

**Sixth International  
Scientific Conference**

**ERAZ 2020**



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# CONFERENCE PROCEEDINGS





THE 6<sup>TH</sup> INTERNATIONAL SCIENTIFIC CONFERENCE  
ERAZ 2020

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SUSTAINABLE DEVELOPMENT**  
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## PREFACE

Economic development refers to the improvement of activities in the economy, which leads to progressive changes in the socio-economic structure and the rising of living standards. Given that the objective of sustainable economic development is elimination of poverty, inequality and unemployment – thus leading to social inclusion and improvement of the quality of life; it is necessary in analysis of this important issue apply extremely multidisciplinary approach.

Faculty of Business Studies, Mediterranean University – Podgorica, Montenegro; University of National and World Economy – Sofia, Bulgaria; Faculty of Commercial and Business Studies – Celje, Slovenia; Faculty of Applied Management, Economics and Finance – Belgrade, Serbia, College of Regional Development and Banking Institute – Ambis, Czech Republic and the Association of Economists and Managers of the Balkans have recognized following issue and organized Sixth International Scientific Conference titled: ***Knowledge Based Sustainable Development – ERAZ 2020*** online/virtually (due to the COVID-19 pandemic) on May 21, 2020.

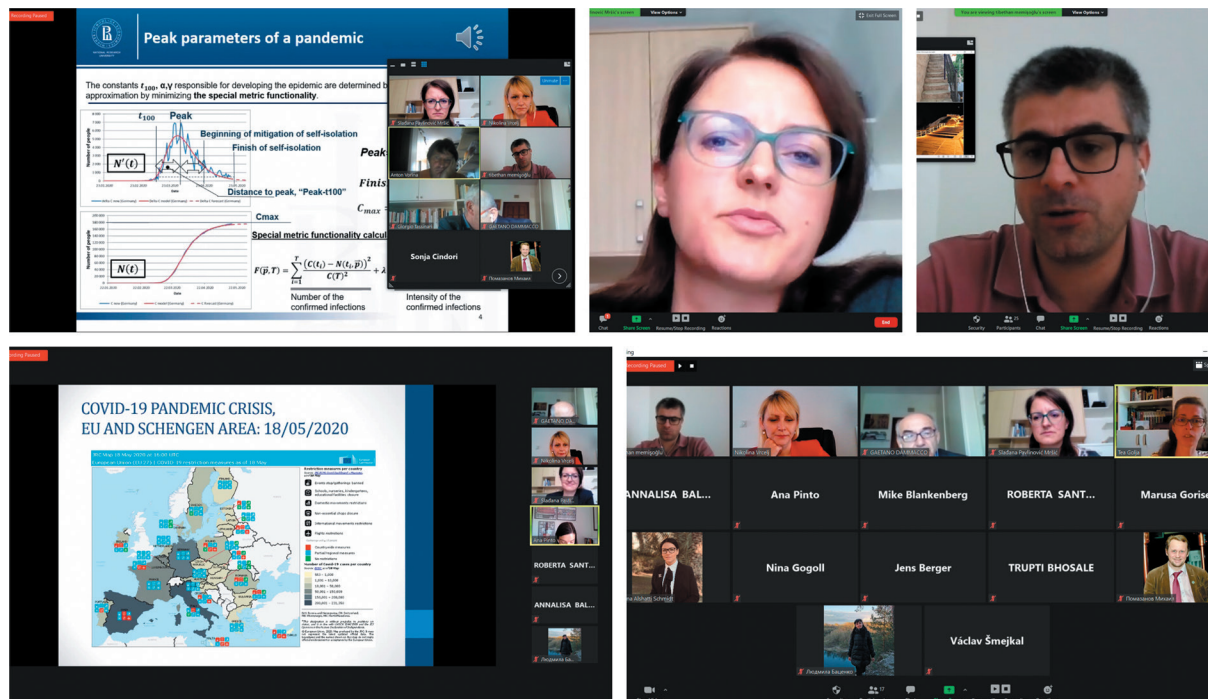
The conference objective was to bring together academic community (experts, scientists, engineers, researchers, students and others) and publication of their scientific papers for the purpose of popularization of science and their personal and collective affirmation. The unique program combined interactive discussion and other forms of interpersonal exchange of experiences and presentation of the latest scientific developments in following areas:

- Microeconomics and macroeconomics,
- Economic policy,
- International Economics and Trade,
- International Business,
- Economic diplomacy,
- Lobbying,
- Globalization,
- European business,
- Modern management and innovation,
- Business and Public Finance,
- Fiscal policy,
- Stock exchange and financial markets,
- Risk management,
- Insurance and reinsurance companies,
- Financial Management and Banking,
- Modern forms of entrepreneurship and investment,
- Investment Management,
- Enterprise and Learning,
- Women and Entrepreneurship,
- Corporate entrepreneurship,
- Agribusiness Strategy,
- Marketing and trade,
- Marketing services,
- Marketing of non-profit sector,
- Research in marketing,
- Marketing in education,
- Marketing in sport,
- Marketing in culture,
- Accounting and auditing,
- Quality management,
- Labor law,
- Business law,
- The role of the rule of law in the country's progress,
- Human rights and protection of minorities,
- Legal aspects of EU integration,
- Intellectual Property Law,
- The reform of corporate law in countries in transition,
- CEFTA,
- Ecology and energy,
- Renewable energy,
- Energetic efficiency,
- Information technology and business intelligence,
- The use and integration of new technologies,
- E-society and E-learning,
- Sustainable tourism,
- Hospitality

Special emphasis for ERAZ 2020 is given to the key topic: *Pandemic Crisis and the Sustainability*.

Within publications from ERAZ 2020 conference:

- 11 double blind peer reviewed papers have been published in the International Scientific Conference ERAZ 2020 – Knowledge Based Sustainable Development – Selected Papers,
- 41 double blind peer reviewed papers have been published in the International Scientific Conference ERAZ 2020 – Knowledge Based Sustainable Development – Conference Proceedings,
- 69 abstracts have been published in the International Scientific Conference ERAZ 2020 – Knowledge Based Sustainable Development – Book of Abstracts.



ERAZ 2020 publications have more than 520 pages. Besides that, some papers were accepted for publication in the conference partner journals namely:

- **JFEAS** is published by the Çukurova University, Faculty of Economics and Administrative Sciences from Turkey twice a year as an open source. This international journal is dedicated to the wide scope of themes of economics, business, public finance, econometrics, international relations, labor economics and the theoretical, methodological and applications between these disciplines, and others in Turkish and English. The journal is indexed in DOAJ, DRJI and Index Copernicus.
- **Journal of Sustainable Development (JSD)** is an international journal published by the Integrated Business Faculty – Skopje, North Macedonia. JSD area includes three pillars of economic, social and environmental development issues. All these aspects are considered relevant for publishing in the JSD. The journal is officially listed in the respected EBSCO database, CEEOL database, as well as the databases of Business Source Complete and Sustainability Reference Center. All articles published in the journal are also indexed in these databases.
- **Journal of Innovative Business and Management** is published by the DOBA Faculty, Maribor (Slovenia) and is referred in international scientific journal bases DOAJ, Google Scholar, EconPapers, ResearchGate and RePec. It has been published since 2009 and since then it has been attracting more and more interest among the readers, who predominantly come from academia and business practice.

- **Balkans Journal of Emerging Trends in Social Sciences (Balkans JETSS)** is an international scientific journal, published by the Association of Economists and Managers of the Balkans. Aims and scope are economics, management, law and tourism. Balkans JETSS have following indexations: Google Scholar, CEEOL (Central and Eastern European Online Library), ProQuest's Serial Solutions, Summon, Primo Central, Alma, EBSCO's EDS Discovery Service and Knowledge Base, TDNet and OCLC.

Participation in the conference took 123 researchers with the paper representing 19 different countries (Albania, Bulgaria, China, Croatia, Czech Republic, India, Italy, Montenegro, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Ukraine, United Arab Emirates, USA) from different universities, eminent faculties, scientific institutes, colleges, and various ministries, local governments, public and private enterprises, multinational companies, associations, etc.





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# CORONAVIRUS CRISIS AND EU ANTITRUST – JUST TEMPORARY ADAPTATIONS OR LONG-TERM CHANGES?

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**Abstract:** *The European Commission and the competition authorities of the EU member states responded to the coronavirus crisis with assurances about sufficient flexibility of their instruments. They enabled temporary cooperation between competitors to ensure the supply of essential medical products and services. At the same time, they warned against any misuse of the crisis for overpricing or other monopolistic practices. However, the crisis has also intensified long-term pressures for a fundamental adaptation of European competition rules. The first challenge is represented by Chinese state-backed enterprises as potential acquirers of weakened European competitors. The second source of pressure is the increasingly dominant role of global online platforms. Their role as an irreplaceable infrastructure for management, communication, counselling and distance learning was reinforced in the coronavirus crisis. The Commission and other experts are already discussing appropriate responses. This paper maps the discussion on possible EU responses to these challenges, and tries to show the strengths and weaknesses of the proposed solutions and on this basis to estimate the future development of EU anti-trust in the post-coronavirus period.*

**Keywords:** *Coronavirus, Antitrust, European Commission, Chinese State-owned enterprises, Online platforms.*

## 1. INTRODUCTION

Antitrust in coronavirus times will surely become the topic of many analyses carried out from different angles. The following analysis tries to predict what “antitrust legacy” the coronavirus will leave us in the long-term. The micro-management of the crisis in March-May 2020 conducted by the European Commission (its DG Competition) and national competition authorities surely produced valuable guidance for undertakings in order to prevent them from abusing the shortages of medical and protective goods and services, and also to clarify for them what kind of cooperation would still be considered permissible in the middle of an emergency. This part of the EU antitrust vs. coronavirus match would not, we dare to predict, have a changing effect on EU competition law and policy as no brand-new instruments have been introduced and with the upcoming calming down of the situation everything will return to normal.

The present analysis, however, argues that the coronavirus crisis, rather than unexpectedly reshaping European antitrust, has accelerated tendencies present and well-known already before the crisis, which would soon bring about changes with a qualitative long-term impact. Even if the pandemic will not produce a new world order dominated by China, it is quite obvious that the influence of Chinese state-owned enterprises (SOEs), especially their take over appetite and capability, will provoke a structural adaptation of EU competition law in order to maintain its efficiency and equal impact vis-a-vis market players with systemically different political and economic backgrounds. In parallel, the coronavirus crisis highlighted another prevailing

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tendency that requires a response from European antitrust. The irreplaceable role of online platforms and their Internet applications, which overshadowed during the coronavirus some traditional public utilities, raises the question of their further regulation. Our societies have become too dependent on them without controlling them enough to secure their smooth, stable and socially responsible availability.

The proposals and possibilities to tackle these two categories of issues will be critically analysed in the following paper. The goal is to show where the developmental trends accelerated by the coronavirus epidemic are heading and what new antitrust rules we can expect in Europe.

## 2. EU RESPONSE TO CHINESE CHALLENGE

Competition Commissioner and European Commission Vice-President, M. Vestager, declared in an interview with the *Financial Times* on April 12, 2020, that the Commission would not object to EU Member States buying shares in companies to prevent their takeovers by foreign state-owned enterprises. Economic consequences of the COVID-19 crisis can make European companies vulnerable and an easy prey for Chinese takeovers, which is a threat that the Commission would consider one of its priorities. A more elaborated proposal of the EU's response to this threat could be expected as early as in June 2020, however it will only be the start of the legislation process, not an immediately applicable measure (Espinoza, 2020).

The impression of urgency should not overshadow the fact that this is a matter that has been debated well before the outbreak of the COVID-19 pandemic (European Commission, 2017; De Kok, 2017). The EU's antitrust problem with Chinese SOEs can be briefly summarised as follows: it is more than likely that successful Chinese corporate giants are controlled and supported by the Chinese state (and the Communist Party), which puts them in a better position to compete with European companies and, at the same time, allows them to avoid standard EU competition law instruments.

While the unfair advantage enjoyed by competitors backed by public resources is easily understandable, their possible avoiding EU competition scrutiny requires further explanation. EU competition rules are addressed to undertakings which they consider to be entities independently carrying out an economic activity consisting in offering goods and services on the market (Court of Justice, 1991, para 21). If an entity does not have sufficient decision-making autonomy, it is part of the undertaking that controls it, or of a so-called "single economic unit". Agreements and transformations within this single economic unit fall outside the scope of EU competition law as mere internal changes inside one and the same undertaking. If a business entity is closely controlled (not just owned) by a State, all business entities subject to the same control form, in theory, one undertaking. Agreement or merger of two or more subsidiaries of Chinese SOEs on EU markets would thus fall outside of the reach of EU competition rules. Only if their market position becomes a dominant one, they would be subject to the Article 102 TFEU prohibition of its abuse. But after Chinese SOEs become dominant in Europe, it could be too late to react for their EU competitors.

An immediate question arises why the entry of such companies into EU markets is not strictly controlled? Under the EU Merger Regulation (No 139/2004), Article 1, the EU's control is applied only to mergers between undertakings with an important turnover not only worldwide, but also in the EU at the same time. If a Chinese SOE newly enters the EU through a takeover of a



European competitor, it has not yet a turnover and market share there (or not an important one) to be bothered by EU Merger Regulation as a potential threat to competition. To prevent easy takeovers of companies strategically important for Member States, the EU adopted in March 2019 the so-called FDI Screening Regulation (No 2019/452) that calls for (but does not commit) EU Member States to introduce national screening mechanisms in order to check whether a third country direct investor does not pose a threat to national security or public order. In the middle of the COVID-19 pandemic, the Commission issued a *Guidance* accompanying this new Regulation so that “Europe’s strategic assets” get better protection (European Commission, 2020a). This “emergency appeal”, however, is only about a more active and flexible use of existing mechanisms and is by no means a new instrument for protecting competition in the EU.

The qualitatively new instrument that the takeover threat boosted by COVID-19 should bring to light – at least judging by comments for the media made by Commissioner Vestager (CPI, 2019) - will probably be inspired by the so-called *Dutch proposal* from December 2019. The media called “sweeping new power submitted by the Dutch government” (Espinoza & Fleming, 2019) was presented in a two-page-long document accompanied with a single page graphic, titled “Non-paper – Strengthening the level playing field on the internal market” (Kingdom of the Netherlands, 2019).

The companies coming from countries where they receive government support or enjoy an unregulated dominant position in a third-country market would, upon their entry into the EU market, be submitted *ex-ante* to scrutiny by the Commission which would consist in application of a well-known market economy private operator test (Cyndecka, 2016). And if it is established that a company under review can disregard the market constraints that any private operator in a market economy must cope with, certain limitations on its behaviour on EU markets can be imposed. They may include for instance ban on certain pricing and selling strategies, investments in assets with no apparent business case; in short, they would be treated from the outset as if they were already dominant in an EU market.

This would restrain their appetite for acts that would endanger the competitive structure there and thus the level playing field for private and state-owned companies irrespective of their nationality would be maintained in the EU. The devil of course is, as always, hidden in the details, and they must be addressed in the promised legislative proposal. It has to be clarified how the new measures would comply with WTO commitments as by now it looks as if the EU wants to put in place rules and measures going beyond what has been agreed on at the international level, however, not only these international legal and political aspects of the new instrument, but also the purely competitive ones, require careful consideration (Kaeseberg, 2020).

Maybe the least revolutionary would be the application of the new instrument in merger cases. Unless the new instrument creates a parallel mode to control concentration, the EU Merger Regulation will have to be amended (by unanimous vote in the Council of the EU!), so that it becomes applicable also to foreign state-backed companies without the required turnover in the EU market. Then the companies involved will have to notify the Commission well ahead of their merger or acquisition, supply the necessary information that would allow a thorough assessment of their combined market strength and the plausible uncoordinated and coordinated effect of the merger at issue. After that, depending on the outcome of such scrutiny, the merger would either be prohibited or permitted with conditions or without them. It is not excluded yet that some new theories of harm would have to be introduced as state-backed companies’ merg-

ers might not have the same impact on competition, as mergers between market players that already dispose of big market shares in the EU and aim at further strengthening of their position.

The same problem becomes even sharper in the case of unilateral market practices of state-backed undertakings. The new instrument may be only partially a parallel to the prohibition of abuse of a dominant position where the Commission intervenes *ex-post*, first establishes that the suspicious undertaking holds a dominant position and then detects the abusive effects of its exploitative or exclusionary practices. In case of foreign-state-backed companies it is proposed that “the European Commission may conduct an *ex-ante* investigation into a company’s conduct” (Kingdom of the Netherlands, 2020, p. 2). Also, the companies will be allowed to submit themselves *ex-ante* to an investigation, in order to learn ahead whether their market behaviour would be subject to the scope of this proposal.

Having established the foreign-state-backed status of an undertaking and thus the applicability of the new instrument to it, the positive law will have to warn the undertaking that certain practices, such as supply constraints that are not in line with market conditions; price and product differentiation between different market operators on comparable transactions; tied selling, whereby additional conditions are imposed with no (apparent) relationship to the transaction; wholesale/retail pricing that is not a reflection of market prices and/or production costs, etc., are furthermore prohibited. And the Commission will have to monitor the undertaking’s market behaviour and intervene when it enters the forbidden area.

In this *ex-post* investigation, the Commission’s procedure may become at last similar to dealing with cases of abuse of dominance, although it is uncertain whether the same standards of harm (i.e. criteria for determining when a particular commercial practice becomes harmful to competition) used to sanction dominant companies’ abuses would really fit here. Before a certain amount of empirical data (and ultimately case law) on effects of foreign-state-backed companies’ behaviour is accumulated, it may be difficult to give those companies enough certainty about barriers in which they are to operate in EU markets. All in all, this new instrument is needed and welcomed but no one should expect that EU competition law would become *merely a bit more* complicated after its introduction.

### 3. BIG TECH AS PUBLIC UTILITIES OR SOMETHING ELSE?

“Coronavirus crisis shows Big Tech for what it is - a 21<sup>st</sup> century public utility”, according to one of *POLITOCO*’s comments published in March 2020 (Scott, 2020). Official and business work, as well as private communication shifted to the Internet and its applications in a previously unseen dimension. If these services were suddenly switched off, the losses and damage caused by the pandemic could have been much greater. The COVID-19 pandemic posed with all urgency the question of whether Internet search and communication platforms should not be placed in the same category as traditional public service providers in energy, transport or telecommunications sectors. This regulation of global Internet and online platforms goes inevitably further than the protection of economic competition. Nevertheless, competition law also has an irreplaceable role in looking for solutions of some of these issues.

A strictly pro-competitive approach would recognise that it has been so far the fierce and dynamic competition that provided us with a number of freely selectable (and also freely consumable) Internet services and all we have to do is to fight against anti-competitive effects of exces-

sive market power of Big Tech giants. It could ultimately mean to break up Amazon, Google, Facebook and Apple as for instance was proposed by US Senator E. Warren (Stevens, 2019) and supported by part of academic literature (Galloway, 2017, p. 255). The integration of various related online services will be banned, the monopolisation of the entire Internet ecosystem will be averted, although the division of fast-growing Internet companies may need to be repeated in each generation. This, however, does not seem to be the European way, although it should be emphasised that sanction by forced splitting must remain on the list as a last resort, otherwise milder sanctions will lose some of their effect.

Commissioner Vestager is against the breaking up option as the real splitting up of these companies would be difficult to manage and no one can prevent that network effect would immediately work in favour of a new Internet “gatekeeper”. A new *ex-ante* regulatory tool is thus the preferable solution (Chotiner, 2020) and the crucial question is “how to intervene before it is too late” (Crofts, 2020a, p. 60). The classical *ex-post* antitrust enforcement of bans against abuses of dominant (even monopolistic) position may really be too slow to enforce and their standards of proof too complicated to effectively catch and sanction anti-competitive behaviour on very dynamic, fluid markets prone to tipping towards monopolistic structures (UNCTAD, 2019, p. 11).

The question is how the new regulation should look like if it must maintain the pace of technological innovation, wide availability of services and free competition at the same time. The most often repeated argument against submitting Google or Facebook to “public utility regime” says that their drive to innovate will be destroyed and rigidity, lack of flexibility, would become the norm (Cremer, Montjoy, & Schweitzer, H., 2019). Users that have got used to their free availability will have to be charged money for each entry as this is part of the deal of having access to services of general economic interests (Vilette, 2017; Harris, 2020). And last but not least, the current Article 106(2) TFEU stipulates that undertakings entrusted with the operations of services of general economic interest are subject to the rules on competition, *only in so far* as the application of such rules does not obstruct the performance, in law or in fact, of the particular tasks assigned to them. Converting Google or Facebook into a public utility would thus only confirm their exceptional position. Even such a brief presentation of threats to the fundamental values of competition, consumer interest and the dynamics of innovation suggests that the new regulatory tool will not be easy to design and have approved.

Commissioner Vestager has recently announced a three-prong strategy: 1) new obligations on digital gatekeepers, 2) continued probes into illegal conduct, 3) new tool to stop markets “tipping” to keep the digital economy opened (Crofts, 2020b, p. 61-62). The Commission is therefore preparing two legal innovations, none of which go that far to call for any kind of socialisation of social media and platforms, not even to consider them as essential facilities (like electricity grids, railways, pipelines or major ports) (Connor, 2020). From what has been submitted to public consultation in June 2020 (European Commission, 2020b), we know that the Commission is preparing an instrument (possibly in the form of a regulation) imposing *ex-ante* prohibitions and obligations on those who may be called digital gatekeepers (i.e. the category of dominant players without need to prove their dominance in a traditional sense) like Facebook and Google.

It is more than probable that neither of the well-established statuses (service of a general economic interest, essential facility) will be chosen for “gatekeepers” of the Internet and social media. These concepts do not fit seamlessly to the situation in online markets as has been emphasised above, and their existing legal framework (completed largely by case law of the EU Court

of Justice) could be limiting for a completely new approach to the issue. The regulation should be drafted by the end of 2020. It will be interesting to watch to what extent it will narrowly focus the competition problems or would rather guide global online platforms to what they must and may not do in the EU in a broader sense.

If it is modelled on the manner of already existing EU Regulation on platform-to-business relations (No 2019/1150), the latter of the two aforementioned approaches is more plausible. That piece of legislation obliges online platforms to a certain higher social responsibility by means of transparent behaviour, by justifying their actions and not restricting the rights of their users. The now drafted new legislation thus could in the same vein prohibit *ex-ante* certain practices that could lead to the further consolidation and spread of market power from an already dominated market to new markets, e.g. by killing-acquisitions, tying services into pre-installed packages, locking-in existing customers, refusing interoperability with other providers, suppressing access to collected data, selling their own products of platforms alongside third parties' products, etc. (OECD, 2018; Funta, 2020).

All in all, it would mean that Big Tech form a new category of competitors, being neither ordinary nor dominant ones, belonging neither to general services providers nor to essential facilities, as the category of "digital gatekeepers" and the corresponding specific obligations would fit them the best.

#### 4. CONCLUSION

If the above-performed analysis is correct, we are entering the phase of *ex-ante* antitrust. What has been thus far typical for mergers and state aids could become a standard also for foreign SOEs and Big Tech online gatekeepers. This *ex-ante* approach means that competition would be more regulated than just protected as the classical *ex-post* approach requiring thorough investigation, conviction and punishment of already committed infringements, has proved not entirely effective for the two biggest challenges facing European antitrust.

The first one consists in the massive penetration of European markets by foreign state-backed competitors coming from countries with very non-Western political and business standards. The second is also about "massive penetration", this time of our lives, of our ways of communicating, learning, working... by online platforms. Both challenges are imminent and threaten dominance that can overturn not only European markets but also European values. Competition law thus works (along with other tools) on the imaginary front line of defence. And on the front line, the speed and clarity offered by *ex-ante* measures are needed more than patient *ex-post* detection, evidence, conviction and judicial review.

We will have to accept that the "good old antitrust" was a Western game, the rules of which were formed for an environment built of brick and mortar and do not fit that well for the realities of the third decade of the 21<sup>st</sup> century. The COVID-19 pandemic did not cause that, but made it clearly visible and very urgent.

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# THE COVID-19 PANDEMIC - HOW WELL ARE WE BALANCING HEALTH, FREEDOM, AND THE ECONOMY?

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**Abstract:** *The worsening healthcare emergency with the COVID-19 pandemic has demanded a prompt reaction from authorities to contain the damage related to the spread of the virus. Our aim is to provide a bioethical contribution, with a careful analysis about the balance of individual rights with those of the whole community. The protection of the right to health in the emergency phase, with the restriction of the right to work and other rights, can have long-term negative consequences on the economy, with fallout affecting funding for the healthcare system as well. The right to health in its community dimension can sometimes clash with the protection of the sacrosanct dignity of the individual. Choices to protect health may have social and economic repercussions that could undermine the stability of many national governments.*

**Keywords:** *COVID-19 pandemic, Healthcare economy, Community health.*

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## 1. INTRODUCTION

On March 11, the World Health Organization (WHO) declared that the spread of the COVID-19 infection had the characteristics of a pandemic (Health Minister, 2020a).

As of May 21, 2020, there have been 1,328,457 laboratory confirmed cases of COVID-19 in the European Union, the European Economic Area, and the UK, with 159,172 deaths, according to the COVID-19 webpage of the European Centre for Disease Prevention and Control of the European Union (ECDC, 2020). Throughout the world, 4,960,975 cases have been reported.

According to Health Minister (Health Minister, 2020 b), in Italy, as of 21/05/2020 there have been 228,006 cases, including 32,486 deaths, among them 163 physicians. Italy has had a higher death rate than that reported by China, where the infection began.

The grave worldwide health emergency has demanded a prompt reaction from the authorities to contain the damage related to the spread of the virus. Inevitably, this reaction has limited the rights and freedoms that are the shared patrimony of all Western nations.

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The particular characteristics of this pathology and related difficulties in prevention and treatment are aggravated by the cultural, anthropological and ethical milieus of both industrialized and developing nations.

Such a high priority has been given to containment measures to face the very grave healthcare emergency and the threat to everyone's health that severe restrictions to personal freedom have been justified, even to the point of limiting the constitutionally guaranteed rights to privacy, work and education.

From the perspective of ethics, it is necessary to resolve the painful impasse constituted by the problem of how to balance the principles of benefit, gradualism and appropriateness with the principle of proportionality of the measures used. Of particular concern is the acquisition of sensitive personal data; in the light of proportionality, suitable measures must be adopted to minimize the sacrifice of the rights of the person.

Analysis of this problem leads to another significant question, which has always been discussed in bioethics (Jonas, 1997). In balancing the rights of the entire community against those of the individual, as manifestation of her personhood, when should protection of "super-individual rights" be considered a higher value than the right or rights of the individual?

In the field of bioethics this extremely delicate topic has provoked intense discussion that has yielded heterogeneous solutions for balancing interests. Some hold the individual's rights and interests to be pre-eminent, particularly regarding experimentation on human beings, in which to date protection of the rights of the individual has always superseded that of the community. Others have judged that it is right to impose a sacrifice of individual interests in order to safeguard a super-individual interest or juridical good, especially regarding cases of infectious or very contagious diseases, in which the good of the community is put ahead of the rights of the individual, which are necessarily weakened to protect the health of all. This seems to have been the case in COVID-19 pandemic.

While it is true that the measures to adopt must conform to the principle of proportionality, in terms of gradualness of the limitation of the rights of citizens but in relation to the particular nature of the current situation, it is evident that this is a pure speculation in the case of a State dealing with a little known or entirely unknown disease, as was COVID-19 in the first period of its global spread.

According to the 2005 Revision of the International Health Regulations of the World Health Assembly [the forum through which the WHO is governed by its 194 member states], (WHO, 2005) if there is proof of imminent risk, the State can add healthcare measures to avoid the disease or keep it under control, including isolation and quarantine.

On March 8, 2020 (DPCM, 2020), the Italian government prohibited people from entering or leaving high risk areas in the Lombardy region and in some provinces of other Regions, except for reasons of work, health or demonstrated situations of need, and also issued laws restricting the operations of stores and factories. Two months after these provisions were put into effect, stage II has begun with a phased re-opening of businesses, though a dramatic decrease in their productivity is expected, as well as a strongly negative GDP.

This paper aims to investigate the impact of COVID-19 in Italy, starting with legislation and its impact on the private and public life of citizens.

## 2. REPERCUSSIONS OF THE SPREAD OF COVID-19 ON ITALIAN LEGISLATION

In order to manage the COVID-19 epidemic, the Italian national and regional governments have produced a flood of regulations. This is an entirely new situation that has never before happened. First, the government declared a six-month state of emergency on January 31, 2020 (DCM, 2020), with the Deliberation of the Council of Ministers, which stated that Italy was in the type of very grave emergency event foreseen in the legislation on Civil Protection. It introduced extraordinary powers for the Civil Protection “in derogation from all current provisions, in the limits and with the modalities indicated in the deliberation of the state of emergency and in the respect of the general principles of the legal system and of the laws of the European Union.”

Thus it is evident that the COVID-19 epidemic has had significant repercussions on constitutionally guaranteed principles; increasingly stringent limitations have been placed on freedoms and other rights enshrined in the Italian Constitution, in some cases extending to “militarization” of some municipalities and forced isolation of people affected by the infection and those who have come in contact with them. Some constitutionalists have spoken of an “eclipse of constitutional freedoms” (Ainis, 2020).

In Italy, the Constitutional Court, in sentences 16 and 17 of 13 February 2013, affirmed the principle of the need for reasonable balance between fundamental rights protected by the Constitution (specifically articles 4 and 32), as they are part and parcel of each other and no one of them has absolute precedence over the others or over constitutionally recognized and protected juridical situations (Gualtieri, 2020).

Nevertheless, the repercussions on the life of individuals of COVID-19-motivated legislation have impacted personal freedom (art. 13), freedom of circulation (art. 16), the right to education (art. 34) and freedom of private economic initiative (art. 41).

This Italian legislation is part of an international context in which other countries have also issued regulations that often vary widely from nation to nation, but not rarely impose strong restrictions on social and economic rights, as well as the rights to freedom and to association (Comazzetto, 2020), with very restrictive measures that prohibit circulation of citizens at home and abroad.

## 3. THE ROLE OF COMMUNITY HEALTH

While not explicitly legislated, in a range of emergencies, the protection of the health and life of citizens, a super-individual good, tends to prevail over any other right.

An example is the limitation on the freedom of circulation “for health or safety reasons” (Constitution art. 16, first section). Even so, in the face of such a vast and long-lasting crisis (De Stefano, 2020), we should examine the modalities and limits of the emergency measures, always in search of proportionality and balance among the various interests involved (Cuocolo, 2020). The balance of Constitutional values and interests should have oriented legislators toward a choice able to “weigh” rather than totally compress all rights.

The juridical value of the right to health, and its individual and community importance as guaranteed in the Constitution, has prevailed over all other constitutional values and principles, as

it is certainly connected to the right to life, the logical and ontological basis of all rights. While we may agree with this choice because of the importance of the right to health and the duty of solidarity, as articulated in art. 2 of the Constitution, nonetheless, the methods for implementing the containment are open to questioning.

It is clear that the methods for containing the risk of the pandemic should have been centered on the principle of “the balancing of Constitutional values and principles” with a choice to implement graduated measures, also based on the “principle of differentiation,” which led to the adoption of different measures in the various Regions where the impact of the COVID-19 infection had different quantitative and quantitative impacts on the health of citizens.

Differentiation of implementation measures calibrated to the contingent situation and based on the balance of values and principles should have led to a choice more in line with the principle of equality in art. 3 of the Constitution, which calls for treating equal situations in an equal way, and different situations in a different way.

The emergency of the COVID-19 pandemic demands innovative and important reflection on the community dimension of the right to health, and on the related aspect of solidarity.

The right to health is one of the most important manifestations of freedom for the human person and one's body. However, the spread of the COVID-19 pandemic has led to a new emphasis to the community dimension of this dual-faced right, which previously received less attention. The good of the community certainly is of greater value, and justifies strong limitations on the freedom of people. In fact, the emergence of COVID-19 has re-defined the contents of the right to health, revealing a further aspect, perhaps in some ways new in such a radical form. It has concretely and dramatically raised the question of the difficult balance between the right to health and the other rights safeguarded by the Italian Constitution and internationally (Directive 2004/38/EC). Personal choices about one's health encounter a fundamental limit in the principle of solidarity, the other face of the right to health, as the interest of the community which cannot allow an individual's healthcare decision, right or wrong as it may be, to endanger those who are more vulnerable and, in the hypothesis of a healthcare emergency like COVID-19, endanger even the functioning of the National Healthcare Service through increased need for hospitalization in Intensive Care Units.

Certainly, one fact is crucial: the right to health is a “financially conditioned right” and this aspect, which has already emerged in various situations, certainly comes to the fore in the context of the COVID-19 pandemic. This has motivated many governments to adopt measures of “total containment” not only because of the virulence of the virus and its “unknown” nature, but also because of the inefficiency of healthcare structures. In Italy, choices in past years to cut budgets for hospital emergency care facilities led to a dearth of intensive care units, and with the onset of the pandemic drastic containment measures were thus required, with very grave negative economic repercussions that will significantly reduce the Italian gross domestic product (GDP) in coming years.

This aspect clearly demonstrates the contradictions in Italian management of the right to health, and calls for deep reflection and re-evaluation of the importance of this right in a dimension well beyond that of “emergency.”

#### 4. CONCLUSION

The battle against COVID-19 is raging not only on the healthcare front, but also on that of juridical civilization, leading to the reaffirmation of the right to health in its community dimension. It demands a new examination of the principles of solidarity and equality, intrinsically connected with the intangible protection of the dignity of the human person.

Fundamental rights need to be protected, irrespective of the emergency, in order to ensure global safeguarding of the person.

Choices on how to assign economic resources in the organization of the healthcare service have clear effects on protection of health that in some situations, such as the COVID-19 pandemic, can transcend the healthcare sphere and provoke dramatic social and economic repercussions that can even endanger the social and economic stability of some nations.

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# A PERSPECTIVE OF MONETARY POLICIES WITHIN CHINA AND EU TOWARDS COVID-19

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**Abstract:** *COVID-19 has shut down the real economy since its outbreak by assaulting the society and its system, which was affected directly or indirectly, including the significant decrease of demand, huge shock of supplies, highly nervous and volatile of the financial market and the overall deterioration of the economic index. With the spread of the epidemic around the world, major economies have continuously introduced extraordinary economic policies to respond. This paper attempts to systematically sort out and analyze the characteristics and development of the epidemic, its impact mechanism, transmission path and actual impact on the global economy, as well as the response models, main goals and measures of macroeconomic policies of EU and China. It compares the macroeconomic policies by China and EU fighting against the COVID-19 and promoting the economy horizontally and vertically.*

**Keywords:** *COVID-19, EU, China, Macroeconomic policy, Monetary policy.*

## 1. INTRODUCTION

The prevention and control of the Covid-19 epidemic situation by major economies around the world has rapidly changed from „normal management” with stable finance and economy as the main line, to the primary task of anti-epidemic relief, while maintaining the „abnormal response” of financial and economic stability. From the macroeconomic perspective, the monetary policies of the major economies closely surround the goal of „1 + 5”. That is, the primary goal is to support anti-epidemic relief, and then add five secondary economic goals: protect people’s livelihood, bail out companies, stabilize finance, reduce the risk of economic crisis, guide market expectations and prepare for economic recovery. These policies have the following characteristics of „global emergency management”: continuous introduction and clear objectives, unprecedented efforts, rich tools, comprehensive coverage, and national policy linkage.

As of the first quarter in 2020, the economic and financial policies of the major economies have contributed a certain impact in stabilizing the expected policies. It is foreseeable that as the epidemic has been dealt under control, the economic policies of various countries will enter the third stage, which is to stabilize the economy and promote recovery. Corresponding policy goals will shift to normal goals, namely employment and economic growth, and their models will gradually become normal management. It needs to be emphasized that economic stability and recovery can only be achieved after the epidemic is completely controlled and become the main goal of the policy.

In the following steps to recover the economy, the policy direction of each country depends on four factors: one is the development of the country’s epidemic situation and the effectiveness of epidemic prevention and control; the second is the effect of current policies; the third is the development of the economic situation; In the face of the New Coronary Pneumonia epidemic, a common crisis for all mankind, countries must cooperate in epidemic prevention and actively

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support international organizations to play a role. On this basis, we must strengthen international macro-policy coordination and jointly maintain the stability of the global industrial chain supply chain, so as to stabilize the development of the world economy.

This paper mainly focusses on the monetary policies taken by EU and China during the Covid-19. The first chapter characterizes the macroeconomic policies within these countries. The second chapter talks about the methods and methodologies, also the hypothesis around the studying topics. The following chapter illustrates the current analysis of the epidemic by the authors, provides a comprehensive comparison of the policies, which in detail gives a horizontal review among countries in EU and China, and a vertical see sight through the timeline of the policies. We also concern about the important global emergencies in the past, which had a destroyable impact to the world's economy, and try to figure out the common parts and differences.

## 2. METHODS AND METHODOLOGIES

To write this paper we are using various of research methods. We apply an inductive and comparative study to analyze these main objectives, including the impact to the economy of such global emergencies, and the macroeconomic policies taken by different type of government. We choose the European Union as a whole asset, and in Data collected since past 10-20 years given out by the international monetary organization, the European Central bank and the China National bureau of statistics.

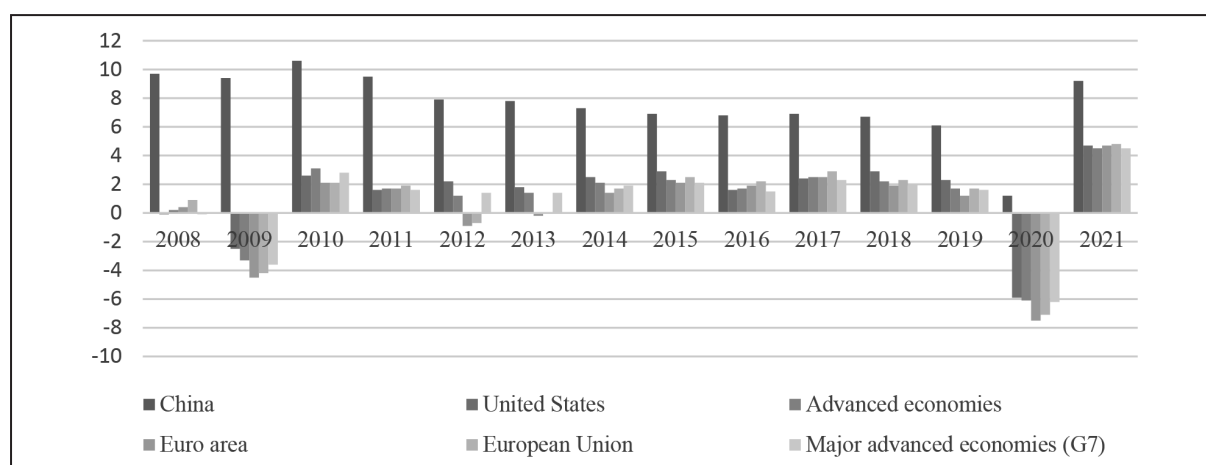
Based on our current analysis, we have brought the following hypothesis, which could map the research objectives:

**H1:** Covid-19 has destroyed rapidly, especially the 3rd Industry in China.

**H2:** Countries with reserve currencies are more likely to get out of the trouble caused by the pandemic through borrowing heavily.

## 3. COMPARISON OF MACROECONOMIC POLICIES

### 3.1. Current situation of the COVID-19 epidemic

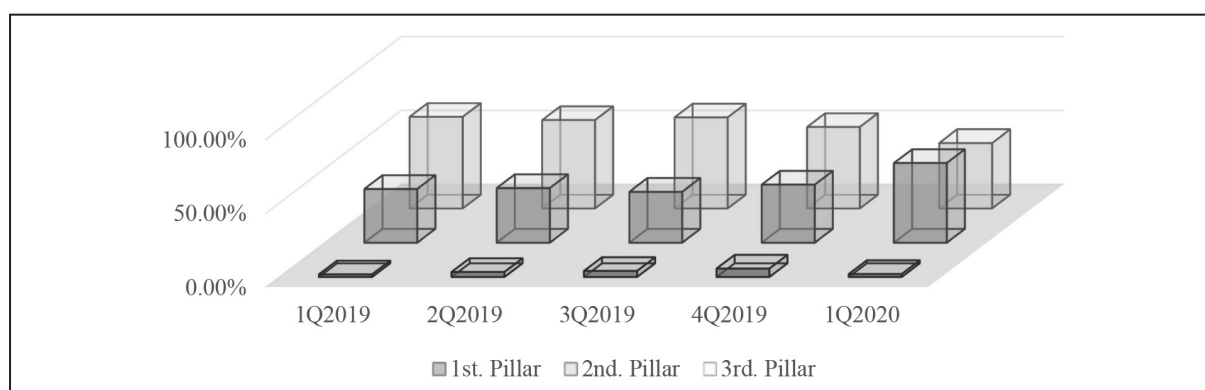


**Figure 1.** Existing and estimated GDP real growth of selected countries and regions since 2008 (Annual percent change)

Source: IMF, made by author.



According to the estimated statistics of gross domestic product from IMF, shown in figure 1, the real annual GDP of United States, EU, and Major advanced economies (G7) is tend to drop below the zero line, reached even -7%. Neither the eurozone will survive COVID-19, even for action taken against the epidemic as a whole institution, based on the fear of the break-up. However, even the IMF's forecast may be very optimistic, China's economic growth has also decreased heavily compared to its previous 6-7 percent increase, is not estimated minus though. And the year 2021 will get recovered. Such globally decrease in GDP annual growth appeared between 2008 to 2009, when the outbreak of the mortgage crisis in America hit the global financial market.



**Figure 2.** The contribution rate according to the industry of GDP in China (in %)

**Source:** The China's national bureau, made by author.

As shown in figure 2, the proportion of the third pillar of GDP, which is now the most important part in China's GDP, has shrunk from the end of the 3<sup>rd</sup> quarter in 2019 to the 1<sup>st</sup> quarter in 2020 compared to the previous construction. In the 1<sup>st</sup> quarter in 2020, it has decreased by almost 20% compared to the last quarter; however, less than the falling value of the first pillar, which has relatively decreased by 65%. Therefore, H1 was rejected.

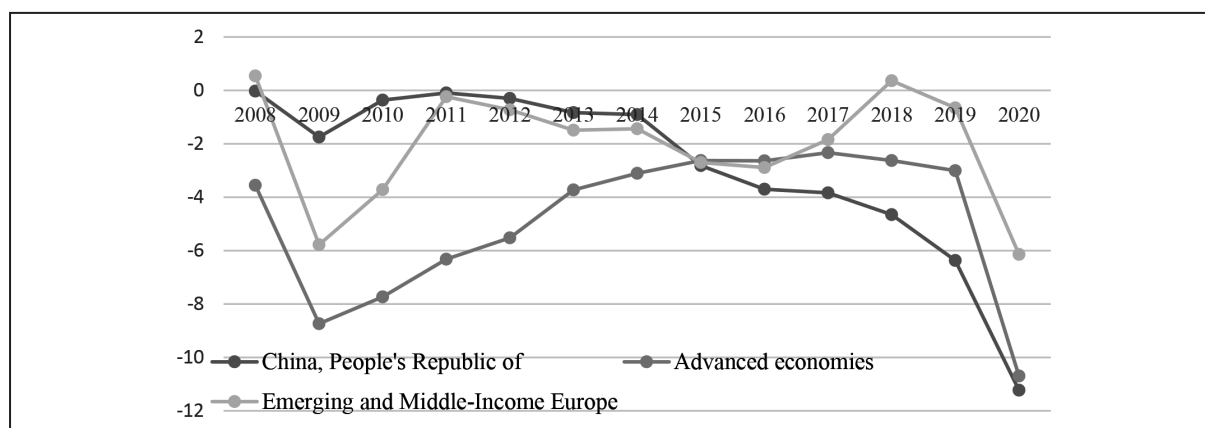
### 3.2. Monetary policy during global major emergencies

Historical experience shows that major emergencies such as terrorist attacks, natural disasters, and infectious diseases often cause short-term fluctuations in the financial market, which in turn affects economic growth and social development. Therefore, in the face of the rush of major emergencies, the central banks generally take strong countermeasures, such as the FED after the incident happened on September 11, 2001, the Chinese central bank after the SARS epidemic in 2003, and The Bank of Japan after the „11<sup>th</sup>. Mar „earthquake in 2011. Though, the policy measures adopted by various countries have their own phases in term of direction and application of tools. For instance, the United States had injected huge liquidity into the market while continuing to cut interest rates; China was in an economic upturn at that time, and its monetary policy remained basically stable except for emergency measures; while Japan mainly adopted quantitative easing (QE) policy, it did not Cut interest rates. The reason why Japan has not cut interest rates is mainly because of insufficient monetary policy space. After the economic crisis in 2008, Japan's monetary policy was close to zero interest rates, when the policy rate was always maintained at 0.1%. After the earthquake, the Japanese government had no room to lower interest rates, so it had to adopt an overweight QE policy.

Financial policies are important tools dealing with the shock of emergencies and promoting the economy. The common characteristics of the policies taken by China and EU are mainly: quick re-

act during the emergencies, quickly inject above-expected funds into the market, increase the monetary and credit investment to stabilize the confidence and the expectations of the financial markets.

The financial crisis in 2008 was caused by the US subprime mortgage crisis, and then spread to the whole world. According to the statistics from the China National Bureau of Statistics, the average value of stock market in China shrunk by 65% in 2008. Twelve years later, the Covid-19 has simultaneously erupted in multiple countries around the world, cracking down on economic recovery and causing huge market shocks.



**Figure 3.** Net lending/borrowing (also referred as overall balance) (% of GDP) in the selected regions from 2008 to 2020

**Source:** IMF, made by author.

The percentage value of Net lending/borrowing is known as the difference between revenue and total expenditure. In figure 3, we could find that during 2008 to 2020, the overall balance, or debt had twice significant shrink, which was in 2009, affected by the global financial crisis, and another in 2020, which the debt of China and other regions reached a milestone highest point.

### 3.3. Comparison of the monetary policies taken within China and EU

A basic goal of macroeconomic policy is to guide enterprises, residents, and markets to form reasonable and stable expectations, reduce panic in the face of major uncertainties, and thus stabilize the market and economy. All aspects of the economic policies of the epidemic prevention and control in various countries have played the role of expected management. In response to the epidemic, major economies (except China) have cut interest rates substantially, and interest rates have reached historical lows.

## CONCLUSION

Since the outbreak of the Covid-19 epidemic, the People's Bank of China has adopted a series of measures. The monetary policy has increased counter-cyclical adjustment to provide strong support for the prevention and control of the epidemic and resumption of production. Since March, major economies such as the European Union have taken measures such as cutting the interest rate, and the monetary policy environment has tended to be loose. In the following further step, each country's monetary policy should be more flexible and appropriate to create a more suitable monetary and financial environment for stabilizing growth, preventing risks, controlling inflation, and adjusting structure.

**Table 1.** Monetary policies review in eurozone and China since the outbreak of the Covid-19 pandemic

Country	Date	Measurements	Amount
China	15 Jan. 2020	The People's bank (Chinese Central bank) put a one-year medium-term lending facility at 3.25% for national banks and local banks operating in Wuhan.	€39.2 bln.
	1 Feb. 2020	China's banking and insurance regulators extended the deadline beyond the end of 2020 for entrepreneurs to follow the new asset management rules. These regulations were part of government effort to decrease exposure to shadow lending.	-
	2 Feb. 2020	The People's bank of China lowered the interest rate on reverse repo operations by 10 basis points, bringing the 7-day facility from 2.5% to 2.4% and the 14-day facility from 2.65% to 2.55%.	-
	3 Feb. 2020	The People's bank of China provided an additional liquidity to money markets via open market operations to maintain adequate liquidity in the banking system and sound operations of the money market.	€157 bln
	13 Mar. 2020	The People's bank of China cut reserve requirements ratio for banks by 0.5%-1.0%.	Freeing up around €72 bln. that the authorities want banks to lend to businesses hit by the pandemic.
	16 Mar. 2020	The People's bank of China applied a medium-term lending facility into the financial system using open market operations at an interest rate of 3.15%.	€13.08 bln.
	31 Mar. 2020	The People's bank of China announced to cut the interest rate it charges to banks on 7-day reverse repurchase agreements from 2.4% to a record low of 2.20%, which was the biggest cut since 2015.	-
	3 Apr. 2020	The People's bank of China announced a 1% cut in smaller banks required reserve ratio, which would be delivered in 2 stages: 50 bp on 15 Apr. And another 50 bp on 15 May.	It is expected to free €52.2 bln. for the banking sector.
	20 Apr. 2020	The People's bank of China cut the one-year prime rate from 4.05% to 3.85% and the five-year prime rate from 4.75% to 4.65%.	-
Eurozone	12 Mar. 2020	The ECB pledged to increase its asset purchase program in 2020 from its prior commitment of €20 bln. per month.	€120 bln. (approximately €13 bln. per month)
		In order to promote banks to keep lending to companies, the ECB change 3 parameters of its Targeted Longer-Term Refinancing Operation (TLTRO-III).	-
		The ECB provided temporary capital and operational relief by allowing banks to fully use it and liquidity buffers and relax capital requirements.	-
	18 Mar. 2020	At an emergency ECB meeting, a „pandemic emergency purchase program“ has announced in which the ECB would purchase all assets eligible under the current QE program as well as commercial paper and Greek government bonds until at least the end of 2020.	€750 bln.
	27 Mar. 2020	The ECB recommended eurozone banks to freeze dividend payments and share buybacks until at least 1 <sup>st</sup> . Oct.	Extra €30 bln.
	30 Apr. 2020	Kept its main deposit rate unchanged at -0.5% but tweaked the terms of its targeted long-term refinancing operations (TLTROs) scheme. Under the new rules, banks that meet certain lending criteria will be able to borrow from the ECB at an interest rate equal to the deposit rate minus 0.5% (-1.0%). This represents a 25 bp discount from previously-announced terms. Also, the ECB introduced a new lending program called the non-targeted pandemic emergency longer-term refinancing operations (PELTROs) which will offer unconditional financing to banks at a rate of -0.25%. Starting in May, the ECB will conduct seven separate PELTROs operations which will come to maturity between July and September 2021.	-

**Source:** The European Central Bank, 2020. The People's bank of China, 2020. Made by author.

In the modern world, the dominant reserve currency is the US dollar, issued by the Federal Reserve, which accounts for 55% of all international transactions. The other dominant currency is the Euro, issued by the European Central Bank, which accounts for 25% of all international transactions. Besides the Japanese yen, renminbi, and sterling are relatively small reserve currencies, although the importance of the renminbi is rapidly increasing. That is the reason why those countries with own reserve currencies are more likely get out of the risks caused by such global emergencies. The other countries in the world tend to hold these debts and currencies because they can be used for consumption around the world. Therefore, countries with reserve currencies can issue large amounts of credit / debt denominated in reserve currencies, especially in the current shortage of reserve currencies. In contrast, countries with no reserve currency have no such option. They particularly need these reserve currencies (such as the euro) in the following situations: (1) They have many debts (such as in euro) denominated in reserve currencies that they cannot print; (2) They do not have much savings in these reserve currencies; (3) Their ability to obtain the required currency is reduced. H2 seems to be confirmed.

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# THE IMPACT OF THE PANDEMIC CRISIS ON SALES BUSINESSES – CASE STUDIES

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**Abstract:** *The entire world is facing with the impact and consequences of the COVID 19 pandemic, what is reflected in various spheres of social life. In the conditions of the crisis management, companies are forced to adapt to the new situation in order to survive on the market. Sales companies have had to make changes in their former business; namely in their organization, logistics, retail supply channels that are now oriented towards the online sales without contact when delivering to customers. The Civil Protection Headquarters of the Republic of Croatia has brought a Decision by which are regulated the working hours and the method of work in the trade business during the Coronavirus epidemic, according to which it is obligatory for all stores to organize their work in compliance with general anti-epidemic measures and special recommendations of the Croatian Institute of Public Health.*

*In the paper are listed and analyzed changes in the sales operations of the two companies due to the pandemic crisis; one company deals with the sale of agricultural machinery and the other with the sale of food products.*

**Keywords:** *Pandemic crisis, Impact on sales business, Changes in the sales operations, Decision of The Civil Protection Headquarters, Companies.*

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## 1. INTRODUCTION

The COVID 19 pandemic crisis has caused changes in the operations of almost all companies in the Republic of Croatia and in the world. The onset of global pandemic of COVID 19 appeared suddenly and immediately caused great difficulties in the business of all economic entities, and especially those that are engaged in the direct sale of their products, as is the case with the companies that are the subject of this paper. Alongside with the pandemic it was accompanied by restrictive measures that were imposed by the civil protection headquarters at both the state and local levels. The first postulate of all the measures adopted by the headquarters was reduction and restriction of social contacts and obligatory social distancing in order to limit the spread of the virus and preserve the health and lives of all citizens. On 19 March 2020, the Civil Protection Headquarters of the Republic of Croatia has issued a Decision on measures to restrict social gatherings, work in trade, services and sporting and cultural events (Official Gazette, 32/2020), therefore suspending working of all shops except those listed in the decision. On 24 April 2020, the Civil Protection Headquarters of the Republic of Croatia has issued a Decision stipulating the working hours and the way of work in the trade activity during the Coronavirus epidemic; all stores and all sales facilities were obliged to organize their work in compliance with the general anti-epidemic measures and special recommendations and instructions brought by the Croatian Institute of Public Health (Koronavirus, 15.06.2020).

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Restrictions that were imposed by the state throughout the Civil Protection Headquarters has required urgent adjustment of all participants in economic activity in order to avoid disruptions in the supply chain, especially of the basic foodstuffs for the population. The Government of the Republic of Croatia has also adopted subsidies for the preservation of jobs that seek to maintain as many employees as possible. This paper presents the change in the organization of sales in two trading companies during the course of pandemic; one trading company deals with the sale of agricultural machinery and the other with the sale of food products.

## **2. SALES BUSINESS AS A FUNCTION OF THE COMPANY**

The sales process is a sequential succession or series of actions of the seller that leads the customer to take the desired activity and which ends with various forms of after-sales services and checks to ensure purchasing satisfaction (Furrel, 2004, p. 207). Sales as one of the functions in the process of reproduction begin and end during one cycle on the market. The fact is that this cycle is constant i.e. continuous and includes research, processing and testing of customers on the market. In such a reproduction process, sales capacities should be harmonized with the optimal share and fulfilment of market demand, while an important role should be added to personnel, economic and technical conditions, from which it can be concluded that products and services in the reproduction process are sold in the area of consumption what has its capacities to which sales should be very well introduced to (Halkos, Tzeremes, 2009). The company intend to sell as much as possible of its products on the market, but for this success to make it possible the company needs an effective sales force. For the successful management of the sale forces, the company needs to determine the motivational basis for which the sales force is ready to perform the tasks determined by the technology of sales organization (Vukelić, 2005, p. 459). Some of the basic goals of sales in modern times are (Marušić, 2017, p. 8): changing the motives and content of demand for a service or a product, processing data in a more modern way and determining information's about the structure of foreign demand, the analysis of all global trends when observing global supply and demand, price calculation and compilation of lists of all orders, work on the promotional activities, development of a marketing plan and communication with the market. Over time, the traditional understanding of the meaning and role of sales is changing, which also in earlier periods has adopted different marketing development concepts and marketing forms and strategic goals, and it has always been important for achieving market success for the company. Although the sales were important, it can be concluded that they were never put in the foreground as it has been done in the modern times (Tomašević Lišanin, 2010). The sales process is subjected to external influences. In order to minimize them, it is necessary to choose the assortment and to carefully maintain the continuity of sales and adjust the trading company to the market requirements (Segetlija, 2006). Sales promotion, as a promotional activity, usually has a direct impact on consumer's attitudes. The means of sales promotion can reflect on consumer attitudes in a variety of ways; what is important is that each method represents a positive change or improves the sale results (Nakić, 2014).

## **3. EXAMPLES OF SALES ORGANIZATION DURING A PANDEMIC CRISIS**

Company X is specialized in selling retail and wholesale and servicing of small agricultural machinery and motor cultivators, chain saws, lawn mowers, motor mowers, water pumps, generators and other small machines. Company X is a distributor of several leading brands for Osijek-Baranja County, among which are STIHL, Honda, Oleo Mac products, Vallorbe and Sembdner and some other brands. In addition, the company is an importer of Ratioparts spare

parts for the whole of Croatia and has organized a network of dealers to sell them. Business of the company X is organized in such a way that products and spare parts after they are received by suppliers are sold partly in its own stores and implemented through the service stores, and partly in shops and service workshops of partners who cooperate with the company. The majority of sales are due to company employees, who often visit businesses such as municipalities in Croatia, utilities companies, large companies, city companies in charge of maintaining cities, small family farms, etc. Only good results can be achieved by working in the field conditions and these are recognized in the company and that is where their business has been focused on. A large part of sales is also realized in the company's branches, where customers can see a wide range of devices and spare parts and get all the necessary information's about the required products. What have always been considered as immensely important in a company are the customers. Since many years of doing business in the company, they adhere to the importance of practice of always listening to their customers, respecting their needs and desires, and do everything to make the customer satisfied. In addition to this type of sales, the company has also developed online sales, which are supplemented day by day with new items that could be interesting to customers. Internet sales are something that has a big boost when generating traffic, but in this segment the company is still not satisfied for that could be happy with. Undoubtedly, their traffic is growing from year to year. It was the Internet sales that proved to be a good investment, because during the crisis it was one of the ways on which the company managed to deliver its products and spare parts to the end customers. It is important to mention the top service that sets the company apart from the competition. Professional and educated service technicians perform services to the customers so that their devices can be operational again as soon as possible. Through the service business, in the process a lot of spare parts are also used, which makes the company to gain better business. Before the pandemic crisis, the company employed 16 people and, despite the new situation, to this day it kept the same number of employees. The owners of the company are primarily responsible for this, but also the help that the company received from the Government of the Republic of Croatia. The Government of the Republic of Croatia has provided a package of measures to assist companies that exists within the country for the first three months of the crisis; during the first month HRK 3250 of the minimum wage for which over 400 000 workers applied; and for the second and third months of the crisis, the government provided HRK 4000 and paid a contributions to that amount. These measures have greatly helped companies to be able to keep their business as well as their employees. The way of doing business during the COVID 19 crisis has changed significantly, especially when measures were adopted to ban the operation of offices and services and also to ban the movement, i.e. leaving the place of residence and permanent residence. During the period when the office branches were closed, the company was exclusively dedicated to their sales via the Internet and to the customers who has called the company by phone. This form of sale also required increased operating costs due to the fact that a decision had to be made and carried out that the delivery of devices and spare parts to customers could be done only through delivery services, would be paid by the company. As a result, the difference in price was smaller, which is an additional problem for the company's business. Since the customers could not enter company's stores during one period of time, it was very difficult to communicate and present individual devices. One part of the customers, despite the situation, visited the shops with the aim of buying the necessary devices and spare parts, but as the branches did not work, they could not make a purchase. This way, a part of the customers has become dissatisfied. At the doors of all of the company's branches, were clearly displayed information on how customers can get in touch with the employees, all with the aim of meeting the needs and satisfaction of the customers desires. Of course, this form of business partly meets the slump in sales of devices and spare parts in the company's branches. For some



time, business in the service was uninterrupted due to the fact that part of the devices that were received still had to be serviced. However, during the measures taken, no other devices were received for service, and the devices that were ready were delivered to customers according to the instructions that were recommended, - all with the aim of protecting the health of both the service technicians and the final users of such devices. The sales business was also badly affected by the fact that employees could not even visit their main customers and thus make sales in the field. As it was allowed to move to a limited extent with the obtained and approved passes, this greatly affected the number of people who expressed the need to purchase and services their devices from the company. What has certainly made it difficult and still makes difficult to do business is ordering devices and spare parts and delivering them. Since most devices are manufactured in other countries such as Germany, Italy, Sweden etc., transport and delivery have greatly changed since the time before the crisis. Namely, due to bans and introduced quarantines that last for 14 days, some carriers did not even make deliveries, and some factories stopped their operations for a certain period of time. As deliveries became longer, the company also had to increase the stock of their devices and spare parts, all with the aim of being able to respond to the needs of its customers as quickly as possible. All of this affected the business of the company, which was looking daily for a way to keep its business within margins of profitability. As soon as the measures of the Civil Protection Headquarters began to weaken and as soon as movement without permits was allowed, sales and servicing of the devices, as well as the company's business itself, again has begun to achieve better results. Still the business is not without difficulties; therefore, the protection measures for COVID 19 are still enforced, such as the recommended spacing of 2 meters in offices, disinfection measures and work with masks, but despite the aforementioned, the company continues to work with the same number of employees.

Company Y is a recognizable brand and market leader in Croatia in the production and sales of meat and meat products, and their products are also exported to foreign markets, with exports accounting for 10 percent of their total annual sales.

Company Y's sales department is organized vertically with the sales director position at the top and key customer managers in hierarchically line behind him, followed by the sales managers who manages sales teams that are geographically divided to cover the entire area of Croatia. Regional sales teams have as a point of direct contact with the customer sales representatives and sales promoters which are in daily direct contact with the customers. On a daily basis, sales representatives visit retail outlets and HoReCe and present the sales range to customers and also conclude sales on the spot by entering orders via the hand held digital applications (PDA) into the system for further order processing. As it is generally known, in normal circumstances retail cannot exist without the personal contact of the two parties, the seller and the buyer. An integral part of the sales function makes daily meetings of sales staff with customers at all levels of activity, beginning from the sales director, key customer manager, sales manager and sales representatives. Although the advantages of modern technology have been used in sales rating from telecommunications devices, emails, sales support software and other technological aids that are used on a daily basis, classic sales cannot be imagined only through them, i.e. without personal contact between the buyer and the seller. All these technological aids are perceived as incidental sales assistance tools, and not as the main resources of the sales process in company Y. Restrictions imposed by the state through the Civil Protection Headquarters of the Republic of Croatia required urgent alteration for all participants in economic activity to avoid an interruption in the supply chain of basic foodstuffs. Therefore, the working hours of retail outlets

with basic foodstuffs were strictly regulated. The conditions have since been tightened for visiting to retail outlets and it has been limited the maximum number of customers who can stay in a retail outlet at the same time, in order to respect social distancing measures. As the company Y is engaged in the production of food products the company could not stop working but it was exposed to additional pressure to continue the production due to piling stocks of basic food stuffs that people started to pile up for fear of the uncertainty brought about by the global pandemic on daily life of the citizens. All of the above stated required an urgent adjustment of sales function of company Y in line to the new circumstances that have since arisen in the society. The concept of social distancing, i.e. its implementation in everyday life, has led to compulsory work from home for all the activities that were not necessary, such as health care, transport, retail sale of medicines and basic foodstuffs, and the like. Company Y fully respected the measures issued by the Headquarters of Civil Protection of the Republic of Croatia and committed the obligatory measures to work from home for all the workers who were not essential in the production and logistics or other jobs that can be done from home. Once the measures of obligatory social distancing and avoiding unnecessary personal contacts were in force, the complete sale of company Y was transferred to work from home. The production of food products does not allow interruptions in the sales function, but allows only adaptation to the new business conditions. Every level of sales staff has faced the challenges that work from home has brought to the sales jobs. Working from home has placed great challenges before information technology that has had in a very short period of time to establish the conditions that work from home should be fully functional and operational in all the tasks that sales business required. After the initial shock that the pandemic caused to business, all the business processes had to move on very quickly. In the newly created situation, technological aids that were already used in the sales process, but there were used as aid, and not as a basic resource, had entered the scene. In order to speed up communication between all levels of sales staff, WhatsApp groups were created via mobile phones, effectively covering all levels of management from managerial to operational levels. Each sales team created its own WhatsApp group through which all official communication within the team went both from top to bottom and vice versa. Meetings with customers moved to the virtual world and began to be fully functionally held via applications such as Skype and ZOOM, although they have taken place from the comfort of the employees' own homes. By respecting the measures of social distancing, the sales representatives have processed the orders from the sale points for which they were in charge by their cell phones and entered such data via PDA's for further processing. The leaders have coordinated the work of their teams through conference calls, via messages, also by WhatsApp groups and via e-mail, but also with the communication to the sales manager and their managers - supervisors has been proceeded on the same way. Two-way communication within the top-to-bottom sales service was performed via telephone conference calls, Skype video conferencing, WhatsApp groups, and also communication with the customers was performed via the virtual communication channels.

#### 4. CONCLUSION

Despite the global COVID 19 pandemic, sales operations were performed almost completely and functionally at all levels in both observed companies. Communication with customers and within the sales department was performed through virtual communication channels. The production and supply chain have never been called into question, not for a moment. The fundamental difference between the sale under normal circumstances and the circumstances under the global pandemic comes to expression in business improvement of sales that were completely suspended at retail outlets because of imposed restrictive measures that did not permit it.

Another, very important aspect of selling that managed very difficultly to come to the fore in the newly created circumstances is the added value of sales, which requires full interaction of participants in the sales job that has not been possible by maintaining only the virtual level of communication. Uncertainty about how long this crisis will last also affects customers' decisions and their needs for certain devices that are now reduced for the customers' buying only the necessary devices. All of this affects the companies' businesses and therefore expectations such as an increase in sales when compared to the last year are unrealistic and the focus was exclusively on better meeting the needs and desires of customers. The primary goal is to maintain quality and ensure fast delivery to customers with an existing number of employees, and the secondary goal is to develop and improve online sales and ensure sufficient quantities of items that customers are looking for in the event of a recurrence of the virus.

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# THE ROLE OF THE FIRM IN FIGHTING POVERTY DURING THE PANDEMIC: THE ITALIAN SYNERGY OF BARILLA-CARITAS

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**Abstract:** *The aim of this research is to study firms as a means of distribution, and not only of production, of wealth. In crisis and emergency situations, such as the one caused by the COVID-19 pandemic, a particularly serious problem of growing and widespread poverty emerges. The author believes that in these situations the ethical function of firms becomes central. This function can be carried out effectively not only through the efficient management of the firm, but also through ethical actions, as the creation of alliances and synergies between businesses and the Church, which help the processes of distribution of wealth in society, in general, and in the weaker social classes in particular.*

**Keywords:** *Business economics, Economic crisis, Poverty, Emergency, COVID-19.*

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## 1. INTRODUCTION

Right now, the world is suffering from a devastating pandemic from both a human and an economic point of view. One of the most urgent problems is represented by the growing poverty that mainly affects the weaker social classes, without a source of income also because of the lockdown of companies.

In conditions of social and economic emergency, in which immediate actions must be inspired by solidarity, the role of firms and of their ethical values are fundamental and the study of their behavior becomes central to understanding the economic mechanisms through which business ethics is concretely realized.

This role has been well represented, already sixty years ago, by an Italian scholar, a profound connoisseur of the firm, according to whom the *duty to work for the common good [...] belongs not only to the State, but also to the firms and individuals and, in general, to those who live in society (Onida, 1960).*

With this study, the author wants to contribute to the debate on the relationship between economy and poverty, which is currently particularly felt and, at the same time, more complex than in other historical phases. Furthermore, the reader can learn about the Italian experience, brought through the presentation of a concrete case.

## 2. OBJECTIVES AND RESEARCH METHODS

This study aims to analyze the role that firms can play in the fight against poverty and the tools that they have in pandemic conditions. In this regard, in fact, the author believes that even in emergency situations, such as the current one, virtuous firms can actively contribute to the solu-

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tion of economic problems, but the ways through which they can carry out this function may be different from those useful in ordinary conditions.

About this, it is important to remember, through the thought of the major Italian Business Economics scholars, that companies are not only a tool for the production of wealth, but also a means for its social distribution.

In particular, the author believes that under pandemic conditions, the role of the firm as an instrument for the distribution of wealth is amplified and is achieved through ethical initiatives in favor of the subjects most affected by the crisis. The support of firms is increasingly being realized, not only in Italy, but in a large part of the world, thanks to the alliances between firms and the catholic Church, united together in the fight against poverty.

It is important to remember that these alliances are based on a fundamental element that unites the economy with the Church, that is, *research and responsibility for the common good and human well-being*. For this reason, the social doctrine of the Church considers the economy an *added value in the service of humanity* (Barresi, 2013, p. 10) and the hope is that *technology and economics are at the service of sharing the goods of the earth* (Wresinski, 1968, p. 5).

The study is based both on the qualitative-descriptive method and on the empirical one. The first method is used for the analysis of the relationship between economic and non-economic entities. The second method is used for the study of a concrete case, Barilla-Caritas, which is an example of how the firm can contribute to the common good, even in conditions of economic crisis, especially through alliances with the Church and its institutions (Orlandis, 2005).

### 3. BUSINESS ETHICS STUDIES

The affirmation of important human values has taken place over the centuries and in various parts of the world, while in the economic field attention has often been paid to the social function of firms and the philanthropic character of some of them (Santosuosso, 2012, p. 2).

Although the problem of ethical behavior in the economic field represents an ancient theme, studied both by classical philosophers and by modern economists, especially starting from Adam Smith, business ethics studies developed mainly in the USA, around the 70s of the last century (Silk, Vogel, 1976; Stevens, 1979), and, followed by an important development in the 90s (Carmichael, 1995; Davies, 1997; Freeman, 1991; Pratley, 1995), soon reached Europe, becoming today also an academic discipline.

In the Italian context, business ethics has been a relevant topic for many business economics scholars, who have generally considered the problem of corporate social behavior as a factor that is by no means extraneous to business strategies.

As mentioned by contemporary scholars (Rusconi, 2018), ethical sensitivity was present, even before the most recent developments, in the Italian masters of Business Economics (Onida, Masini, Coda).

In the theory of Onida (1960) there is no contrast between ethics and firm, indeed, respect for the former contributes to good management and overall business economy.



The ethical component is definitely present also in Masini's thought, who, in 1970, dedicated one of his major works (*Lavoro e risparmio*) *to those who in the search for truth and in coherent action give themselves for the «common good»*. In his theory *each firm must operate in such a way as to ensure that it achieves its institutional goals in a harmonious condition with the needs of the common good of the country* (p. 122).

In recent literature, the theme of ethics and ethical code (Catturi, 1995), as well as that of the need to be aware of the ethical dimension of the firm (Di Toro, 1993, p. 122), have become a structural and organic part of the Business Economics and are valued both as action and as social responsibility (Alford *et al.*, 2009; Coronella, *et al.*, 2016; Rusconi, 1997, 2006; Sciarelli, 2007; Signori *et al.*, 2005).

The problem of social responsibility does not concern only the Church (Chung, 2014), but also firms. For the latter, the social responsibility presupposes the recognition by the firm of being a key player in ensuring ethically correct management and promoting social welfare in terms of social cohesion (Pollifroni, 2007, p. 43).

The theme of business ethics has always posed at least three important questions, which although they are critical under normal conditions, may instead be less problematic in crisis situations, in which the ethical behavior of the company tends to be authentic, requiring a high effort and greater sacrifice.

One of the major problems consists in understanding whether, to be such, ethical behavior must be spontaneous, since, otherwise, it would not be an ethical value, but a mere legal fulfillment.

In this regard, the author believes that the true ethical value of the firm's action, as well as of the individual, emerges outside the situations in which it is mandatory to adopt certain behaviors.

If we move from this assumption, it is clear that the true expressions of ethics, as a moral duty and not as a legal obligation, are manifested precisely in contexts of emergency and of growing poverty, such as the historical phase we are experiencing. Under these conditions, the firms that voluntarily support the poorest classes are precisely those that own some fundamental values such as: a) generosity; b) sensitivity; c) human respect; d) charity.

A second problem consists in understanding whether ethical behavior can be considered as an authentic action of love for the weakest, and not only as a tool used in an opportunistic way (Ciappei, 2005) by firms to obtain visibility and fame.

The author believes that the fame and visibility of the firm are not to be censored; if obtained by lawful means, they represent positive values that support the firm, its competitive strength and reputation (Sciarelli, 2018): the firm's ability to be on the market efficiently and effectively is a common good that benefits the whole of society.

However, it is necessary to avoid contradictions, i.e. the situations in which on the one hand the economic subjects declare to follow ethical values and on the other they pursue their interests exclusively (Ciambotti, 2015, p. 53).



Finally, there is a third aspect that concerns the relationship between economy and society, as the poverty that firms can contribute to fight is not only the lack of material goods but also the condition of oppression in which the poorest live.

This problem is well represented by the thought and action of Father Joseph Wresinski, who dedicated his life to the poor, so that the world knew their social, and not only economic, disease. This concept is evident in the definition of great poverty, given by the French Economic and Social Council on the basis of the report “Great poverty and economic and social precariousness” presented by Father Joseph Wresinski in 1987: *Precariousness is the lack of one or more certainties, mainly that of work, which allow people and families to assume their professional, family and social obligations and to take advantage of their fundamental rights. The resulting insecurity can be more or less large and have more or less serious and definitive consequences. It leads to great poverty when it affects several sectors of existence, when it becomes persistent or when it compromises the possibility of re-assuming one’s responsibilities and of regaining one’s rights by oneself, in a foreseeable future.*

In this sense, it is fundamental to understand the difference between poverty and misery, as the first is the lack of means, while the second is the annihilation of the human being. As stated by Wresinski (1983/2009, p. 88): *Misery is not inferiority due to lack of power, it is the mutilation of your very quality as a human being.*

#### **4. FIRMS AND THE DISTRIBUTION OF WEALTH**

In normal conditions, firms can contribute to social progress through acting in an economically efficient and effective way. Specifically, manage the firm to produce wealth means operating in favor of the community as the wealth produced does not stop within the firm but also spreads to society.

The main means of distributing wealth are: 1) the wage policy; 2) the pricing policy; 3) the dividend policy (Onida, *cit.*).

As for the first policy, that is, wage policy, the social diffusion of the wealth produced by firms occurs primarily through the creation and conservation of employment. Employment allows the distribution of wealth in the form of wages and salaries, and this wealth returns to the economy through consumption. Consumption supports demand and demand supports firms’ production. In this way, a virtuous circle occurs in which economic progress develops.

In relation to the second policy, firms can distribute wealth through the application of low sales prices which allow even the poorer classes to live with dignity. It is true that the application of low prices reduces firms’ profit margins; however, it also allows, in most cases, to increase the sales quantities and therefore to obtain satisfactory profitability.

Finally, as regards the third policy, the wealth produced by firms spreads in society through the distribution of dividends, which represent income for shareholders. These incomes will return to firms through consumer spending, thus continuing to support economic progress.

These three policies, if properly managed and combined with each other, imply that the wealth produced by the firms can be distributed outside and can contribute to the economic and social progress of the community.

## **5. THE RELATIONSHIP BETWEEN FIRMS AND THE CHURCH IN PANDEMIC CONDITIONS**

It is important to note that in crisis situations, the three policies useful in normal conditions may not be enough, or even be completely blocked due to the forced closure of economic activities. In these situations, in order for the firm to actively contribute to the fight against poverty, additional policies, or appropriate changes to the policies already used, are necessary to enhance the social role of private economic activities.

Specifically, the social role of the firm can be played through ethical actions, which work together with the three wealth distribution policies described above in supporting the poorest classes of society. These actions, generally based on initiatives such as donations, subsidies and welfare policies, can be carried out effectively through an alliance with institutions that have always been committed to the fight against poverty, and in particular with the institutions of the Church.

In conditions of general and exceptional economic crisis, the need for help and support becomes urgent and the social action of the Church, which in history and culture is closest to the needy, assumes central importance. In this sense, the coalition between the economy and the Church can become a key factor in preventing or reducing the degeneration of poverty into misery.

In the particular context of the COVID-19 pandemic, the union between Church and firms becomes central, for at least two reasons: first of all, the Church can act as a link for the distribution to the poor of the wealth produced by firms; secondly the Church is committed not only in supporting the material needs of individuals, but also in affirming the fundamental rights of all people to participate in the culture of the society to which they belong.

The relationships described above represent an optimal synergy, as a system of social peaceful cooperation (Woods, 2005, p. 205), between the private economy and the integrative function of the Church, thanks to which it is possible to pursue well-being even in emergency conditions, in which the wealth distribution circle is interrupted or cannot function normally.

## **6. THE SYNERGY CASE OF BARILLA-CARITAS**

The Italian Barilla-Caritas case is a virtuous example of synergy that demonstrates how the social emergency enhances both firms as a tool for producing wealth, and the Church and its institutions as tools able to contribute to the distribution of wealth produced by firms.

Barilla is an Italian company active in the food sector and operating internationally and is a model of excellence, not only from an economic point of view, but also from an ethical point of view.

The company was founded in 1877 by Pietro Barilla who, descended from a family of bakers documented from 1576, opened an oven for baking bread and a small workshop for pasta processing in Parma.

In 2019, Barilla's turnover exceeded 3,500 million Euros, with 8,481 employees and 28 production sites, of which 14 in Italy and 14 abroad, in 100 countries.

Barilla's social commitment is well represented by the Barilla Center for Food & Nutrition Foundation (BCFN), founded in 2009 with the aim of analyzing the major issues related to food and nutrition in the world. The foundation is an independent and multidisciplinary center of thought that studies food in its environmental, economic and social dimension. In 2014 BCFN became a foundation and consolidated its commitment in communicating and finding concrete solutions to the issues of global nutrition.

Barilla has always shown a remarkable interest in poverty, and has made the words of Father Joseph Wresinski his own: *Wherever there are men and women condemned to live in extreme poverty, human rights are violated. And it is our precise duty to unite to guarantee respect for these rights.* With these words, Father Joseph Wresinski was among the first to emphasize the link between poverty and respect for human rights, including the right to food. Barilla, through the no-profit Barilla Center for Food and Nutrition Foundation, has been able to capture this message, even in times of virus COVID-19, in the spirit of collaboration and solidarity.

Caritas, founded in 1971, is a no-profit organization that promotes charity worldwide to support those in need. It operates in Italy, Europe, the Middle East, Africa, America, Asia and Oceania. Its aim is to promote the witness of charity in the Italian ecclesial community, in ways that are appropriate to times and needs, in view of the integral development of human being, social justice and peace, with particular attention to the poorest and with prevailing pedagogical function.

The 220 diocesan Caritas are engaged in the territory in the animation of the ecclesial and civil community, and in the promotion of pastoral tools and services: listening centers, observers of poverty and resources, parish caritas and reception centers.

Caritas, in collaboration with other Christian-inspired bodies carry out studies and research on needs to help discover their causes; promote volunteering and encourage the training of pastoral workers of charity and Christian-inspired staff engaged in social services; contribute to the human and social development of the countries of the South of the world also by raising public awareness.

Through the relationship between Barilla and Caritas, the values of solidarity and human respect are united in the fight against poverty. Thanks to this relationship, private economic wealth has moved to the weakest people in society.

Among the most recent cooperation interventions it is important to remember that in April 2020, through the Alimenta Foundation, the Barilla Group donated IT tools and teaching materials to families in difficulty. The contribution was distributed to the diocesan Caritas present near the 8 Barilla plants in Italy. The aim is to support the education and training of new generations for that segment of the population which, due to the Corona virus emergency, is unable to purchase the IT supports and the necessary teaching materials. The sum donated for this purpose is 120 thousand Euros.

## 7. FUTURE RESEARCH DIRECTIONS

The conditions of exceptional emergency such as the current ones should stimulate the scientific debate to question about the tools to face the social and economic problem of poverty.

In pandemic situation, the problem is more complex for two reasons: on the one hand poverty is increasing, on the other the whole economy and firms are unable to produce adequate and sufficient levels of wealth to ensure conditions of general well-being.

The task of scholars should therefore consist in analyzing possible solutions and in reflecting on issues such as subsidiarity and collaboration between all social partners. Despite its drama, the experience of the pandemic should not be lost, but, on the contrary, it should serve as a stimulus for the study of the best solutions to be adopted in practice.

The case studied here represents one of the possible actions to be undertaken and promoted and can be an example of an excellent relationship between virtuous enterprises and non-economic institutions, such as the Church, united towards a common goal.

However, the debate still remains open and the path to be followed to find suitable solutions to the most difficult conditions is still long. Business Economics scholars, who deal with firm for scientific purposes, may not agree with the solution described here, which sees the Church as one of the possible solutions.

Precisely for this reason, the theme dealt with here opens up new horizons of study, which in current conditions are called to face a problem, that of poverty, which is more urgent than ever.

In this sense, the problem does not consist in sharing or rejecting the solution proposed here. The solutions may indeed be different, but what matters is that the economic sciences deal specifically with this problem: when firms struggle to reach adequate levels of profitability, the circle of wealth distribution, which creates general well-being, is interrupted or alters. These are therefore the situations in which, as firms are not enough on their own, further and supplementary interventions must be adopted, such as cooperation and synergies with other social institutions that contribute to filling the gaps in economic support suffered by the poor.

The future that awaits us makes it necessary to reflect in depth to understand how the economic world can actually, and not only theoretically, contribute to the common well-being, that is, to the social good that even the Italian Business Economics has long identified as the duty of everyone.

## **8. CONCLUSION**

Poverty is an ancient problem that has been the focus of scholars for many years. In this historical phase this problem has become urgent as the conditions of poverty are spreading rapidly and with greater seriousness all over the world.

In this context, firms play a central role as they constitute an instrument not only for production but also for the distribution of wealth.

Specifically, while pursuing private economic ends, firms actually play a particularly important social function. Economic studies often highlight that this social function is performed through efficient and effective management of economic resources, for the benefit of the whole community.

However, in this historical moment, the role of wealth producer, typical of the firm, is affected and significantly weakened by the economic crisis, which makes effective and efficient management goals more difficult to achieve.

Under the conditions described above, firms need to work with institutions that have cared for the poor for centuries, to create a synergy that allows a better distribution of wealth. The Church has always worked for the poor, not only through their material support, but also through actions aimed at their social inclusion, for the affirmation of their rights.

In order for this collaboration to be effective and concrete, virtuous firms must not and cannot limit themselves to playing their typical role of wealth's producers, but must also possess and share some fundamental ethical values such as generosity, human respect, collaboration and solidarity.

The case studied in this research well represents this solidarity and constitutes a model suitable for a general application, in which the synergy between firms and the Church is particularly suitable for the pursuit of the common good.

The Barilla-Caritas case is in fact an Italian example of a virtuous relationship, through which the values of solidarity and human respect have come together in the fight against poverty.

Specifically, this study has shown that even in crisis situations, companies such as Barilla can contribute to the common good by supporting the social role that non-economic institutions, such as Caritas, play every day to defeat misery.

The case considered here constitutes an important example of ethical economic action, as charity is a tangible manifestation of the values that the firm can possess, in addition to the strictly economic ones.

The ethical profile of the firm has led to the birth and growing development of business ethics studies, since the 70s of the last century. Even more so, in conditions of growing poverty, the problem of the ethics of economic action is amplified, as the need to support the weaker classes of society becomes central and of general interest.

Fighting against poverty is everyone's duty, as a poor society is destined to remain a weak society, in a broad and not only economic sense. It is condemned to remain politically marginalized, backward in education, unable to create excellent human capital, disrespectful of human rights and, in short, lacking the indispensable conditions for participating and contributing to progress and civilization.

## **ACKNOWLEDGMENT**

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# CRISIS MANAGEMENT OF PRIVATE KINDERGARTENS IN CHINA UNDER COVID-19 EPIDEMIC SITUATION

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**Abstract:** *Since the outbreak of COVID-19, private kindergartens in China have encountered a crisis of survival and development. Whether private kindergartens can successfully overcome difficulties is related to the development goal of preschool education and more children's enrollment needs could be met in the future. In order to realize the sustainable development of private kindergartens, literature review and interview are adopted in this paper to analyze the practical difficulties faced by private kindergartens during the epidemic. The following suggestions are proposed from the perspective of kindergarten internal management: kindergarten principals should assume the responsibility of management, adopt a variety of ways to reduce the turnover rate of kindergarten teachers, and establish the crisis management system in response to outbreaks.*

**Keywords:** *COVID-19 virus, Manager, Internal management, Public interest kindergarten.*

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## 1. INTRODUCTION

Since the outbreak of COVID-19, China has taken a series of prevention and control measures such as quarantine, extension of holidays, suspension of in-house catering and tourism, and online teaching to avoid large-scale population movement and aggregation, thereby controlling the development of the domestic epidemic in a relatively short time. As a country with a large population, China has achieved such a significant stage victory in the fight against the epidemic that other countries in the world began to learn from the “China experience”. However, there is no denying that the COVID-19 epidemic has caused a noticeable impact on the development of economic and social in China, as well as people's daily life (Zhang, 2020, p. 26), especially brought severe survival and development crisis to private kindergartens. There are 266,677 preschool education institutions in China, among which 165,779 are private kindergartens, accounting for 62.16% of the total (CHNNBS, 2019). In the nearly four months since the outbreak, private kindergartens have no source of income because of suspension. If the kindergartens can be reopened in mid-May, it will also face the problems of refunding part of tuition fees to parents and the possible loss of teachers and children. It is customary for kindergartens to have summer vacations in early July, which will lead to the income of these private kindergartens may be zero again. That is to say, private kindergartens are expected to have a seven-month income freeze period this year due to the particularity of its industry. Whether private kindergartens can successfully overcome the difficulties is not only related to the interests of the founders of kindergartens, but also related to the realization of the goal of reaching 80% coverage rate of public interest kindergartens in China by 2020 and the possibility of more children's enrollment in the future (Yang, 2020, p. 3).

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On April 15 this year, the general office of the Ministry of Education in China (2020) issued a notice on the support work for private kindergartens throughout the country during the epidemic, requiring all regions to regard relief of difficulties for private kindergartens as an urgent task at present and formulate phased support policies for them. Many education administrations have supported private kindergartens through policies such as reduction and subsidy of education fees, issuance of awards and subsidies for public interest kindergartens, free distribution of epidemic prevention materials and tax incentives. In fact, in order to achieve sustainable development, private kindergartens should not only rely on the help from the government, but also strengthen their internal management to improve their ability to prevent and control crises. However, previous research mainly focused on the external aspect of private kindergartens, for example, the policy support from the government, and there is basically limited research on the internal emergency management of private kindergartens. To bridge this gap, this paper focuses on how to improve the internal emergency management based on the analysis of the dilemma faced by private kindergartens, so as to improve the sustainable development of private kindergartens.

## **2. METHODOLOGY**

In this study, literature review and interview were mainly adopted. Literatures was mainly selected by referring to the articles indexed in CNKI, WoS, Scopus, Google Scholar and CQVIP based on the following keywords: “COVID-19”, “private kindergartens”, “managers” and “management system”. The policies, regulations, documents and related data are conducted through the official websites and newspapers of the Chinese government. Due to the epidemic situation, the interview is mainly carried out in the online form with a total of 6 teachers and principals of private kindergartens in different levels on the basis of the interview outline prepared in advance.

## **3. RESULTS AND DISCUSSION**

With the outbreak of covid-19, private kindergartens that had lost their main source of income were hit hard due to school suspensions. To be able to successfully overcome the difficulties, the managers of private kindergartens will face multiple challenges.

### **3.1 Operation of private kindergartens**

The plight of private gardens during the epidemic has attracted widespread attention. A survey of 280 private kindergartens showed that more than 60% of them were unable to maintain normal operations and 19% were seeking to transfer due to a shortage of funds (Luo, 2020, p. 2). As early as February 28 this year, a research from Preschool Education Committee of the Chinese Association for Non-Government Education pointed out that the epidemic brought great challenges to the operation and even survival of private parks, especially public interest private kindergartens, and there is a greater risk of out-of-school children. It is recommended that the government should provide rent subsidies, and encourage financial institutions to provide small loans to private kindergartens in the form of government discounts and low interest rates to alleviate the financial difficulties.

In the case of COVID-19 epidemic crisis, private kindergartens need to rely on their own management in addition to policy support and other external forces to achieve their sustainable development. In particular, kindergarten principals must take the responsibility of management. The Professional Standards for Kindergarten Principals published by the Ministry of Education

of China (2015) clearly clarifies the roles of kindergarten principals as managers, leaders and educators, each of which has corresponding tasks and professional responsibilities. By comparing the relevant professional standards or occupations of kindergarten principals in China, the United States, New Zealand and Canada, it is found that both the roles of managers and leaders are emphasized, and the comprehensive and specific professional responsibilities and performance of kindergarten principals are highlighted (Suo, 2019, p. 46), as shown in Table 1.

**Table 1.** The role orientation of kindergarten principals  
in professional standards of four countries

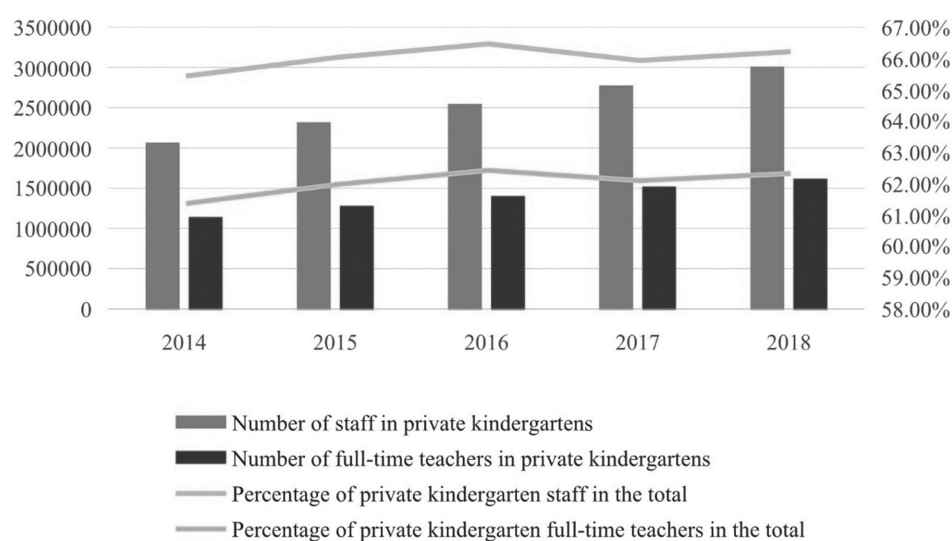
Country	Role orientation of kindergarten principals		
China	manager	leader	educator
United States	manager	leader	--
New Zealand	manager	leader	educator
Canada	manager	leader	educator

It is necessary for kindergarten principals to take the initiative to take their responsibilities, especially the kindergarten emergency management after the epidemic. The principals need to organize the preparations for the start of the kindergarten in advance, including personnel arrangements, system construction, parent work and so on. Before children officially enter the kindergarten, teachers should be organized to establish a connection with every parent. For example, a series of parent-child education courses on the online platform could be provided for parents who are still hesitant to choose a kindergarten to keep abreast of the situation of the children and guarantee a smooth transition before official arrival. Such distance education methods could not only achieve “suspension of classes but not stop learning and no delay in education”, but also can make the parents still choose to let their children continue to stay in the original kindergarten and ensure that the source of students is not lost. Also, it can also ensure the basic income of kindergarten education fees, which is helpful to maintain the basic operation of kindergarten during the outbreak.

### 3.2 Turnover of preschool teachers

Before the epidemic outbreak, previous research showed that the flow of kindergarten teachers is significantly higher than that of teachers in other education stages, and unbalanced flow phenomenon with a liquidity period of less than 5 years and a flow rate of more than 10% gradually becomes more prominent (Yue & Liu, 2013, p. 53). Moreover, the research on the kindergarten teacher turnover in central China showed that the frequent turnover of kindergarten teachers presented a certain regularity, that is, the turnover rate of teachers in private kindergartens is much higher compared with public kindergartens (Cai, 2011, p. 7). To grasp the impact of the epidemic on the profession of preschool teachers, 3 different types of private kindergarten teachers was conducted an online interview to after the epidemic outbreak. Two of these respondents reported that they had switched careers because that their kindergarten had not been paid during the epidemic, and they either did not have enough deposits to pay for daily living expenses. Another respondent got the basic salary from the kindergarten, but the amount is not adequate to maintain the elementary needs in their daily life. She is on the fence about whether to change her career although she loves the education career. In fact, the turnover rate of kindergarten teachers is aggravated on the original basis affected by the epidemic situation.

Figure 1 shows that both the number of staff and full-time teachers in private kindergartens account for a significant proportion in the whole preschool education system (CHNNBS, 2019). Therefore, the increasing turnover rate of teachers of private kindergartens during the epidemic will have a great impact on the development of preschool education in China. Most private kindergartens may face the problem that the number of teachers is insufficient when children come back to the kindergartens. For private kindergartens, although the loss of some teachers could reduce some expenses, it was bound to bring difficulties to the future education and teaching activities. The kindergarten principals should ensure that the existing capital chain is not interrupted because that the private kindergarten needs to be responsible for its own profits and losses, which is not only the economic lifeline of the kindergarten, but also an important guarantee for the payment of the salaries of the current teachers.



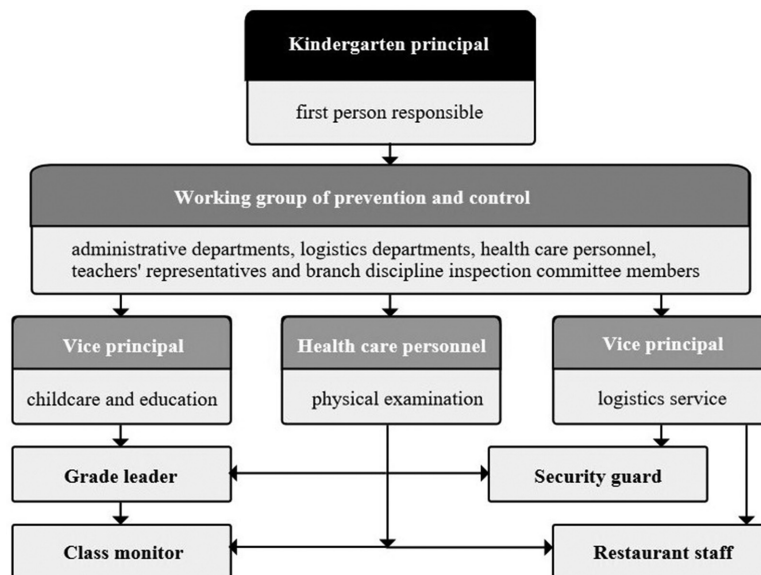
**Figure 1.** Situation of staff and full-time teachers in private kindergartens

Kindergarten principals should adopt a variety of ways to reduce the turnover rate of kindergarten teachers. On the one hand, the principal could organize the teachers to establish an “online companion community for children” during the epidemic, and parents can join the group voluntarily and only need to pay a small fee. Special teachers should be arranged to share parent-child game videos suitable for preprimary children in the group, and answer parents’ parenting questions at a fixed time every day. In this way, it not only could enable preschool teachers earn more than their salary during the epidemic, but also stimulate their sense of mission and motivation for achievement with parents’ participation and trust, and make them more enthusiastic about their current positions. Besides, the various awards and subsidies provided by the government in response to the epidemic could be reasonably used to provide basic living subsidies for teachers, so as to guarantee their basic living to reduce the turnover rate. On the other hand, since preschool teachers need to do more work after the kindergartens officially reopen, kindergarten principal could take necessary welfare plans to increase teachers’ professional happiness and stabilize the teaching team. It has been reported that 71% of the surveyed employees could be influenced by their welfare plan on their decision of whether to resign or not (10 Robbins & Coulter, 2017, p. 329). Because the epidemic has not been completely controlled, the following welfare plans can be adopted in kindergartens to avoid cross-infection and meet the safety needs of teachers, for example, kindergarten teachers could have free meals in the kindergartens and receive free daily epidemic prevention materials such as thermometers and masks.

### 3.3. Internal emergency management mechanism

Although the support policies for the epidemic issued by the Ministry of Education and other local governments could properly alleviate the survival problems of private kindergartens, effective internal management system is fundamental to achieve private kindergartens' sustainable development. Online interviews were conducted with 3 principals of private kindergartens at different levels. All of them reported that there is a lack of emergency management mechanism for unforeseen circumstances such as outbreak of COVID-19. It is of great significance to establish the internal emergency management mechanism to realize the sustainable development of private kindergartens on the basis of ensuring survival.

Therefore, the kindergarten should establish a management system for epidemic response before the official reopening. As the first person responsible for the prevention and control of the epidemic in the kindergarten, the principal is fully responsible for the organization, leadership, responsibility decomposition, task implementation and supervision and inspection of the epidemic prevention and control in the kindergarten, which is the requirement of China's Ministry of Education (2020) for all principals of both the public and private kindergartens (p.12). Firstly, the kindergarten principals should organize the establishment of the kindergarten epidemic prevention command leading group to complete the work plan and system construction during the epidemic prevention and control, as shown in Figure 2. Specifically speaking, it is necessary to formulate emergency plans and conduct relevant exercises to ensure that relevant personnel clearly understand the procedures and responsibilities before children enter the kindergarten. Additionally, there is a need to develop and refine the work specifications for children care and disease prevention, as well as the health care specifications in the one-day kindergarten process. Kindergarten rules should be open and transparent to children's parents to win their trust. After the formation of a virtuous cycle, it can be ensured that children could insist on going to the kindergarten every day without being absent.



**Figure 2.** Structure of epidemic prevention command leading group in kindergarten

Secondly, kindergarten principals should implement various prevention and control measures according to the requirements of local government, and make on-duty arrangements to ensure the health and life safety of children and teacher. Also, the principals of the kindergartens shall timely launch the emergency plan for prevention and control of the sudden epidemic in the kin-



dergarten according to the specific conditions after the kindergarten reopens. The first lesson for children should be elaborately arranged for a stable transition and large collective activities should be avoided. Finally, it is necessary to organize specially-assigned personnel to take charge of the psychological adjustment of kindergarten staff after the epidemic, similarly, kindergarten teachers should actively pay attention to the mental health of children and their parents, both of which are very important but also easy to be ignored by the manager.

#### 4. CONCLUSION

Since the global outbreak of COVID-19, the sustainable development of private kindergartens in China has been greatly impacted. Based on literature review and individual interviews, this study argues that private kindergartens are confronted with the many difficulties such as the risk of closure or transfer in operation, the increasing turnover rate of preschool teachers, and the general lack of emergency management mechanism in kindergartens. In view of this, we suggest that kindergarten principals should take the responsibility of management, adopt a variety of ways to reduce the turnover rate of kindergarten teachers, and timely establishment of crisis management mechanism in response to the epidemic.

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# NEW ROLE OF RELIGIONS IN THE PANDEMIC CONTEXT

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**Abstract:** *The global pandemic produces rules that impose suffering on religions, which must reconsider their social role now. This entails the need to examine the rules of coexistence within societies, where Coronavirus phenomenon raises existential and religious questions. We need to look at the condition of the state of religious freedom – in the European context – referring to globalization in a climate of restriction of personal, social, and religious freedom.*

*Complexity has undermined the role of states, the delimitation of competences regarding relations with religions. For them, building community and associations relations where religious freedom is expressed is fundamental. Believers are therefore bearers of specific interests.*

*This particular situation calls for a new function for religions, focused on the value of the person who can lead to the common identity and guarantee «those values of social and community integration that seem particularly discovered today».*

**Keywords:** *Religious formations, Democracy, Europe, Faithful.*

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## 1. INTRODUCTION

The pandemic phenomenon shows its complexity by the fact that it involves many different areas, which affect – both directly and indirectly – the sphere of economic, political, institutional, and religious relations.

The limitations imposed by the current health emergency have produced new rules, which impose suffering on religious confessions as well. So that, they need to reconsider their social and public role now.

All this implies – as an immediate effect – the need to analyse the rules of coexistence within societies, where Coronavirus phenomenon raises existential and religious questions.

One of these questions concerns the concept of rule of law and the protection of religious freedom, inserted both in the national and European context, with reference to globalization in a climate of restriction of personal, social, and religious freedom<sup>2</sup>.

The relationship that is created between Covid-19 and religious freedom and the consequent role of religions and religious freedom in times of emergency is extremely current and of great interest.

As in the pandemics of the past, the places used by religions – especially for sacred rites – must be close like any other place where gathering can be created, because of their intrinsic collective dimension, which could facilitate infection.

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<sup>2</sup> Cfr. Santoro, R. (2014), *The Role of Religious Confessions in Building Europe*, (p.78-99) in Vv. Aa., *Europe of founding fathers: investment in common future*, Bari (Italy), Cacucci.

As has been pointed out, the measures taken to deal with COVID-19 have caused a series of restrictions on the constitutional rights of freedom and, therefore, the right to religious freedom has also been affected. The limitations imposed are indirect, as a necessary result of the measures intended to limit free movement and meetings. It was the first time, since the Italian Constitution came into force, that the need to protect the health – as a legal asset – has led to such a wide limitation of the rights of freedom, which are so central to the establishment of our fundamental Charter.

## 2. RELIGION AND THE CONSEQUENT RIGHT TO RELIGIOUS FREEDOM

The absoluteness of the protection reserved for health has considerably restricted the protection reserved for religious feeling<sup>3</sup>. Despite some hesitations revealing the difficulty in taking the right measure of the new limitations (e.g. the „proximity” to the country expressed „in the opening of the churches” of the CEI public note of 10<sup>th</sup> March turned into a choice of „responsibility” in „closing churches” two days later), religious confessions have adapted to state provisions, linking them to a safeguard clause of necessity and urgency also known by religious rights.

Even wondering on the aesthetic and external contents of religion is not a new conceptual operation, but in the days of the Coronavirus emergency it takes on a different meaning. In fact, the need for the faithful to associate has promoted the explosion of „online religion”, with Masses, video-catechesis, messages from bishops, parish priests and lay people through the web. This transposition takes place through direct social networks (i.e. Facebook, Instagram), instant messaging programs (i.e. WhatsApp, Telegram) or by using one of the many video conferencing platforms available. Added to these pastoral experiences, designed and lived online, there is the sharing – always via web – of impromptu celebrations on the terraces of the rectories, and prayers recited by the minister, who walks the city streets. Beyond the reasons that make choices of this type (the main one is certainly the need to be spiritually present), one of the questions that deserves further study concerns the value of the rites and, above all, the value of the Mass, which is the main one.

The National Office for Social Communications of the Italian Bishops’ Conference has recently released the document „Celebrating Mass on TV or streaming”, a handbook addressed to all those priests, religious people and deacons, who are engaging in online celebrations. The suggestions of the CEI note are a fundamental reference point for technically managing this „spiritual tsunami” that has swept the social accounts of many faithful, who are orphans of the celebrations in the presence of the assembly of the faithful. The three parts composing it („practical indications”, „directional attention”, „social glossary”) have a double merit: indicating precise work methodologies and stimulating training in this area, hoping that it will be used as an incentive to know and interpret the identity codes of digital culture.

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<sup>3</sup> The letter of the Prime Ministerial Decrees of 8<sup>th</sup> March 2020 (extended to the whole national territory the following day) was direct. It suspended all the „events in public or private places”, „including those of a playful, sporting, religious and fair nature”, „even if they would have taken place in closed spaces but open to the public” (Article 1, lett. g) and has conditioned the opening of places of worship (*rectius*, the entrance, as it will be specified in Article 1, lett. h of Law Decree N. 19 of 25<sup>th</sup> March) „to the adoption of organizational measures such as to avoid gatherings, taking into account the size and characteristics of the places, and such as to guarantee visitors the possibility of respecting the at least-one-meter-distance between them” reiterating, however, the suspension of „civil and religious ceremonies, including funeral ceremonies” (Article 1, lett. i).

A religious dimension on the Net, in addition to paying appropriate attention to technical-formal details, must lead itself in the perspective of a religious ministry mediated through the world of technological communication, which focuses on the beauty of the content of faith and manages to embody it in the contemporary context, characterized precisely by the presence and development of digital media, by the factors of convergence and interactivity.

Complexity has undermined the role of states, the delimitation of competences regarding relations with religions, relations between religious confessions and State, and above all, it has put in crisis an old conception of conceiving religion<sup>4</sup>.

The differences, also concerning religious systems and the so-called religious phenomenon, are characterized by the fact that they derive their existence not from the internal rules of the various socio-juridical systems, but from the theological and transcendental content. It should be pointed out that religious systems represent the most emblematic expression of the multicultural problem, because they contribute to clearly form the identity of nations<sup>5</sup>.

Conflict often comes from diversity, characterized not only by the different content of the vision of life, but also by the different reaction with respect to the facts of life, in this case conditioned by globalization and multiculturalism. This difficulty affects not only transnational international coexistence, but also the dignity of the human person itself.

In this context, religion and the consequent right to religious freedom are presented with a content of transcendental values, which unite the life of people, determining their conduct, ways of life, customs, morals, the way of thinking and of acting. Religion, by its nature, implies the existence of a strong and qualified bond, which explains the sense of belonging in an associative bond, many times suitable for creating confessional organizations, which tend to take on a specific role within the socio-political context in which they operate. This sometimes causes tensions, conflicts, identity crises of social growth, also coming from the new cultural, social, legal and economic scenarios that cross European countries and, at the same time, entails the need to rebuild a system of values that leads to a peaceful coexistence, within which we can achieve the well-being of every man, as an integral part of society itself.

### 3. THE PUBLIC FUNCTION OF RELIGION

The religious factor shows itself - both with respect to these events and to the personal aspirations of each individual - as a «privileged perspective suitable for filling the human aspirations for freedom, equality, tolerance, democratic participation, that is, suitable to fill with content the same dignity of the human person in the reproduction of daily relationships»<sup>6</sup>.

<sup>4</sup> In its new enlarged geographical composition, the European space on the one hand had to verify „the existence of a phenomenon of exaltation” of diversity, on the other it had to face the problem of relations inherent in religion and politics, within the relationship between the religious dimension and the law. Cfr. Dammacco, G. (2003), *Multiculturalism and the right to coexist of cultures in Europe. The new instances of the Balkan countries*, in Santelli Beccegato, L. (edited by), *Interculturalism and future* (pp.283-300), Bari (Italy), Levante.

<sup>5</sup> Cf. Santoro, R. (2018), *Multiculturalism and Religious Affiliation – or Religious Factor: Legal Problems of a Changing Society*, in Vv. Aa., *Religious Phenomenon and Dynamic of Multiculturalism* (pp.13-39), Bari (Italy), Cacucci.

<sup>6</sup> Dammacco, G. (2001), *Human Rights and Religious Factor in Euro-Mediterranean Multicultural System*, Bari (Italy), Cacucci.; Catalano, G. (1989), *Lectures on Ecclesiastical Law*, Milano (Italy), Giuffrè. Here it is stated «How mistaken it is to insist – both on the philosophical and sociological field – on the old idea, which considers religion as just a “fact of conscience” concerning the individual sphere and with no effects

The rights of the person and his fundamental freedoms become synonyms of the common good to be protected: religion represents a system of this common good that unfolds its effects differently according to the different geo-political spaces. In fact, religion, freedoms, equality, dialogue are to be considered supreme values towards which to orient coexistence and the relationships between societies<sup>7</sup>.

The religious dimension occupies a first-rate place. There has been talk, not by chance, of the return of religion in the public space, but it is not always possible to explain what this expression actually refers to.

The public function of religion focuses on the value of the human person to define identity in a common perspective, which allows to guarantee «those values of social and community integration that seem particularly discovered at the present time»<sup>8</sup>. Consequently, «individual religious freedom increasingly requires the associative bond in order to guarantee its effective development»<sup>9</sup>.

#### **4. DIALOGUE WITH THE STATE AND WITH PUBLIC INSTITUTIONS CONSTITUTES A NECESSITY FOR THE RESOLUTION OF THE SOCIAL PROBLEMS**

For religions, building community relationships of associations, in which religious freedom is expressed, is fundamental. The faithful, therefore, are bearers of specific interests.

The religious dimension of man consists of principles that are based on revelation, on theology, on conscience itself, and on transcendental instances, superior to the rules of coexistence, however democratically constructed. In fact, the fundamental values of which religions are bearers have always represented indispensable points of reference for the life of the person.

Within the various social systems, the legal system guarantees the fundamental recognition of those values for coexistence and disciplines them especially at the constitutional level. Therefore, the constitutionally guaranteed religious factor consists in the social dimension of the spiritual and theological values lived by the faithful. In addition, the legal system must be concerned that the different religious visions of life do not conflict with each other or with the State itself in order not to hinder peaceful and productive coexistence. In this perspective and with regard to the autonomy of religions, the urgent decree due to Covid-19, justified by the unpredictable relevance of the event, responds to a way of implementing the secularism and

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on the sociological field. Therefore, it is considered absolutely unimportant by the legislator or, nevertheless, as something which does not interfere into producing rights».

<sup>7</sup> The process of building peace between religions is part of the construction of Europe, based on legal principles and rules governing the peace and security process. See in this connection article 2 and 6 of the Treaty of Amsterdam, where the common objectives and the values on which to base the common European coexistence are defined. It is an ongoing long legal-political process, which encounters considerable difficulties. The production of the numerous legal acts highlights the importance of the ultimate goal, that is to achieve a coexistence of peace and security, also promoting the development of peoples and their well-being. In addition to articles 2 and 6 of the Treaty of Amsterdam, are also to be mentioned: Treaty of Nice (2000); Helsinki Final Act (1975); Barcelona Declaration (1995); Treaty Establishing a Constitution for Europe (2004).

<sup>8</sup> Garelli, F.(1991), *Religion in Italy: towards a New Cultural Hegemony?* (pp.159 ss.), in *Il Mulino*, Vol. 40

<sup>9</sup> Cascuscelli, G.(1998), *Religious Freedom and Minority Confessions – Three Operational Guidelines*, in *Studies in honor of Gaetano Catalano* (pp.421 ss.), I, Soveria Mannelli (Italy), Rubbettino.



autonomy of the state. It has been said that The virus strikes without distinction, in full respect of the principle of equality, without discrimination. And governmental measures chase the virus in the same direction: they run to stop the movement, the circulation and the meeting, in any motivated way. The decrees do not close the churches but suspend the „civil and religious” ceremonies, literally intended as those demonstrations (sacred or secular) that take place according to a pre-established program or rite and with the intervention of an audience.

Thus, the virus tests both the orders of States and those of Churches and religions, as well as their mutual relationship, driving to review consolidated models of organization and development. Precisely, all this contributes to the *reformatio ecclesiae* also considering the reform of the behaviour of the faithful.

The particular condition created by the pandemic has rediscovered the fragility of the human person and his value. In this direction, religion has rediscovered the importance of its role, which it is practicing in this period through the action of religious leaders (think in particular of the work of Pope Francis and of the other religious leaders of Islam, of orthodoxy Christianity and Judaism) and solidarity works to help the needy, including those who have lost economic capacity due to the pandemic. This happened because the complex of the dogmatic, moral and ethical patrimony of all religions constitutes a strong system of values identifying a human group; that human group that jurists define with the expression of „religious confession”. The human, philosophical and legal principles that are derived from religions have contributed to creating civilizations and to forming the different socio-legal systems, within which the principles of tolerance and protection of religious freedom have developed, albeit with great suffering.

These principles, consolidated over time within the different societies, today meet a new challenge, namely that of coexisting in a multicultural climate. This challenge today finds a global climate conditioned by the pandemic and, therefore, involves all religions in multicultural contexts, in which social groups ask to be protagonists of a new humanism of solidarity and brotherhood. In this sense, they are social subjects that make dialogue within societies livelier, but at the same time they become interlocutors of the state, without pretending to contrast or limit the power of the state. Dialogue with the state and with public institutions constitutes a necessity for the resolution of the social problems that the pandemic unease generates within a society that is witnessing the growth of poverty and all forms of personal and family distress<sup>10</sup>. All this means that the States, having overcome the initial phase in which the urgency of the health situation required acts of imposition, use the tools that the legal system makes available to carry out dialogue with religions also to rationalize the solidarity actions that were spontaneously arranged through volunteering.

What is worrying is the seriousness of the economic situation that all States will face with the resumption of economic and social activities, which can be addressed not only with measures of an economic nature, but also with the protection of the spiritual values on which coexistence and well-being of people in the state lie. In this sense it will be necessary to guarantee religious freedom, not only to allow the free action of religious groups to support the sense of existence in the face of life’s difficulties, but also to involve the action of religious groups more organically to new needs (such as food problems, the fight against usury towards traders, youth

<sup>10</sup> Gradually, dialogue becomes more and more an instrument used juridically as part of the legislative construction through the production of appropriate programs. In the face of the challenges and needs resulting from social and international coexistence, religions must become part of the democratic process, without forgetting and betraying the authenticity of their religious message and, at the same time, without conditioning or mortgaging the development of democracy.



discomfort, difficulties due to lack of work, assistance to young families with young children, etc.). The state, due to its democratic and pluralistic character, must meet the needs of citizens to participate in state activities in the face of needs, allowing those who make up the religious community to organize themselves by creating all the appropriate tools to satisfy needs of every order, which favour the development of the personality. In this perspective, the constitutional obligation for the state to guarantee both the individual exercise of religious freedom and the exercise of the community takes on a broader meaning.

This relevance on the state system is well understood, bearing in mind the function of religious denominations, which, due to the fact of being primarily spiritual, directly involves the will of the citizen/faithful and, therefore, affects the state community. In fact, religious confessions, as custodians of the revealed truths, stand as supporters of the purity of faith and customs, proposing to implement in practice the vision of life proposed by extending their vision on every human activity, none of which is morally indifferent. Consequently, religious confessions are everywhere present and freely intervene in social life, having the salvation of souls as their pre-eminent purpose.

The placing of religious denominations in a context that is not only national, but also European, highlights the activism of the Catholic Church, through the international and community instruments available to it.

Article 17 of the Treaty of Amsterdam does not limit itself to sanctioning the respect of what is established by the law of the single Member States with regard to the juridical condition of churches, associations or religious communities (to which, among other things, the „philosophical and non-confessional organizations are equated”), but also requires the Union to take on the commitment of open, transparent and regular dialogue with churches and organizations, which have long been present in Brussels with more or less structured offices and representations. Therefore, once again the path of collaboration and dialogue, already experienced in many of the States of the Union and accepted as an instrument in the Treaty of Amsterdam, is the one undertaken by a Europe that, without renouncing its secular connotation, recognizes the importance of the „specific contribution” that religious confessions can offer<sup>11</sup>. This contribution is decisive in relation to the need to amortize possible conflict situations caused by the increase in religious inhomogeneity due to the substantial non-European and intra-European migratory flows. On this line, last in chronological order, the Recommendation of the European Parliament of 13<sup>th</sup> June 2013 to the Council about drafting EU guidelines on the promotion and protection of freedom of religion or belief. In this document, point o) states that «in framework for the development and implementation of the guidelines, support and commitment to a wide range of civil society organizations, including human rights organizations and religious or belief groups, an importance essential for the promotion and protection of freedom of religion or belief; therefore the human rights focal points of the EU delegations should maintain regular contacts with these organizations in order to be able to promptly identify the problems that could arise in the area of freedom of religion or belief in the relevant countries».

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<sup>11</sup> Religious organizations, at this moment, not only realize a qualifying moment of the European process, but also act concretely way, asking the European institutions to protect religious interests, because these are an expression of values at the basis of civil coexistence.

In this perspective, it can be seen how religious organizations have strengthened their institutional presence within the European territory, placing themselves as privileged interlocutors in the construction of the new Europe.

It should not be forgotten that relations between the Churches are placed within ecumenical relations, attempt to foster a path towards shared theological values and ecclesial practices.

In this regard, it is necessary to mention the 2001 Charta Oecumenica which stresses that: «the Churches promote a unification of the European continent. Unity cannot be achieved in a lasting form without common values».

In this sense, the activity carried out by CCEE (Council of European Bishops' Conferences) is important, which operates in other fields that broaden the horizon of the topics discussed in the various meetings organized throughout Europe. Among these, the one concerning youth ministry throughout the world, the dialogue between Christians and Muslims in Europe, the defence of religious freedom with the sole objective of supporting a society in which justice, freedom and peace resides, the protection of environment.

Religious confessions, at this moment, not only create a qualifying moment in the European process, but they act, in a concrete way, asking the European institutions to protect religious interests, because these are an expression of values at the basis of civil coexistence.



# LEGAL RESTRICTIONS DUE TO CORONAVIRUS AND RIGHT TO RELIGIOUS FREEDOM

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**Abstract:** *The current pandemic has created new scenarios and problems regarding religious freedom. To combat the spread of the coronavirus, governments have ordered social distance and total closure of numerous activities including the celebration of sacred rites without consulting religious authorities. Religions have accepted the restrictions with a sense of responsibility, but the sacrifice of religious freedom for the faithful has been great. In addition, the effects of the pandemic together with the negative effects of globalization will continue over time, generating economic and social damage. In addition to prayer, religions have invited the faithful to a social commitment to reduce the critical issues of the crisis and specially to combat poverty. It is therefore necessary to analyze some topics: critical issues relating to the limitation of the right to religious freedom; what problems arise in the relations between powers (civil and religious); what problems arise in relations between state and religions; how the constitutional rights of the faithful and citizens are protected; what are the legal problems internal to the different religions, considering that the judgment on the validity of online rites is different; what is the role of religions in the face of the economic crisis. For the first time since the beginning of the human rights era, there has been a serious conflict between human rights, especially for the greater protection given to the right to health. The right to religious freedom also suffered, but it must be considered that the protection of the right to religious freedom also contributes to the recovery of a „good” economy, which can counteract the negative effects of the pandemic and globalization. We must build a personalist humanism, which the alliance between religions can promote. A humanism that respects the rights and dignity of man, against the logic of profit, and that rewrites the ethical rules of the economy. Looking at the post-pandemic, religions can be the soul of the ethical and moral rules that must guide the „good economy” in society to overcome social and economic differences.*

**Keywords:** *Religious freedom, Economic crisis, Religion’s role, New humanism.*

## 1. EMERGING CULTURAL TREND: THE CONTRAST BETWEEN FUNDAMENTAL RIGHTS IS POSSIBLE

The coronavirus pandemic is the first true global pandemic of the third millennium and has designed a new scenario, which has shocked not only the world of health, but also social relations, even within stressed family relationships<sup>2</sup>, the rules of coexistence, economic processes, rights and freedoms fundamentals, places of politics, rules and roles of religions<sup>3</sup>. This scenario has a cost, which is not only economic. The social measures to combat the spread of the infection have been very severe and can be summarized as follows: strict observance of personal hygiene rules, social distancing, more or less general lockdown. For the first time since the era of human rights began (after the end of the Second World War and with the birth of the United

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<sup>2</sup> Very interesting the report by Harris, Rachel L & Tarchak. Lisa (March 30, 2020), "It's Starting to Feel Like a Pressure Cooker in This House. Readers tell us what it's like to almost never be home alone", *The New York Time*, <https://www.nytimes.com/2020/03/30/opinion/coronavirus-isolation-relationships.html>

<sup>3</sup> There are numerous essays that analyze damage from coronaviruses other than health. As for the damage to the economy, compare Internet sites Mastrodonato, L. (2020), "La prima vittima del coronavirus è l'economia italiana", *The Vision*, <https://thevision.com/attualita/danni-economia-coronavirus/>

Nations) there has been a serious conflict between the same rights: for example we observe the contrast between the right to work and right to health, between rights of freedom and right to health, between economic rights and health, between right to life and euthanasia. It is a cultural trend present in contemporary societies that needs to be carefully considered, especially because there is still no answer to this problem<sup>4</sup>. This trend taken to the extreme can stifle the rights of freedom and religious freedom. In fact, the protection of the right to health has been taken as a pretext for compressing democratic rights by strengthening the power of individual political leaders, as has happened in Hungary, the USA, Turkey, Brazil<sup>5</sup>.

## 2. THE GLOBALIZED PANDEMIC IMPACTS ON THE ECONOMY AND HUMAN RIGHTS

The coronavirus pandemic has a singular characteristic, since at the same historical moment it occurs simultaneously with globalization<sup>6</sup>. These planetary phenomena produce different effects, but at the moment they are also converging and affect economy and human rights. The pandemic also used globalization and the speeding up of relationships, making the spread of contagion faster worldwide. The convergence between the negative effects of the two phenomena risks compromising the social and economic progress of the affected countries, practically all over the world. The data of many researches have already said this since the end of 2019 (for example the forecasts of the International Monetary Fund-IMF, and of the European Commission, which predicts a fall in recession to -7.7%, and OECD analyzes). The negative effects of the pandemic are added to the negative effects of globalization, which are especially exploitation, environmental degradation, the increase in social inequalities and poverty, the loss of local identities, the impoverishment of local economies, the decrease in privacy and personal rights. From an economic point of view, this form of pandemic contains the risk of generating a multiplication of inequalities (social, economic and human). The contrast between different conceptions of economics emerges more clearly, substantially oriented to give greater strength to the private system or to the public system, rediscovering the role of the State. Furthermore, it is possible to distinguish between a 'good' finance and "good economy" (necessary to finance development, Keynes) and a 'bad' finance and "bad economy" (which can favor speculation, higher rents for few people, individual rather than social well-being). Bad finance often does not see the crisis coming, because it uses for its speculations „theories and models that hypothesize that crises are not possible”<sup>7</sup>. We can recall these aspects, because the choice between the different conceptions also depends on ethical and moral rules, based on religions.

Another negative effect of the convergence between pandemic and globalization is the compression of rights, among which are the rights of personal freedom, the right of free movement, freedom of assembly, the right of religious freedom, the right to work, economic rights, political participation rights.

<sup>4</sup> According Waldron, Jeremy (1989), "Rights in Conflict", *Ethics*, Vol. 99, No. 3, pp. 503-519, Published by: The University of Chicago Press, <https://www.jstor.org/stable/2380863>, Page Count: 17

<sup>5</sup> Paredes, N. (2020 4 april), Coronavirus en Hungría | „La primera democracia europea que cae a causa del coronavirus: cómo la crisis del covid-19 ha puesto en juego el sistema democrático húngaro”, *BBC News Mundo*, <https://www.bbc.com/mundo/noticias-internacional-52151321>; Editorial Board (2020 april 25), "L'autoritarismo al tempo del Covid", *Il Foglio*.

<sup>6</sup> According Cardini, F.(2020, avril 7), Pandemia figlia della globalizzazione”, *AdnKronos*, <https://www.adnkronos.com/cultura/2020/04/07> ("Globalization has speeded up news but also any other type of communication")

<sup>7</sup> Turner, A. (2020), *Between Debt and the Devil Money, Credit, and Fixing Global Finance*, Princeton University Press.

In practice, the compression of rights took place temporarily during the lockdown and social distancing. Paradoxically, health benefits have come through the compression of other human rights. For example: the quarantine obligation and the ban on leaving one's home constitute a limitation of personal freedom: the creation of „red areas”, from which it is not allowed to leave, restricts the freedom of movement and circulation; the ban on gatherings severely limits the freedom of the meeting; mandatory closure of economic activities and businesses is a limitation on the right to work; the ban on attending places of worship constitutes a limitation on the exercise of the right to religious freedom.

### 3. PARTICULARLY THE ITALIAN WAY AND RESTRICTIONS ON THE RIGHT TO RELIGIOUS FREEDOM

In Italy lockdown and distancing have resulted in the closure of religious places of worship for the faithful, that is, a sacrifice of religious freedom. Religious organizations (Catholic Church, Protestant communities, Jews, Muslims, Buddhists and all other religions) have accepted the closing orders with a sense of responsibility. However, they were not formally consulted, although there were only talks between government representatives with some religious leaders. This situation seems to contrast with the system of relations between the state and religious organizations. In Italy there have been 12 agreements between the state and religious denominations since 1984, when the first agreements were signed with the Catholic Church and the Waldensian confession.

These Agreements have inaugurated a new season of dialogue, respect and collaboration, applying the principles contained in the articles of the Italian constitution, „defining the boundaries of mutual competences” to establish peaceful relationships<sup>8</sup>. In fact, especially for the Catholic Church, article 1 of the new Agreement indicates cooperation for the good of the country and the promotion of man as a central element. In other words, confirming the autonomy and mutual independence, the State and the Church have undertaken to achieve a wide form of collaboration towards shared objectives, also starting from different perspectives and purposes. The particular formula used in the Agreement allows us to argue that the collaboration concerns not only the points explicitly indicated, but every situation of need that compromises the human person and the good of the country, such as the current one, since „the complexity of the relationships between State and Church also manifests itself beyond the scope of the Agreement”<sup>9</sup>.

So, in this circumstance both the State and the Church underestimated the strength of the Agreement, perhaps because of the urgency of the moment. The right to religious freedom and concrete practices must be guaranteed not only by the State, but also by the Church, since the right is a good that belongs to the person and not to the institutions. The other religious denominations, both those that have signed an Agreement with the state and those that have not, have reacted with implicit acts of adhesion to the restrictive provision of the state of closure of places of worship. The Coronavirus emergency also affected religions, requiring the faithful, priests and various spiritual guides to reorganize themselves to continue praying remotely, still feeling like a community. However, the theological problems that have arisen with reference to the value of some community prayers cannot be ignored. For some religions, such as the Islamic one, a serious problem concerns the validity of prayer via internet.

<sup>8</sup> Dammacco, G. (2010), “La politica delle religioni: la libertà religiosa tra persona e stato”, in More Authors, *Oltre i confini. Religiose e società nell'Europa contemporanea*, ( pp. 231-262), Bari (Italy), Cacucci Editore.

<sup>9</sup> Santoro, R. (2010), “La politica dei concordati e il dialogo tra chiesa e società”, in More Authors, *Oltre i confini. Religiose e società nell'Europa contemporanea*, ( pp. 155-176), Bari (Italy), Cacucci Editore.



#### 4. THE NEED TO OVERCOME THE INJURIOUS EFFECTS OF CORONAVIRUS ON THE ECONOMY WITH A NEW HUMANISM;

Unfortunately, coronavirus has also caused damage to the economy, as well as health, but the negative effects of the pandemic are not known precisely. It is difficult to indicate estimates of what the effects of Covid-19 will be on the world economy. Even considering what happened in the pandemics of the past, it is necessary to consider that interdependence is greater today. According to the OECD report entitled „The world economy at risk” The impact of the Covid-19 outbreak on economic prospects is severe<sup>10</sup>. Coronavirus represents its greatest danger to the global economy since the last financial crisis of 2008. Negative estimates of damages can be a starting point not only of an economic nature, but also of a social, spiritual, human and religious nature. There are still many uncertainties: it is still unclear when the restrictive measures on the mobility of people will end, what will be the mortality rate, how long will be the extent of the interruption of production activity, how and how long it will be possible to recover the cheap damage. This means that to face the situation after the acute phase of the pandemic, good economic measures and analyzes will be needed, but also social analyzes, sociological and psychological analyzes, religious analyzes.

Even the Churches have undergone an economic compression, since in the absence of the celebration of the masses the offerings were lacking. For example, in France it has been calculated that the economic loss due to the non-celebration of the masses for the ten weeks of confinement has reduced revenue by around 40-50 million euros. However, this did not lead to the decrease in the works of charity; on the contrary, the spread of human solidarity has allowed the various caritas organizations, the Catholic voluntary organizations, the associations to support the increased request for help, offering food, family spending, money to pay bills and debts. These activities were added to the initiatives of the governments, proving fundamental also as a special human and economic response.

The pandemic is a complex, global and total phenomenon and for this reason all energies must be brought together: economic, social, spiritual, religious energies. Above all, it will be necessary to put the human person at the center of every action and it will be necessary to reconstruct the rules of coexistence in order to protect the human person, his dignity, his rights. It is necessary to build a personalist humanism on the basis of the Document on human brotherhood for world peace and common coexistence, signed in February 2019 in Abu Dhabi by Pope Francis and the Grand Imam of Al-Azhar, Ahmad Al-Tayyib<sup>11</sup>. In this document everyone is asked to commit themselves „to spreading the culture of tolerance, coexistence and peace”, ending conflicts, environmental degradation and cultural and moral decline, and implementing „an equitable distribution of natural resources, which benefits only a minority of rich, to the detriment of the majority of the peoples of the earth”.

The pandemic also creates opportunities for change (in the dynamics of society, economy, culture, work). But, to change the lifestyle it is necessary to find the reasons that help us make this change to create human well-being.

<sup>10</sup> OECD Interim Economic Assessment (2020, 2 march), *Coronavirus: The world economy at risk*, <https://www.oecd.org/berlin/publikationen/Interim-Economic-Assessment-2-March-2020.pdf>

<sup>11</sup> *Human fraternity for world peace and living together* (2019), the document is available in [http://www.vatican.va/content/francesco/en/travels/2019/outside/documents/papa-francesco\\_20190204\\_documento-fratellanza-umana.html](http://www.vatican.va/content/francesco/en/travels/2019/outside/documents/papa-francesco_20190204_documento-fratellanza-umana.html); Tornielli, A (2019), “Pope and the Grand Imam: Historic declaration of peace, freedom, women’s rights”, *Vatican News*, <https://www.vaticannews.va/en/pope/news/2019-02/pope-francis-uae-grand-imam-declaration-of-peace.html>.

## 5. THE PROTECTION OF RELIGIOUS FREEDOM AND THE ROLE OF RELIGION FOR THE BENEFIT OF A GOOD ECONOMY

The pandemic must make us reflect on the limits of human nature and on the importance of considering the future with humility. It must also make us reflect on the consequences that affect the increase in poverty, the growth of needs, the condition of developing countries, the violation of human rights and the dignity of people. „Faced with these dramatic problems, reason and faith help each other. Only together will they save man”, as Pope Benedict XVI wrote in the encyclical *Caritas in Veritate* of 2009, in continuity with the teaching of John Paul II in the encyclical *Fides et ratio* of 1998. On this same path is Pope Francis in the Exhortation apostolic *Evangelii gaudium* of 2013 and in the social encyclical *Laudato Si* of 2015, which concerns the care of the common home.

Religions have made a sort of alliance against the pandemic that has strong points in prayer and joint responsibility. These are two important points that all religions have indicated internally and to their faithful as a way forward because it is consistent with the theological content of their religious message.

Faced with the gravity of the current moment, for example, on April 14, 2020, the World Council of Churches (an ecumenical organization that collects 349 Christian denominations in the world) appealed to Trump to cancel sanctions on Iran during Covid-19, regarded as inhuman measures affecting the weaker part of the population. In the awareness that „the new coronavirus is a common enemy of humanity everywhere” the CMC invites to give a response „of solidarity and cooperation”<sup>12</sup>.

Another important document was signed in Abu Dhabi on December 2019 during the Sixth Assembly of the Forum for Promoting Peace. It is the new „Charter of the new alliance of virtue” signed by a group of the world’s most respected Islamic scholars, faith leaders joined by experts from governments, and representatives of civil society organisations to build global peace, based on tolerance and religious freedom in<sup>13</sup>, according to which religious freedom belongs to the ontological status of the human being. The Charter includes the important affirmation, that is: „another is rights that exist prior to the state and inhere in each human being by virtue of his or her existence. Such rights are typically understood as deriving from a greater-than-human source, such as God or nature, for the believer or non-believer”. Consequently, the dignity of the person and his rights must always be defended, especially in the face of such serious situations as the pandemic.

Numerous episcopates of the Catholic Church have also given indications to the faithful to protect the good of health, following the indications of the governments, and at the same time they are organizing themselves for the resumption of religious rites.

The list of religions that have taken a position of responsibility and collaboration with public institutions is very long. It is important to understand that the action of religions follows (albeit with many differences) two directions: an internal direction to support the right to the practice

<sup>12</sup> In *AsiaNews*, <http://www.asianews.it/news-en/World-Council-of-Churches-to-Trump:-amid-Covid-19-emergency-lift-sanctions-from-Iran-49809.html>

<sup>13</sup> The full text in <https://gulfnnews.com/uae/government/charter-of-new-alliance-of-virtue-read-full-text-1.1576010355082>.

of cults and training as religious freedom (to overcome the obstacle of the meeting ban, the use of technological communication has created a large global community) and an external one, stimulating all forms of solidarity for the benefit of the poorest, including through collaboration with public administrations with all forms of help (food, health, psychological, ...).

This common commitment of the different religions has essentially concerned actions within civil society to prevent the transmission of the virus, safeguard the body's right to health, carry out solidarity actions towards the people who need. This is an important statement to confirm the need for religious cooperation to overcome differences and aim for tolerance and respect as objectives of human coexistence.

The objectives of collaboration and solidarity are consistent with the message of religions and draw an ethical and moral patrimony that also inspires the common reaction towards putting in place actions to counter the economic crisis.

The pandemic after the passage of the acute phase in the world will continue in another way, also because the economic, human, moral, psychological problems will unfortunately still be evident. A kind of apocalypse seems to be born on the horizon, but this apocalypse must be understood as an experience that contains, however, elements of positivity and rebirth after the hard test<sup>14</sup>. During the experience of the pandemic, religious authorities have shown great responsibility for facing the seriousness of the situation and accepting the limitations imposed by governments. The social and economic consequences of the pandemic impose a reflection on the negative effects that are projected in the future, such as the increase in poverty, the increase in inequalities, the violation of human rights, the increase in conflicts, the crisis of human and family relationships. The collaboration between the state and religions in the face of these situations finds new values and new ideals, generating a new relationship between reason and faith, which „help each other. Only together will they save man”<sup>15</sup>. This must be the characteristic of a new style of relationships based on mutual trust and not on the management of an *ad excludendum* power, which tends to sacrifice the religious freedom of people and religious communities. This new path of mutual trust concerns the relations of states with all religions, which guide their faithful in fidelity to religious values and in respect for civil authorities, even when they limit religious freedom (albeit temporarily). So, for example, the UAE council issued a fatwa, which even during Ramadan does not allow prayers in mosques, but invites the faithful to alternative moments in the family (it is The UAE fatwa on fasting and prayers in Ramadan 1441, April 19, 2020).

The pandemic is teaching to be together and, in this direction, collaboration between religions and civil society can be important in relation to the economic crisis. In fact, technical solutions are not enough to overcome the crisis. It is important to reconstruct the rules of justice and morals and these rules can only be respected if religious sentiment becomes deeper and more alive in people and institutions. The serious world situation of the future suggests a new way of protecting religious freedom, promoting collaboration between the faithful and citizens, between religious communities and civil institutions. In fact, the right to religious freedom is a right that

<sup>14</sup> According to the perspective of Cardini, F. (2020), *Dopo l'Apocalisse. Ipotesi per una rinascita*, Edizioni La vela.

<sup>15</sup> According to what Pope Benedict XVI wrote in the 2009 encyclical *Caritas in veritate*, in continuity with the teaching of John Paul II in the 1998 encyclical *Fides et ratio*. Pope Francis is on this same path in the Apostolic Exhortation *Evangelii gaudium* of 2013 and in the social encyclical *Laudato Si* of 2015, which concerns the care of the common home.

also contains a duty: it is a subjective right that is projected through a civic duty to affirm justice and brotherhood. In the challenge facing humanity it is not the management of a power in favor of the few and to the detriment of many, but the common commitment for the protection of the „common house”: economy, communication, culture, politics must foster respect, tolerance brotherhood for the progress of all, seeking new balances between people, rights, duties, societies, religions.



# CONSTITUTIONALITY DURING TIMES OF CRISIS: ANTI-PANDEMIC MEASURES AND THEIR EFFECT ON THE RULE OF LAW IN CROATIA

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**Abstract:** *The Croatian constitution-maker's dedication to the concept of a social state begets the state's duty to care for public health. This duty is especially salient amid the SARS-CoV-2 virus pandemic. One would be well-advised to be watchful of the dangers that periods of crisis pose for the viability of liberal democracies: in Croatia, protective measures against the COVID-19 disease have been entrusted to the national Civil Protection Command in an initially illegal way. This was later on retroactively convalidated by legislative "patchwork" solutions. It is to be expected that the issue of such measures' constitutionality will in the foreseeable future present itself on the Constitutional Court's docket. This paper focuses on one of the most contentious measures - that of a ban on Sunday trade, particularly its implications for the economic constitutional rights such as the right of ownership and entrepreneurial freedom. Furthermore, the authors' analysis of several Constitutional Court's decisions from the time of the previous economic crisis will endeavor to anticipate the Court's decisions in upcoming cases.*

**Keywords:** *COVID-19, Crisis measures, State of emergency, Right of ownership, Croatian Constitutional Court.*

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## 1. INTRODUCTION

Given that the contemporary social state goes beyond a mere guarantee of an existential minimum and instead encompasses the preconditions for the free participation in social and political processes whose realization greatly hinges on the accessibility, universality and affordability of education, healthcare etc., the social state citizen is an "actual participant of the democratic process, freed from singlemindedness and coercion, and ensured against privation" (Kuzelj, 2019: pp. 65-66). It is, therefore, justifiable to talk about the state's obligation to provide healthcare and guard the public health. In constitutionalizing the social state concept (Art. 1. par. 1), the Constitution of the Republic of Croatia (henceforth: CRC) indubitably positions the Republic of Croatia (henceforth: RC) among the socially sensitive constitutions of contemporary European democracies, guaranteeing to all the right to healthcare (Art. 59) and a healthy life (Art. 70. par. 1), while simultaneously imposing a general duty to accord – within the scope of individual powers and activities – particular attention to human health (Art. 70. par. 3). These provisions should be interpreted to grant the authorities the powers and duties aimed at public health protection – a fact especially salient in the present conditions of the COVID-19 pandemic.

It is self-understood that anti-epidemic measures, while tailored to the protection of the constitutional right to health, also limit certain other constitutional rights and freedoms to a degree. It's precisely the emergency situations that bring to the limelight the dual (and not just a little paradoxical) nature of law as a product of political conceptions that simultaneously also serves

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as a great limiter of discretionary decision-making by precisely those political bodies that create and/or influence it in the first place. In this sense, Gardašević (2003, p. 88) stresses the importance of “determining the role of law as an order guaranteeing fundamental rights” and of its success in limiting the capacity of political bodies to enforce arbitrary policies. For him, this is the very essence of the rule of law and legal state.

Croatian constitution-makers left the balancing of conflicting constitutional guarantees to the legislator, on a case-by-case basis, with Art.16.par.2 mandating respect for the principle of proportionality. Bearing in mind the pregnancy of times of emergency, there is a differentiation between the venues of limitation of fundamental rights according to the circumstances that give rise to them. Fundamental rights may be limited in regular circumstances (Art. 16. par. 1), relying on the need to protect public health, as well as by use of a stricter procedure in emergency situations (Art. 17). The CRC does not refer to “regular” or “exigent” circumstances *verbatim*, but defines the latter as times of war, an imminent threat to the independence and unity of the state, and natural disasters (Art. 17. par. 1). The meaning of the former, on the other hand, is deduced by use of the *argumentum a contrario* principle.

The fact that there was no proclamation of a natural disaster in the RC during the COVID-19 pandemic, or that (significant) limitations to fundamental rights and freedoms weren’t adopted pursuant to the stricter Art. 17 parliamentary procedure demanding a 2/3 parliamentary majority is worrisome. Moreover, the majority of such limiting measures weren’t introduced by use of a statute, but through the decisions of the national Civil Protection Command (henceforth: the Command), a body that was initially not even legally authorized to adopt such measures. Hoping to prevent an imminent find of formal unconstitutionality, the ruling majority tried to offset the danger by a retroactive convalidation of such measures (see *infra*), reflecting the crisis of constitutionalism plaguing the modern concept of liberal democracy. This chronic crisis of constitutionality in the RC was diagnosed in 2019 (Smerdel, 2019: p. 19): “We consider a constitutional crisis to be, first and foremost, a state where the usual understanding of constitutional norms cannot resolve even a slightly serious conflicting situation, usually between branches of government”. Bearing this in mind, as well as the fact that a constitution cannot be the guarantor of its own realization but instead requires active citizen involvement in the defense of constitutionally guaranteed rights and freedoms, the authors must conclude the following: for the RC, a wise saying attributed to Benjamin Franklin (see Brockell, 2019) has never been more applicable than it is today. Croatians have “[a] republic, if [they] can keep it”.

The following section will therefore accentuate some of the most controversial questions of the Command’s public health protective measures. Special attention will be paid to the economic impact of the analysed measures, especially regarding the ban on Sunday trade. In anticipation of the Constitutional Court’s (henceforth: the CC) decision the authors will also provide a short overview of decisions issued during the previous 2008 economic crisis, and use those lessons to try to foresee the reasoning expected to be used in prospective cases. We must however, stress the particularities of the 2020 pandemic in relation to the 2008 recession, given that the latter’s measures influenced the realization of individual socio-economic rights, while the former impact not only on those but basic civil liberties as well.

## 2. EFFECT OF CRISIS MEASURES ON THE RULE OF LAW IN CROATIA

At the beginning of Croatia's independence, the CC (1992) established that there is no constitutional mandate requiring a special proclamation of a state of emergency. A state of emergency is a matter of facts, independently of whether the ruling elite wants to recognize this and subordinate itself to a much stricter constitutional standard (a 2/3 parliamentary majority for any ensuing limitations of fundamental rights). An insistence on the principle of normalcy (Scheinin, 2020), i.e. of navigating the crisis by use of the usual means available in domestic legal orders (Tzevelekos, 2020) can be dangerous, since the measures adopted „are not expressly quarantined to exceptional situations“ (Greene, 2020) and may underperform in their adherence to terms of necessity, proportionality, temporality and commitment to human rights (Scheinin, 2020).

Amid the COVID-19 pandemic, the Croatian government decided not to recognize a *de facto* state of emergency, in spite of the Constitution's Art. 17 that expressly recognizes a state of „natural disaster“ as one such emergency. This was done notwithstanding the fact that Art. 17 actually also incorporates a principle of proportionality that is lesser in stricture than the one used by Art. 16, which rules the „business as usual“ (ordinary) legislative process. The practical implications of this move are that the measures adopted – and expected to be subjected to the scrutiny of the CC – must pass a strict proportionality mandate, that is be necessary and not just „appropriate“ to the emergency at hand (Art. 17). This is a test the authors hold will be hard to satisfy regarding one of the most contentious measures adopted during the pandemic – that of a ban of Sunday trade, curtailing both the right to work as well as the right of ownership and entrepreneurial freedom.

The measure was one of the latecomers among the package adopted by the Command – an *ad hoc* body composed of 27 various government and public administration bodies' representatives, most notably from the Ministry of Health, the Croatian Institute of Public Health (CIPH) and Ministry of the Interior. Legally speaking, the majority of measures adopted were indisputably in the purview of the Minister of Health under the condition that an epidemic is proclaimed pursuant to the Act on the Protection of the Population from Infectious Diseases (APPID) – which it was on 11 March 2020. On 18 March 2020, the new Art. 22a of the Civil Protection System Act bridged the gap separating it from APPID, enabling civil protection units to be employed in governing the pandemic situation. The system of civil protection thus became *the* transmission mechanism to enforce the decisions made by the Minister of Health. The only problem? The Minister was not the one making the decisions but rather the Command, whose member the Minister *wasn't*. This stunning omission by the government sidelined the existing legal framework, threatening slippage into a “*de facto* dictatorship” and marking a “suspension of democracy”, as noted by the CC's justice Abramović (2020). Therefore, all decisions made by the unauthorized Command should have been deemed null and void (as they were adopted *sine* legal basis). Their unconstitutionality was, however, hastily attempted to be redeemed on 17 April 2020 by a retroactively applicable (Gardašević, 2020) amendment of APPID (Art. 18 of the amending Act), adopted in emergency parliamentary proceedings. The constitutionality of this retroactivity itself is very much in dispute, given the fact that the Parliament violated its own Standing Orders which specify (in Art. 193) that the Parliament should first have voted on the question of retroactivity and only after that could have proceeded with the final vote on the amendment. As those Orders supersede ordinary laws, this clearly presents an issue of formal unconstitutionality. At this time, there are – unsurprisingly – at least 27 applications before the CC, including by two of the CC's very own justices, claiming unlawful violation of fundamental rights (giving rise to potential damages claims).

The same amendment of the APPID also gave birth to another curious legislative maneuver that removed the Minister of Health as the fulcrum of the decision-making process regarding epidemiologically-mandated measures. After Art. 10 of the amending act transferred that power over to the Command, the Minister's role became reduced to that of the person proclaiming the epidemic. Other than that, he became merely one among the predominantly political members of the Command and not even as a *bona fide* member, but a co-opted, discretionarily associated one (see the relevant Regulation in the Official Gazette Nos. 126/19 and 17/20, and the Decision on Appointment of Authority members in the Official Gazette No. 20/2020 - *not* including the Minister among the Authority members). A little more than two months before the early parliamentary elections (scheduled for 5 July) this body then appeared to fuse the "good with the useful", using the veil of the "relaxation of pandemic-fighting measures" in order to buttress popular support for the right-wing ruling coalition by banning Sunday trade. *Nota bene*, the four most prominent members of the Authority – Ministers of the Interior and Health, head of the CIPH, and head of Croatia's central infectious disease hospital, are all members or known supporters of the ruling party.

This Decision from 24 April 2020 joined the package whereby other Sunday activities like congregating for religious purposes (from 2 May) and various services (e.g. restaurants, coffee bars, beauty salons etc. – from 11 May) were, conversely, once again allowed. The question whether such a schedule of easing the pandemic-fighting measures was acceptable under the Constitution's Article 16 became crucial. It is to be remembered that the Article in question requires a particularly stringent proportionality test in limiting fundamental freedoms – that of necessity or, alternatively, use of the "least restrictive measure". It is indisputable that the protection of public health is one of the constitutional goods enumerated in Article 16, and is therefore presumed to be a valid reason for limiting various rights such as the right to work, right of ownership and entrepreneurial freedom. However, the outcome of the "necessity" analysis hinges on the symmetrical nature of the Command's decisions. Their respective inter-balance is the litmus paper revealing whether they are synergistic, or rather arbitrary and violative of the constitutional Art. 3 and its mandate to respect the rule of law. One would be within their rights to ask how precisely Sunday trade is detrimental to the epidemiological situation in the country whereas mass gatherings in places of worship, coffee shops and hairdressing salons are not. It is well one thing to say that "public health" is a viable constitutional goal overriding some aspects of particular fundamental rights. But it is quite another to cast it as a vehicle legitimizing any and all discretionary choices of a pseudo-legislative body answerable directly to the Government that sidesteps a capable Parliament and ignores a constitutional mandate that requires stricture of parliamentary decision-making in the state of emergency that is *praeter*-constitutionally refused to be recognized.

Adoption of "out of step" measures that seem tailored to the appeasement of the conservative electorate cast significant doubt as to their constitutionality. This is especially so when we consider the fact that the 24 April decision achieved a goal until now inaccessible to the Parliament itself. Namely, the CC has already had two chances (in 2003 and 2009) to pronounce on the constitutionality of Sunday trade bans. It made it very clear that such a violation of entrepreneurial freedom cannot be justified by an idea of an unencumbered, family-centered Sunday for the employees, as Croatia is a secular state. It furthermore stressed the "*proprium turpitudinem nemo allegans*" rule, meaning that the State could not cite workers' lack of protection against a violation of their rights to a paid Sunday's work (and a day off at other times of the week) as the reason behind the ban (as the State *itself* is the one tasked with upholding the law across its territory). In a comprehensive analysis, Staničić (2020) called the conditions for constitutionality for a (parliamentary-imposed) Sunday trade ban „exceedingly difficult, if not even impossible“. In this newest, third Sunday trade ban, the discrim-

inatory element is most salient. It will be the task of the CC to determine whether there were any epidemiologically-relevant reasons to distinguish between various subsets of the same class of entrepreneurs (seeing as services such as newsstands, gas stations and bakeries were exempt from the ban) or among the trade vs. service activities, regarding their respective conduciveness to the spread of the epidemic. The authors posit that there were none, just as they posit that the qualitative synergy of these classifications with the free conducting of religious gatherings makes a strong case for the unconstitutionality of the analyzed measures. This is further corroborated by the fact that the Command relinquished the ban from 31 May onwards, after only 5 Sundays, following a popular backlash against the loss of jobs predicted to come about due to the ban. Paraphrasing Milton Friedman's famous observation and acknowledging that nothing is more permanent than a temporary fix, the authors await the Court pronouncement(s) with bated breath, keeping the hope that "the damage to democracy [will not – authors] be greater than the damage caused by any virus" (Abramović, 2020).

The authors must therefore next look to the decisions of the CC on the constitutionality of particular (emergency) measures adopted during the previous 2008 economic crisis, so that we could use those recent experiences to try and predict its reasoning in the upcoming cases. Specifically, the decision on the constitutionality of the so called "crisis tax" is one of the most controversial Court's decisions in the past 30 years. Measures that were contrary, or at the very least dubitable from the viewpoint of the constitutional concept of a social state (Art. 1. par. 1), social justice and equality as the highest values of the constitutional order (Art. 3), equality before the law (Art. 14) and constitutional principles of taxation (Art. 51) were deemed constitutional (Bačić, 2013: p. 195 *et seq.*; Cindori, Kuzelj, 2018: p. 490 *et seq.*). Among other things, the CC (2009, § 16) favored the particular importance of the crisis tax for the stability of public revenues at the expense of absolute equality and equity in its collection, defining "the qualified public interest" as overriding the inequalities created by the legislation among its addressees. The decision stressed the temporal limitations of the crisis tax and its sunset clause, leading one to conclude that it was this which gave rise to the claim that "a special tax ... can in its present form be temporarily supported in the Republic of Croatia's legal order". The question then becomes how the CC was able to verify this qualified public interest if not by lending faith to the Government's explanatory memorandum, given the collision of such a legislative solution with the fundamental constitutional postulates. The very purpose of constitutional review becomes moot in a situation where the Government's explanations are taken at face value. The arbitrariness of the Government's actions was additionally accentuated by the fact that the crisis tax had no major impact on the national deficit and that it was abolished before the deadline stipulated in the sunset clause, in spite of the fact that the economic crisis outlasted the mandate of the Government itself (Cindori, Kuzelj, 2018: pp. 494-495). In this sense, Bačić (2013: p. 196) stresses the need for a "radical critique of that law, with the belief that judges should sooner defend the permanent goals of the Constitution than the fickle and short-term political measures of temporary governments". Finally, in spite of leaving the crisis tax in force, there was no beneficial impact on the economy and there was "an impression of offloading the whole burden of the crisis on the citizens, while neglecting particular irregularities ... lead to a deepening mistrust towards the Constitutional Court's task as the keeper of the Constitution" (Cindori, Kuzelj, 2018: p. 497).

Finally, this paper will look at two more recent cases regarding the constitutionality of the so called "legislation on privileges" of state and public service employees. The CC (2015a: § 45; 2015b: § 29) stressed that it could not deny that the applicant's objection towards the Government's demeanor during the collective negotiation process was well founded. The issue of Government's procedural (un)fairness was underlined in connection to actions that went against the principle of collective bargaining, specifically to the unacceptability of having negotiations on employees' material rights



and benefits almost immediately followed up by a law derogating them without any previous re-negotiation of the collective agreement (CC, 2015a: § 45.1.). In a second decision (CC, 2015b: § 29.1.), the Court acknowledged that the course of collective bargaining preceding the enactment of the disputed legislation was marred by a series of shortcomings, most visibly demonstrated by the fact that the Government did not even plan for the budgetary means required by the assumed obligations, in spite of the applicable collective agreements. In both these decisions, the CC (2015a: § 46; 2015b: § 31) found discrepancies in the Government's actions deviating from the full respect for democratic procedure. But, assessing the issue in its entirety as well as within the context of the measure's adoption and prolongation of validity, the CC concluded that those particular cases did not cross the threshold of legalizing arbitrariness (i.e. unlimited political power). It remains unclear on what basis the CC judged the legitimacy of "veering away from a full respect for democratic procedure" and what does this "less-than-full" respect for such procedure mean for the fundamental rights guarantees. Finally, in assessing the proportionality of the disputed measures the CC (2015a: § 66-67; 2015b: § 44) once again stressed the conditions of economic crisis where such measures were adopted, their characteristics giving rise to their extraordinary nature and the limited nature of their application. It articulated the belief that a renewal of those measures could put into question the realization of the principle of proportionality and turn into an issue of respect for the rule of law, certainty and predictability. Everything considered, there is a clear tendency for the CC to tolerate crisis measures which are suspect from the viewpoint of constitutionality, as long as they are extraordinary and of limited duration.

### 3. CONCLUSION

At times of crisis, we must bear in mind how fragile liberal democracies are in the face of exigent measures adopted in circumstances of emergency and danger that can serve to conceal the particular interests of the ruling elites. In relation to the last great economic crisis from 2008, the COVID-19 pandemic is special due to its impact not only on socio-economic but also civil rights and liberties. The RC, a country founded on lasting adherence to the virtues of democracy and social welfare, is faced not only with a pandemic but also with an attempt by the ruling coalition to further its political interests. In this sense, the Sunday trade ban stands out as highly interesting. The authors must express their hope that the CC will not follow its earlier precedent in the upcoming cases, and that it will break from the belief that a "partial deviation" from respect for democratic procedure could be justified by the measures' extraordinary character and limited duration. It is therefore fitting that we should remind of Art. 5. par. 2 CRC whereby everyone is under the obligation to uphold the Constitution and respect the legal order of the RC, applying to the legislator as well as other authorities (the Command included). If those should be unable to stand by the constitutional principles, their actions certainly cannot be in a "qualified public interest".

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# THE POSTAL SECTOR AT A TIME OF CRISIS CAUSED BY THE COVID-19 PANDEMIC

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**Abstract:** *The post office has already had to deal with crisis situations caused by „force majeure”. Today, it is a Covid-19 pandemic, and in the past, there have been large-scale floods, tsunami disasters, earthquakes and so on. It is in these critical situations that postal companies are very necessary for society. National postal operators are usually the only providers of the so-called universal service, without being able to refuse to provide any service falling within the scope of universal service. The aim of the paper is to analyse the recorded practices of selected postal operators and national regulatory authorities, which they adopted and implemented during the pandemic. The paper will use the method of excerpting and method of analysis (in obtaining and evaluating information about the current state of the problem) and methods of induction and deduction. The reader will get a picture of how postal companies have behaved in this critical situation. The added value of the paper is the definition of areas that need to be theoretically and practically professionally researched soon.*

**Keywords:** *Postal sector, Pandemic, Postal services, Crisis situation.*

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## 1. INTRODUCTION

Postal services face challenges at a time of disaster, and in 2020 the world had to face Covid-19. Therefore, various responses to the Covid-19 crisis have been reported worldwide in the postal sector by postal operators, courier and express companies, relocation and logistics companies, as well as companies involved in the development and implementation of the latest technological solutions in this area.

Postal companies have changed their activities to meet the new requirements of their customers, as soon as possible to comply with strict new regulations in the workplace, to be able to work with a large volume of items and often with fewer employees. The crisis has clearly and significantly affected not only postal businesses, but also e-commerce and customer behaviour, expectations and demand.

## 2. FRAMEWORK DEFINITION OF THE STATE OF THE POSTAL SECTOR AT THE TIME OF THE BEGINNING AND THE FIRST MONTHS OF THE GLOBAL PANDEMIC

Postal companies have responded to the challenges of the global pandemic. Hamande (2020) claims, that “the most common was the introduction of new services provided by postal companies, which was forced by this pandemic situation. They also had to deal with cross-border postal services and look for distribution channels that could operate at a time of limited air traffic capacity”. New partnerships were created with retailers, which consisted in the implementation

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of the so-called the first and last miles in the relocation process, i.e. stage of submission and delivery of consignments. Pertsovskiy (2020) states, that “the first and last miles moved to the main strategy centre of postal, express and logistics companies”. This is the first and last mile, including the return of shipments. Crouse (2020) speaks, that “in these phases of the relocation process, postal companies contact the customer directly. These are also the most difficult and sensitive parts of the relocation process, because it is decided here whether the customer is satisfied or not”. Roggendorf (2020) claims, that “in connection with the mentioned problem in the delivery of consignments, during the pandemic, great attention also had to be paid to achieving flexibility and adaptability in sorting processes. They created new distribution channel solutions for companies that operated in the off-line space during the transition to the online space”. In many countries, it was possible to identify new postal businesses that immediately focused on the most important needs of people during a pandemic and began to supply mainly food and medicine (several times increased due to regulations on staying at home), which were the most popular assortment at the time. Access to cash, financial and government services (e-gov and IDs) was also required. There have been demands for a digital platform for a wide range of electronic services. With this fact, the question arose very significantly whether this range, services and companies that were created during the pandemic will remain on the market longer, even after the end of the pandemic, and how the competitive environment will develop in the „post-Covid” time.

Buhler (2020) claims, that “postal companies in all countries, which have been established on the market for a long time, monitored very closely how newly established business entities dealt with the prescribed requirements for the quality of postal services. They have literally „copied” the system of traditional postal companies, but qualitative indicators in many countries have not been able to achieve these newly established companies. Traditional postal operators also provided social services, because through them they provided the governments of some states, e.g. sanitary and food packages and nationwide cash benefits (so-called helicopter money), ensuring the survival of the population in crisis areas. It is clear from developments around the world that the post office has played a crucial role in communicating with customers in sectors such as healthcare and government”.

It was confirmed that the way to these changes was to make a change in relocation processes and systems and to intensify the use of hybrid mail. Businesses in the postal services market have paid close attention to the new strategies of e-commerce companies. The change in strategies and business operations of e-shops was influenced by short-term and long-term changes in the behaviour of their customers. The pandemic has further increased the pace of e-commerce. The world says this period was an „365-day Christmas” for online sales. For example, the Swiss Post stated that with 17.3 million parcels delivered in April, the post office was busier than any Christmas they had experienced.

This also accelerated further evaluation and development in the already mentioned last mile - with more attention paid to robotics and robots, which could be a very suitable solution in such cases.

While the e-commerce market is prospering in times of pandemic and volumes are constantly increasing, many postal operators face a dilemma. The volume of their packages increases, but their market share often decreases. This is an interesting phenomenon as competition grows, prices may be under pressure and customer experience, as well as the range of products or ser-

vices required is declining. However, many changes are taking place in the conditions of postal companies, in order to provide the market and its customers with choice, quality and good experience from long-term operation in the postal services market.

### 3. GOAL AND METHODS

The goal of the paper is to approach the recorded procedures of selected postal operators, which received and implemented during the pandemic, with regard to meeting customer requirements, with regard to the protection and security of first contact employees, in providing universal postal service. Based on the methods of analysis, synthesis and critical thinking, areas of future research are offered, which will be focused on innovative solutions in the internal and external environment of postal companies. These innovations should aim to minimize the negative consequences of these types of crises - their timely, vigorous and effective implementation.

The paper used the method of excerpting and the method of analysis - in obtaining and evaluating information about the current state of the problem; method of synthesis and comparison - for systematic comparison and evaluation, including linking the obtained research results to the relevant conditions in which postal companies operate in crisis situations.

### 4. ANALYSIS OF THE PROCEDURES OF THE GOVERNMENT, REGULATORY AUTHORITIES AND POSTAL OPERATORS IN THE V4 STATES AT THE TIME OF THE OUTBREAK AND DURING THE COVID PANDEMIC – 19

In view of the COVID-19 outbreak, the ERGP is collecting information about measures adopted in the postal sector in view of the Covid-9 outbreak. ERGP is also collecting information regarding the operational and regulatory impact of the pandemic. Below you can find a summary of the information collected by V4 members (updated until 21 April 2020).

#### Slovakia

**The Government** has declared the state of emergency (from 12. 3. 2020) and has been adopting various measures. For the whole country all shops and restaurants are closed, but exemptions are made for certain areas including postal offices. There is also the necessity to cover one's face (nose and mouth) with face mask or adequate substitute when going outside. According to the Postal Act at the time of emergencies caused by a natural disaster or industrial accident and in reasonable cases of protection of public order, public security including the inquiry and prosecution of criminal offences, health care and human life, animals and plants protection as well as cultural heritage in the affected territory, the NRA may temporarily adjust the method and conditions of clearance (collection) and distribution of postal items in the affected areas by way of derogation from the provisions of the Postal Act, in particular, for the necessary time period, it may:

- exclude providing of postal services and decide that these services will only be provided by the authorised postal company;
- exclude some types of postal items from clearance and distribution;
- restrict or suspend provision of postal payment service; or
- ensure clearance and distribution of some postal items in a special way.

**National regulatory authority (NRA)** - at the request of the USP the NRA has taken according to the Postal Act some measures in the delivery to the address of postal items to ensure the minimum contact between delivery persons and addressees:

- registered items are delivered to the letter boxes without signature of the addressee;
- recorded delivery mail/official documents, mail with receipt of delivery and cash on delivery, and oversized items are kept at the post office and the addressee receives the information/delivery notification (to their letter box or e-mail address) to collect the item at the post office;
- the storage period for postal items at the post office has been extended from 18 to 32 days;
- parcels are delivered to the address, but outside/in front of the building of the addressee with necessary safety measures;
- the opening hours of postal offices are shortened (usually no longer than 17:00 per one day a week).

**Postal providers** - only certain number of customers is allowed in the premises of the postal office of the USP at the same time. All postal offices are closed on weekends. The USP has suspended collecting of postal items to some countries. Other postal providers have been taken measures to minimise and shortened the time of contact with addresses, some of them have recommended their customers to use bankcards instead of cash, made changes for items/parcels that require signature (courier sign for delivery rather than the addressee).

According to Hambálková (2020) “Regarding the situation with the national postal operator, postal services were provided by significantly fewer employees during the pandemic (1165 employees were missing, while the total number of employees at the end of April was 13,224). This is since employees were unable to work or received benefits in connection with the care of children who do not attend school at the time of the pandemic.” (p.5)

## **Czech Republic**

**The government** declared the State of emergency from 12<sup>th</sup> March with general restrictions (e.g. closure of educational facilities, free movement is limited with the exception of travel to and from work and necessary travels to ensure basic human needs, retail sales and the sales of services on the spot is forbidden with some necessary exceptions) – all restrictions are available on the web: <https://www.vlada.cz/en/media-centrum/aktualne/measures-adopted-by-the-czech-government-against-coronavirus-180545/>. There are no specific measures regarding postal services at this stage.

**NRA** - continuously monitors the situation how the universal service obligation is fulfilled in accordance with the postal law. The USP (universal postal services) can interrupt or limit the fulfilment of its obligations in case of emergency like the current epidemic. This limitation must be removed as the situation allows it. So far, the NRA has not been taken any measure regarding providing of postal or universal services yet.

**Postal providers** - According to the general recommendations, the Czech Post has asked the customers to visit postal outlets only when it is necessary and to use a surgical mask (or other comparable protection). The Czech Post delivers all postal items to addressees in general without substantial restrictions. One measure regarding the delivery was set by registered items without supplementary services like advice on delivery, necessity of this measures is now proved by the

NRA. In areas with quarantine (there are no such areas, now) and in case of addressees with ordered quarantine, the Czech Post stores postal items directly at post offices with extended time period to pick them up. Addressees receive only announcement in their home letter boxes or they can choose the delivery to other place or person which is not in quarantine (this change is free of charge). The NRA has no information regarding prospective measures of other postal operators or regarding any limitation of their services.

## Hungary

**The government** announced restriction of movement on the 28<sup>th</sup> of March and updates it weekly. According to this measure it is recommended to stay home and leave home only for work, shopping, dog walking, or doing individual sports. Restaurants, cinemas, theatres, schools are closed. Grocery shops and pharmacies, post offices are open other not essential shops are either closed or operating with restricted opening hours generally till 15 o'clock. Only costumers older than 65 can visit shops or pharmacies between 9-12 o'clock, others may visit earlier or later. A Governmental Decree has been issued on 03/04/2020 that allows postal service providers to deliver registered items, official documents and parcels without personal contact. Items requiring signature can be delivered now only by taking the name and the ID card number of the receiver. The delivery man takes 1,5 m distance from the receiver at the delivery, the receiver shows his/her ID card and tells his/her name and the ID card number. The number of customers entering a post office at the same time is also limited according to the number of available service desks, others have to wait outside of the building and keep reasonable distance among each-other. The postal service is part of the basic services that has to be provided even in situation like crisis or war according to the postal Act and we do not have any official information from our service provider about any measures taken concerning the limitation of the availability of postal services.

**The NRA** published and regularly updates a FAQ document with practical information and advices on its webpage to help customers and service providers - [http://nmhh.hu/cikk/210995/Postara\\_csak\\_akkor\\_menjunk\\_ha\\_muszaj\\_hasznos\\_tanacsok\\_a\\_hatosagtol](http://nmhh.hu/cikk/210995/Postara_csak_akkor_menjunk_ha_muszaj_hasznos_tanacsok_a_hatosagtol) (only in Hungarian).

**USP (Hungarian Post)** introduced the following measures:

- limited opening hours for the post offices, no post open after 18:00 on weekdays, only a few posts available on Saturdays, and posts are closed on Sundays;
- post offices in shopping malls and in government offices are closed permanently;
- it is recommended for customers older than 65 to visit post offices between 8-9 in the morning;
- no delivery of registered items, official documents or parcels for those who are in medical quarantine (in this case a red sign has to be put on the door of the person who is suspected to have caught the infection). Items are hold back at the post office till the end of the quarantine for later pick up or delivery. There is no change in the delivery of non-registered items or ordinary letters;
- took some practical measures also to protect its employees who are in daily and close contact with costumers and distributed masks and gloves for them;
- introduction of a simplified authorization form for elderly people to help the delivery of pension (many elderly people have no bank account and they receive their monthly pension by post).



## Poland

On 19 April 2020, the provisions of the Covid Act regarding the postal market entered into force. Changes in the postal law relate to:

- the possibility of delivering a letter-post item which is a registered item to a delivery mailbox;
- suspension of the obligation to obtain a receipt for courier items;
- establishing derogations from the universal service obligation.

In states of emergency or in the event of an epidemic or epidemic emergency, a letter item being a registered item may be delivered to its letter box (with effect of delivery), without the need to submit the special application.

This does not apply to postal items sent to or sent by:

- courts and tribunals;
- the prosecutor's office and other law enforcement agencies;
- court bailiff.

In extraordinary states or in the event of an epidemic or emergency situation, the postal operator's obligation to suspend receipt of a courier package is suspended.

**The NRA**, at the request of the designated operator, by way of a decision, establishes a derogation for the designated operator from the obligation to provide universal services in the event of the spread of infection or contagious disease, which may pose a threat to public health.

Changes were also introduced during the epidemic status regarding:

- the obligation not to return the parcel to the sender;
- the effectiveness of deliveries of uncollected letters after the epidemic;
- authorizes the designated operator to obtain data from the PESEL (Personal Identity Number) database for election purposes;
- the so-called „Short delivery” e-delivery services for scanned documents for citizens with a trusted profile.

The situation is dynamic, but so far, no additional measures have been undertaken to ensure distribution of mail and parcels.

**Courier companies deliver parcels** despite coronavirus. The operators declare they have developed precise contingency plans for all areas of their business. As a result, they have become operationally independent from external factors. The designated operator - **Poczta Polska** also declares having a crisis plan, assuming limited activities and limited resources. Respecting the government guidelines formulated in the special act on the prevention and control of coronavirus and related to the announcement of the epidemic, Poczta Polska suspended the receipt of dispatches to some countries. This is due to the suspension of air transport. The work organization of its facilities is also changing. The operator reduces the working time of branches on business days to six hours, with the branch being open on selected days from 14-20 or alternatively for three hours on Saturday. Due to difficulties on European roads and restrictions in the work of operational services of postal operators in Poland and abroad, delays in the delivery of parcels sent to certain countries are expected. Postal operators apply increased precautions in

all areas of their business. All preventive measures are aimed at protecting health and maximizing the risk associated with the current situation. The safety of customers and employees is an absolute priority.

Based on the information provided by the individual V4 states, it is clear that the procedure assigned to postal operators by the state, the national regulatory authority and their own strategic decisions are the same in some respects and slightly different in others.

## 5. PROPOSAL FOR FUTURE RESEARCH

As the Covid-19 pandemic has been accompanied worldwide by its unpreparedness to address all the problems that have accompanied it, the following areas in research in the postal sector are also very important:

- the solution of the so-called arvej and the last mile in the post-Covid world;
- the resilience of postal networks in crisis situations (crisis management without denying reality) ways to meet the challenges for the post-Covid postal and logistics world;
- changing consumer behaviour in times of force majeure and finding new, creative and at the same time „safe solutions” to customer contact;
- solving cognitive logistics of cross-border exchange through efficient processing and use of data flows and using knowledge in them (ability to manage and analyse data in multiple applications, directories and interfaces), use of imaging technologies, artificial intelligence and the like;
- creation of a logistics ecosystem - innovation of real-time delivery tracking technologies (e.g. active and passive RFID, RAIN RFID networks, 0G networks - the Internet of Things, etc.), to increase the satisfaction of postal customers.
- solving complex persistent structural problems in order to transform the mail business with an optimized cost base and more efficient mail operations 4.0 towards the integration of data from various information databases, towards increasing the performance of the postal company;
- solving the future of direct mail towards hyper-personalization;
- changing the role of digital communications and social media in the future of the postal sector and so on.

## 6. CONCLUSION

The survival of a company (individuals, companies and organizations in each country) whose postal companies provide their services depends on the degree of readiness of the post office, the quality of the crisis management team, the effectiveness of the crisis plan implementation and its diagnosis. At the time of the pandemic, the postal companies were clearly operating in significantly changed conditions. Regardless of the legal aspect of each situation, the perceptions created from the beginning to the end of the crisis can dramatically affect the reputation and financial position of postal companies. Therefore, it is necessary to pay attention to all aspects of managing this type of crisis, which would be caused by the so-called „Force majeure”. Based on the results of research in some areas identified in this paper, the preconditions would be created to cope with the negative consequences of the crisis and would contribute to the readiness of postal companies for pandemic situations that the whole world.

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# WILL YOUNGER PEOPLE PAY THE HIGHER PRICE OF THE PANDEMIC?

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**Abstract:** *The article examines whether young people are at a greater risk of unemployment than the general population in the post-pandemic crisis. First, the authors draw attention to youth unemployment as a structural problem even before the pandemic, making young people more vulnerable. Further, the paper analyses the age structure of employed in sectors most impacted by the pandemic. The results show that disproportionately high number of young people work in the most impacted sectors, hold less secure types of employment and are thus more vulnerable and at-risk of unemployment in post-pandemic crisis. However, the impact on young will most likely not be the same in all EU countries.*

**Keywords:** *Youth unemployment, Precarious employment, Impact of the pandemic, Structural youth unemployment.*

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## 1. INTRODUCTION

Since the mid-1990s researches on youth labor markets are showing, that in general, young people are more impacted by the economic crises than older (Podmenik, 2013; Choudhry, Marelli and Signorelli, 2010). During and after the 2008 economic crisis, the youngest generation of job seekers was the most severely affected in almost all EU countries (Engemann and Wall, 2010).

The current situation with the COVID-19 pandemic crisis is not the same as the one in 2008. At the beginning of 2020 countries in the EU and other parts of the world affected by the virus, adopted measures of lockdown, quarantine and movement restrictions (to a different extent) and temporarily froze certain sectors of industries, services, education and other productive sectors. Negative economic consequences of the confinement, in terms of unemployment, national predictions of GDP and export-import drops, were visible soon after the measures were instated. From the concerned citizens' point of view, the most affected are the ones, employed in the temporarily shut-down sectors (such as tourism, hospitality, and event industries) and those whose jobs are not protected by permanent contracts (part-time workers, precarious employments, students and self-employed individuals).

Recent ILO report highlights that the pandemic would particularly hardly hit young people, who were already one of the most vulnerable groups in the workforce. Besides recent job losses and growing precarity of youth employment, the COVID-19 economic crisis may result in a major dislocation of young people from the labor market for some time. Some authors attribute this possibility to the rapid rise in unemployment with the accompanying tightening of competition among job seekers. (Kramer and Kramer, 2020)

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This paper examines how the pandemic and the following economic crisis might affect young people, especially their position on the labor market. The authors proceed from the two general assumptions:

- (1) Young generations, which have not yet been able to improve their employment rate and position at work and labor market since the last crisis in 2008, will be more severely affected by the pandemic crisis than older ones.
- (2) Expected aggravation of the youth work positions can be attributed, among others, to the sectoral distribution of jobs. Namely, we proceed from the assumption that unemployment will rise the fastest in specific sectors - most affected by the anti-pandemic measures, in which young people are employed more often than older. Therefore, younger people are more at new risk of losing their jobs.

These assumptions are based on the previous analysis of long-term youth unemployment and on data which shows the structure of youth employment in European countries. The authors intend to confirm the assumptions above with a combination of two types of approaches; long-term observation of the youth labor market and structural data which provide insight into the impact of the pandemic crisis on youth (un)employment.

The first part of this paper focuses on the long-term trend of youth unemployment, its structural problem, including the data analysis on types of employments among younger and older people in the EU countries. The second part indicates the sectors most impacted by the COVID-19 crisis, followed by the comparative data analysis of the age structure of those employed in the most impacted sectors.

## **2. YOUTH UNEMPLOYMENT – DANGERS OF CRISIS OR A STRUCTURAL PROBLEM?**

The structural characteristics of youth unemployment can be demonstrated through both, economic and sociological perspectives. Economic Indicator of (youth) structural unemployment - the ratio between youth unemployment and job vacancy rate - shows a growing trend for the EU. Moreover, it *"... is very similar in 2018 to what it was 10 years before. This reveals that even in times of economic growth youth unemployment persists."* (Podmenik, Gorišek, 2020, p. 87-88). From the sociological point of view, the structurality of (youth) unemployment is demonstrated by its sustainability, which shows the inefficiency and inconsistency of social (sub) systems responsible for maintaining the balance between supply and demand in labor markets. As mentioned above, the youth unemployment rate has not dropped since the mid-1990s (Noelke and Muller 2011; Leuven and Oosetbeek, 2011; Podmenik and Ivančič 2017) despite a sharp increase in the level of education among young people. Some authors (Coleman 1991; Teichler 2000) assessed that a surplus of around 30% of over-educated young people on labor markets, especially in Europe (Podmenik and Ivančič 2017). In the sociological context, this structural problem has wider dimensions. It is not only that well-educated young people are unable to find jobs in a good economic condition, but it also shows, that educational systems are counter-productive; that national strategic planning is aligned neither with the education system nor with the needs of (potential) employers. Adding up the skills mismatch and inability of all involved stakeholders to manage such changes, serious consequences, on top of youth unemployment, affect societies (non-utilized human capital, social deprivation and youth marginalization, reduced family life, falling birth rates, ageing society, etc.).



The observation of the long-term trend of unemployment among youth (15-29) in the EU countries (for which data was available through Eurostat database) shows that youth unemployment rate, in comparison to the general unemployment rate, remained much higher even in times of good economic performance. The structurality of (youth) unemployment is obvious when even during the period of economic conjuncture the (youth) unemployment rate doesn't fall considerably under the levels observed in the period before the economic crises. However, big differences are visible among the EU countries. In Southern European countries, youth unemployment rates are much higher (in some the rate never dropped under 15%) and much more sensitive to the crisis (in Spain and Greece the level of youth unemployment rose to more than 40%). In Western and Northern Europe, the levels remained quite steady (and, in some countries, such as France and Belgium, relatively high) throughout the last 20 years. In Eastern and ex-communist countries, there is more movement in the youth unemployment rate, but also the biggest drop in last few years (for example - youth unemployment in Czech Republic, Poland and Estonia is today lower than in the Nordic EU countries). (Podmenik, Gorišek 2020).

The danger for youth in times of crisis is not only shown by the structural characteristics of unemployment but also in less secure types of employment like part-time; self-employed work position; project jobs, etc., all gathered under the umbrella term *»precarious work«*. The last crisis resulted in increased precarious work among youth in the developed world (ILO 2011). For example, Clarke and Cominetti (2019) point out, that even up to two-thirds of the employment growth in the UK since 2008 has been in atypical roles, especially among youth. While many young people internalized the new market conditions and see them as immutable, they understand the abnormality of it (Berry and McDaniel, 2020). Further, precarious working conditions are among the factors that importantly affect the spread of in-work poverty in Europe (Ratti 2020). In times of (any sort of) crisis, less social security makes youth even more vulnerable and pushes them on the margins of societies.

### 3. DISPROPORTIONALLY MORE YOUNG PEOPLE WORK IN LESS SECURE JOBS

In order to confirm our assumption, that pandemic crises will disproportionately affect young people, who have already been pushed to the margins in their current employment situations, the article analyzes Eurostat data on types of employment. The authors were especially interested in temporary and part-time employment, as they offer less social security than permanent contracts and as such represent a bigger risk of losing their jobs. In the EU<sup>3</sup> in general, 13.6% of people aged 15-64 are temporarily employed. This percentage is much higher in the age group 16-24, where 42.8% are working on temporary contracts. The biggest share of temporary workers among young is in Spain (69.5%), Italy (63.3%), Portugal (62.2%) and Slovenia (61.8%). The lowest percentage is in Romania (only 5.6%), Lithuania, Latvia, Bulgaria, Hungary and Estonia, all under 13%.

Furthermore, 19.1% of people aged 15-64 are working part-time in the EU<sup>4</sup>. Once again, the share is much bigger among young people (32.6%). The higher share of young working part-time is recorded in the Netherlands, Denmark and Sweden, where over 50% of young people work in part-time jobs. It is the lowest in Croatia, Bulgaria, Hungary and Slovakia, where less

<sup>3</sup> For this analysis we still included the United Kingdom when analyzing the EU countries

<sup>4</sup> It is important to know that there are possible labor law differences among countries which are not included in this research but could explain some differences in data.



than 10% are employed in part-time jobs. However, when taking into account only people who work part-time because they were unable to find a full-time job, the share is the biggest in Italy, Romania, Greece and Spain (over 46% of part-time employed young people stated that as a reason for part-time employment).

### **3. WHAT TO EXPECT REGARDING YOUTH UNEMPLOYMENT IN THE SECTORS MOST IMPACTED BY THE PANDEMIC?**

Pandemic and government actions to battle the health crisis, such as lockdown, movement restrictions and limits in business activities, have direct economic consequences that were visible already weeks after the pandemic was declared. Based on the ILO report from 29 April 2020, global working hours in the second quarter are expected to be 10.5 per cent lower than in the last pre-crisis quarter, which is equivalent to 305 million full-time jobs. However, not all economic sectors and therefore not all workers and social groups were affected equally.

ILO ranked economic sectors by the impact of the pandemic crisis on economic output:

- High impact: Wholesale and retail trade; repair of motor vehicles and motorcycles; manufacturing; accommodation and food services; real estate; business and administrative activities;
- Medium – high impact: Arts, entertainment and recreation, and other services; transport, storage and communication;
- Medium impact: Construction; financial and insurance services; mining and quarrying;
- Low-medium impact: Agriculture, forestry and fishing;
- Low impact: Human health and social work activities; education; utilities; Public administration and defense; compulsory social security (ILO 2020a).

### **4. YOUNG PEOPLE ARE MORE AT RISK IN NEARLY ALL EU COUNTRIES**

The analysis includes the latest Eurostat data from 2019 on the number of employees in different sectors based on their age and compared them to the previously mentioned ILO classification of most impacted sectors. Eurostat uses NACE rev. 2. Classification of activities, but it fully corresponds with ISIC Rev. 4. in all sectors used for the analysis (based on Eurostat correspondence tables). Age groups used for comparison are youth (15-29) and general (15 years and older).

The analysis shows that young people are more at risk in nearly all EU countries, whether that risk is absolute or relative. In many EU countries, more than half of young employees work in most impacted sectors. In the EU in general, 47.2% of employees aged from 15 to 29 work in the economic sectors most impacted by the COVID-19 crisis. The biggest share of young people employed in most impacted sectors are in Italy (60.7%), Greece (57.3%), Czechia (57%), Slovenia, Portugal (both 56.4%), Slovakia (55.3%) and Romania (54.7%). The share is above 50 per cent also in Hungary, Poland, Bulgaria, Spain and Lithuania. This means, that in 12 countries of the EU, more than half of the employed people aged 15-29 are employed in the most impacted sectors and at risk of losing their jobs.

The share of young working in the most impacted sectors is higher than the share of all employees working in those sectors in every EU country. In the EU in general, 40.1% of employees work in the most impacted sectors, which is a 7.1 percentage point lower than the share of young people working in the most impacted sectors.

**Table 1.** Young people working in the most impacted economic sectors

GEO/TIME	SHARE OF YOUNG IN MOST IMPACTED SECTORS (%)	SHARE OF ALL POPULATION IN MOST IMPACTED SECTORS (%)	DIFFERENCE IN SHARE OF WORKFORCE IN MOST IMPACTED SECTORS (young vs. over 15) (pp)	SHARE OF YOUNG IN EMPLOYED OVER 15 (most impacted sectors) (%)	SHARE OF YOUNG IN EMPLOYED OVER 15 (all sectors) (%)	DIFFERENCE IN SHARE OF YOUNG IN EMPLOYED OVER 15 (impacted sectors vs. all sectors) (pp)
EU 28	47,2	40,1	7,1	23,4	19,9	3,5
Austria	48,4	42,7	5,7	27,2	24,1	3,1
Belgium	42,6	36,3	6,3	23,7	20,2	3,5
Bulgaria	52,6	45,9	6,7	16,2	14,1	2,1
Croatia	49,5	42,4	7,1	22,5	19,3	3,2
Cyprus	42,8	38,0	4,8	25,9	23,0	2,9
Czechia	57,0	47,8	9,1	19,2	16,2	3,1
Denmark	46,3	36,0	10,3	32,3	25,1	7,2
Estonia	44,3	41,7	2,6	20,3	19,1	1,2
Finland	43,0	34,9	8,1	28,1	22,8	5,3
France	40,4	33,4	7,0	24,4	20,2	4,2
Germany	44,8	42,9	1,9	21,4	20,5	0,9
Greece	57,3	41,1	16,2	21,6	15,5	6,1
Hungary	53,8	44,1	9,6	22,0	18,1	4,0
Ireland	49,6	38,8	10,7	30,1	23,6	6,5
Italy	60,7	44,3	16,4	18,9	13,8	5,1
Latvia	40,8	38,1	2,7	18,6	17,4	1,3
Lithuania	50,1	41,8	8,3	20,4	17,0	3,4
Malta	37,2	29,4	7,8	28,7	29,2	-0,5
Netherlands	45,4	35,0	10,3	37,7	29,1	8,6
Poland	53,0	44,7	8,2	23,8	20,1	3,7
Portugal	56,4	43,2	13,1	22,3	17,1	5,2
Romania	54,7	49,3	5,4	16,9	15,2	1,7
Slovakia	55,3	45,5	9,8	21,1	17,4	3,7
Slovenia	56,4	48,0	8,4	20,1	17,1	3,0
Spain	50,5	42,4	8,2	18,3	15,3	3,0
Sweden	37,4	30,6	6,7	27,7	22,7	5,0
United Kingdom	43,7	34,2	9,6	32,1	25,1	7,0

Source: Eurostat (2020), own calculations

It is interesting to see that countries with the highest share of young employed in the most impacted sectors are not necessarily the ones with the biggest shares of all employed in the most impacted sectors. For example, Italy, ranking the highest in young, ranks 7<sup>th</sup> in all employed.

The biggest differences between the share of young and the share of all employed in most impacted sectors are in Italy (16.4 percentage points), Greece (16.2 pp), Portugal (13.1 pp), Ireland (10.7 pp), Netherlands and Slovakia (both 10.3 pp).

It is further interesting to compare the misrepresentation of youth in most impacted sector compared to their representation in less impacted sectors. In general, employees aged 15-29 represent 19.9% of the total number of employed in the EU in all sectors together. The share is bigger in the most impacted sectors, where they represent 23.4% of employed.

The biggest over-representation of young people in most impacted sectors is seen in the Netherlands (8.6 percentage points higher than in all sectors), Denmark (7.2 pp higher), United Kingdom (7 pp), Ireland (6.5 pp) and Greece (6.1 pp), while the lowest is in Germany, Estonia, Latvia and Romania, all below 3 percentage points of a difference. Malta is the only country where young people are not over-represented in the workforce in most impacted sectors compared to the general workforce.

## 5. CONCLUSION

This article examines the impact of COVID-19 pandemic crisis on youth unemployment. Based on the previous analyses, observation of the long-term trend of youth unemployment and the structural characteristics of youth unemployment, the authors predicted that young people will be more impacted by the current crisis than older. The data on types of employments among youth further proves this assumption, as young people are more often employed in less secure jobs. However, the nature of the current crisis shows, that young people could be even more disproportionately affected than in previous crises. In order to confirm that the authors performed their own analysis of data on the age structure of employed in sectors most impacted by the COVID-19 pandemic (as determined by the International Labour Organization).

In all countries of the EU, the share of young people working in most impacted sectors is higher than the share of all employees working in those sectors. While they only represent 23.4% of all employed in the most impacted sectors, that share is still higher than in all sectors combined, where young employees aged 15-29 represent 19.9% of all employed. This confirms the assumption, that young people are more likely to be affected by the after-pandemic crisis in terms of unemployment. This corresponds with the latest estimates of the ILO on the global level (ILO 2020b) and the first reports of newly registered unemployed<sup>5</sup>.

However, not all young in the EU will be affected to an equal extent. It is worrying to see that most young people are (absolutely and relatively to the general population, as well as regarding the safety of their employment) at risk of losing their jobs in Southern European countries, which already have some of the highest numbers of youth unemployment. These countries also report extremely high levels of temporary employment among youth.

Nevertheless, there are several countries, where proportions of young people in most impacted sectors are not that different from the general population (for example Germany, Estonia and Latvia). Those countries also score below-average shares of part-time and temporary employment among youth.

It is possible to confirm our assumptions, that young people are at a higher risk of unemployment in the post-pandemic crisis and that this risk is bigger than during previous economic crises. Not only are young people more often working in less secure jobs, but they are also at greater risk because of the most common sectors of their employment. The risk, regarding the sector of employment, is either absolute (in countries where more than half of young employees work in most impacted sectors) or relative (where over-representation of youth in impacted sectors is the biggest) or both.

It is important to realize that the post-pandemic crisis will not affect all age groups equally, especially when discussing and adopting government actions and policy interventions to minimize the impact and ensure fast economic recovery. Youth unemployment is a multi-dimensional problem interconnected with many social sub-systems and directly impacts not only young people's lives but also the potential, innovation and productivity of our economies.

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<sup>5</sup> The unemployment office of Slovenia released the report on the *Impact of the pandemic on the labor market in Slovenia* in which it stated that the biggest share of newly registered unemployed is among the youngest population (Zavod Republike Slovenije za zaposlovanje, 2020).

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# PANDEMIC AND MISPROPORTIONED AGE STRUCTURE OF ACADEMIC STAFF IN UKRAINE: THREATENS AND OPPORTUNITIES

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**Abstract:** *Pandemic crisis has inevitably affected all areas of human life, education and science are no exception. One of the typical characteristics of these sectors in emerging markets is a misproportioned age structure of scientific and educational staff. The analysis covers the overall higher education system. Considering senior employees investigation shows that they are generally more qualified, more experienced, with more achievements. As it is known present pandemic threatens primarily older people. The purpose of this paper is to study the possible influence of pandemic threats on educational systems due to real and potential rapid change in working staff. The findings of this work are expected to raise awareness about the unsolved task of the high-grade transfer of experience within academic staff. It is also shown some possible steps to approach this important goal.*

**Keywords:** *Transfer of academic experience, Human capital, Emerging markets.*

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## 1. INTRODUCTION

The COVID-19 pandemic quarantine restrictions have tightened the challenges facing higher education in whole world, generating many problems, and Ukraine is not an exception. Among the major problems there are two key issues: first of all, the possibility of studying at universities for all students in absolutely all disciplines through exclusively distance learning; secondly, the possibility of providing high-quality distance learning, at least approximately comparable to the training that students traditionally obtain. Certainly, there are many other issues: financial, technical and time resources, methodological and methodical, personnel, regulatory, information security. At first glance, it seems that quarantine restrictions have caused these problems. But in fact, it only manifested and actualized the tasks that should have been solved long ago.

Discussions about the need to develop online education have been going on for many years. Some universities have purchased and began to deploy educational online portals, instruct and stimulate teachers, develop courses for distance learning. The technologies were quite complicated in both development and application, the direction was growing slowly. And when the real test came all the flaws and shortcomings of these systems crawled out. Still we all realize that the Ukrainian education system needs radical changes, and now it is the time to do them. Those tasks that are solved due to quarantine in the future will help to solve a number of tasks that have long been voiced as a direction of reforming domestic education, namely: to make education more flexible, inclusive, digitalized, accessible, to provide a more individual approach to learning and personal development, to provide skills of modern technologies, to increase independence in learning and to instill the skill of continuity in learning. These are changes that have been expected for a long time, and quarantine only helped to understand that they are urgent and there is absolutely no alternative to their objectification.

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## 2. MISPROPORTIONED AGE STRUCTURE OF ACADEMIC PERSONNEL

Pandemic crisis has inevitably affected education in many ways, but in our paper we turn to only two facts that are interconnected: the translation of the entire educational process into a distance form and a high proportion of highly qualified academic staff over 60 years old that is in the main risk group due to COVID-19. We should mention, that if in developed countries the risks associated with COVID-19 concern people over 70, in countries with significantly weaker economies, and therefore weaker demographics and health care system, people over 60 are already at risk. Therefore, on one hand some specific difficulties appear as for the work of universities personnel over 60 years old due to total distance learning, and on another hand even if they allow classroom work next academic year, it's still reasonable to isolate the cadres of the older generation, reducing their presence in universities as much as possible.

Most states face similar problems. But for emerging markets including Ukraine it really becomes a challenge because modern academic staff of the universities in these countries has a misproportioned age structure. For a long time, the tendency of rising the age of the so-called average scientific and pedagogical worker who had a degree not only persisted, but also increased. In 2014, according to Zhilyaev (2015), the largest percentage - 52.27% - of doctors of science working in higher education institutions were over 60 years old and another 30.54% were in the category of 51-60 years, also 24.6% of candidates of science were over 60 years (p. 34). There was some slowdown of aging of the teaching staff due to new Education Act in 2015, but still a share of teachers of retirement age is rather high today. If we take number of researchers involved in Research & Development in 2018, according to Kuznetsova (2019), employees over the age of 60 took close to 30%, and researchers who had the degree of Doctor of Science and are over the age of 60 accounted for 58,10% (p. 38, 40). So, aging mostly concerns doctors of science and heads of scientific and educational divisions.

The example of our university shows that the trend is the same. Due to Bakirov (2020), if we take for the calculation full-time teaching staff, we can see, that more than 20% of them are older than 60 (p. 64). And situation within management personnel can be clearly understood based on the Table 1 (p. 64-65).

**Table 1.** Heads of faculties and departments in V.N. Karazin Kharkiv National University

	Management staff	2018 year		2019 year	
		quantity	%	quantity	%
1	Deans, directors of institutes	23	100	23	100
	Among them				
	Doctors of Sciences, Professors	15	65,2	15	65,2
	Candidates of Sciences, Associate Professors	8	34,7	8	34,7
	The age of 50 - 59 years	8	34,7	6	26,0
	The age over 60 years	10	43,4	10	43,4
2	Heads of departments	126	100	128	100
	Among them				
	Doctors of Sciences, Professors	89	70,6	90	70,3
	Candidates of Sciences, Associate Professors	37	29,3	38	29,6
	The age of 50 - 59 years	28	22,2	27	21,0
	The age over 60 years	67	53,1	72	56,2

Source: Bakirov, 2020

So, for Ukraine as an emerging market, the problems of academic staff over 60 related to the pandemic are very acute. Of course, it should be noted that the above trends of the high average age of research and teaching staff cannot be considered outside the objective processes of aging of the population of Ukraine. Still it also reflects specific negative processes inside high education. Why is it important to analyze it? We must understand that part of the inefficiency of already taken steps and those that will be undertaken in the coming year is a consequence of inadequate, overstated expectations from all participants of the educational process, and primarily from teaching staff.

There is a possibility that from September universities will again work on a distance basis. And there is the same possibility that the government will allow classroom work next academic year or some mixed type of education. Still it can restrict access for older teaching staff in classroom in order to protect them from the COVID-19. If the precautionary measures are not followed, then there are risks of loss of academic staff due to disability or death from the COVID-19 or diseases which were not properly or in time treated because of quarantine limitations, which means the need to prepare for their compensation, and immediate transfer their teaching load to younger colleagues. Learning cannot be stopped; students must receive a full-fledged education. Herewith administrations have to understand that there is a risk not just of losing the other teacher, but of losing of that part of personnel which is very valuable for the education and science (recall that most professors and academics are over 60).

At first glance the easiest way is the dismissal of employees of retirement age due to their risks and inconsistency with modern teaching requirements. And, perhaps, in some cases, it is justified, for example if all the criteria indicate that this particular teacher can no longer at all compete with younger colleges and there is worthy replacement for him/her (the latest can be a real problem in province). However, this is far from always the case. From the theory of human capital, we know that while the health fund in the structure of human capital depreciates over the years the intellectual part of capital is still growing and persists for much longer time. And the field of education and science is precisely the areas where, all other things being equal, even in retirement age a teacher and a scientist is of great value. In addition, quarantine is not forever, and if at the end of quarantine the teacher again becomes very useful to his/her university, then the university's task is to help him or her to go through this period with maximum dignity, to increase potential and real efficiency of work.

### **3. PROBLEMS OF SENIOR ACADEMIC STAFF IN DISTANCE LEARNING AND POSSIBLE SOLUTIONS**

It is most likely that from September quarantine will be extended, older workers will be saved in staff and will continue like everyone else using distance forms of work. So, our intention is to raise awareness about the unsolved task of making educational process as efficient as possible taking into account rather high ration of staff over 60 years old. We'll try to analyze arising challenges and find some possible answers for them.

**1.** Most senior teachers have serious problems in the technical implementation of distance learning (in spring semester difficulties were often minimized or implicitly transferred to younger colleagues). We are talking about the preparation of materials, their download, etc., as well as on-line forms of communication. If something technically went wrong, then help was often required, which usually no one could urgently provide, as a result, often there were no full-fledged lectures and seminars. The difficulty is that these technical skills will not appear quickly. And one must honestly admit this. What are the possible options?

It is important to help senior staff with the on-line implementation of their teaching ideas and activities in general, to show them modern educational platforms and teach how to create (and, may be, do it together) some main elements of their own courses. It is necessary to give professors more than usual hours to prepare written materials, process lectures for distance learning, and create new forms of intermediate and final control. Younger teachers need to devote more hours (officially, by plan) to help professors as it is obvious, that university won't hire more technical personnel due to budget deficit, although it is very desirable. Besides, it is reasonable to pass all practical work (that is except lectures and final control) to younger employees, as they can faster process different types of materials sent by students and create interactive methods of distance learning, including on-line work groups, professional chats and platforms, online conferences and seminars, etc. Another way is to attract students to participate in the department's online activities, give them incentives to help in creating video and presentation materials, different virtual content, online resources, conferences, groups in social networks etc., which they understand better than even the middle generation of teachers. It is also a nice idea to stimulate mutual assistance between faculties, that is 'technical' faculties of university can give technical assistance to humanitarian, and last one can give help in creating more 'friendly' methods of teaching and communicating students.

**2.** Among the problems there are a number of technical ones: inaccessibility of Internet for a part of population, an unstable or poor Internet connection that interrupt free education; temporary lack of sound methodological basis and certified platforms for distance training; lack of quality technical means for full-fledged distance learning (for example, simple and professional video cameras and microphones, tripods, updated software, etc. - if they had the opportunity, teachers bought most of these funds at their own expense, masking technical gaps in their universities); information security is a problem too (educational portals store a lot of confidential information, such as exam tickets and test cases, texts that are intellectual property of teachers that can be copied and distributed by unscrupulous students).

Some part of these problems government and universities try to fix in summer. But we anticipate that many teachers will meet most of these difficulties face to face again in September. Nevertheless, the task of the faculties is to let each teacher know about the technical possibilities that are available to them within the university, as well as to inform of the possible alternatives that can help to compensate their personal lack of technics. Senior teacher needs to be particularly instructed and given help in starting work with new technics.

**3.** We must acknowledge another problem: there are very few well-developed methods for transforming full-time courses into distance learning courses that are easy to share with all teachers. It certainly concerns all academic staff, but most of all seniors as they got used to traditional ways of passing knowledge and might not even come closer to distance learning in their previous practice. The role of the subject of study, the peculiarities of the course that is taught, are very important here too. Therefore, there is a need to ensure a real exchange of experience among teachers in specific areas. We have to admit such a feature of the Ukrainian academic space: there is no understanding of the need for a systematic exchange of experience in teaching university disciplines. That is, to hold a conference, a seminar, a discussion about something new in science is a norm, and to get together to discuss new methods, methods of transferring specialized knowledge between different faculties, universities members is something that you almost never meet in high education (mostly you can find this kind of activity as a discipline for pedagogical students, not for working teachers).

Meanwhile, the world has long ago entered a new period when a radical and constant updating of educational methods is required. We need teacher associations in the development of ideas within the profession as a whole. That will provide opportunities to evaluate our teaching progress; to give academic personnel a platform to make contact with one another and share ideas; to get closer to the development of teacher trainers who will help their colleagues to incorporate new teaching methods into their specific practice taking into account also the age and the experience of the concrete teacher.

4. There is one more feature of the modern education system: in universities all academic personnel must be engaged in science. The characteristic of the educational process in most post-soviet countries is the insufficient remuneration of academic staff. And here some difference appears between the older generation of cadres and the younger one. Older personnel studied and started work when science and education were highly valued. Most of these people have devoted their entire lives to science and education. If they worked part-time, mostly it was also in the fields of education and science, or in the areas of real economy related to their researches. That is, their academic level grew in the process of additional work. Young scientists studied at another time, they also have to earn extra money, but often are looking for a part-time job in areas where they pay more, that is, not related to science and education. As a result, they commonly cannot fully develop and realize themselves as scientists. And more, students and young teachers really see that work in education and science is extremely underestimated and there are few prospects, which leads to a further decline in motivation for full-fledged work in the field of science and, in general, interest in it.

The older generation of academic staff, with their experience and knowledge, in our opinion, should take more active role in popularizing science in the university environment. First of all, they have what is called a taste for science. And this can be conveyed to a student only from a person who is internally burning with science. Secondly, it is extremely important that they have the concept of true science, including, for example, a real paper, which is the result of research you've really done, and not the result of urgently written texts, to which you are forced by the obligation to write 3 papers a year. And these scientists also remember that they went to conferences to exchange experience, to discuss important and interesting scientific innovations, and not just to read / publish their theses, because there are such requirements for a teacher/scientist. The professors also have a huge experience of working with young people in science, they know the most common mistakes and difficulties in conducting and designing scientific research.

Already, these three points are enough to make it clear: now, in the era of another deep crisis in emerging economies it is very important to give senior academic staff the opportunity to think over and to realize the possibility of systematic, purposeful transfer of their scientific experience and experience of working with young researchers to their junior colleagues, to students, even schoolchildren and everyone who is interested. These can be interdepartmental, inter-university and even international programs. These should be serious projects to popularize true science, including issues of scientific ethics. We understand that this cannot be done overnight. But in view of the quarantine restrictions, senior professors can be asked (and allotted time within teaching load officially) to think over and to prepare to launch these projects, as well as to implement several pilot projects online if possible.

5. Another difficulty that everyone has encountered, but especially the older generation of teachers, is health problems. It is clear that by the age of 50-60 years, a number of chronic diseases appear, age-related changes occur, and the risk of life-threatening diseases increases. In

most cases, the prevention of most problems is a healthy lifestyle, involving in daily physical activities, as well as alternating stress and relaxation. However, quarantine brought just the deprivation of physical activity in the right measure, especially because for older people the most common ones are active walking and swimming, which is exactly what they were deprived of and most likely will be deprived of during the next academic year.

In addition, an experienced lecturer in his/her discipline needs only a plan, a draft of a lecture, short slides and a note with updated statistical data, the rest is in his/her head and he/she speaks freely about it. To prepare distance courses, it took much time to formalize, transfer to paper, and contribute to educational platforms (with which most teachers worked rarely or never before). Besides, many additional written documents appeared that the university administration required, for example, plans for distance learning, and then reports on the work done. As a result, each new lesson required preparation in such a volume that the responsible online teacher spends at least 12 hours a day on the computer seven days a week! As a result of several months of “sedentary” work, people faced exacerbation of chronic diseases, deterioration of their vision, vascular, orthopedic, excretory system, with excess weight, which again increases the risk of serious complications of most chronic age-related diseases. Thus, the danger of complete or partial loss of working ability, and even death, among the academic staff of the older generation increases. It must be admitted that these problems also affected the teachers of the middle generation.

Therefore, it is extremely important for the quarantine period to remove all secondary activities of senior teachers, giving them the opportunity to focus temporarily on the main goal - high-quality training of students. May be the only possible way is to cut as much as possible usual methodical and scientific load (common methodical and documentary activities, obligatory training manuals, annual scientific publications and individual participation in scientific conferences, etc.). And, to switch time of senior academic workers to the creation of better distance learning courses and electronic textbooks, to more active scientific work with students and young colleagues, including the development of their skills of investigation design and writing of high-quality research papers (which corresponds to our paragraph about transfer of scientific experience). If personnel over 60 years old have some spare time and enough health it is reasonable to stimulate them to creation, conduct and simply participation as a listener in high-quality online conferences where they can share pedagogical, teaching and scientific methodic ideas and experience. But only – if it will not pose a threat to their health. It is worth even to low temporarily the usual quantitative requirements for curricular and extracurricular workloads for senior academic staff so as not to force teachers and scientists to sit around the desk for longer time that is well-grounded. And, of course, to promote physical healthy activities for all teachers by all creative steps available.

#### **4. CONCLUSION**

Now there is a wonderful chance to make education in emerging markets more competitive, flexible, attractive and high quality. The future of higher education in Ukraine depends on how we meet this challenge. Most changes that should be done due to quarantine are obvious changes that have been done long ago. But senior academic staff requires special means and needs particular attention in view of the threats posed by the pandemic and total distance learning caused by it. For academic staff over 60 years old it is mandatory to develop a new system of scientific and teaching activities for the period of pandemic that correspond with their full or partial isolation from classroom work.



It is very useful to give technical assistance to senior teachers (if possible, to make this help constantly available), to teach them most useful elements of distance-learning technologies, to inform about possible help to compensate their personal lack of technics. It is important to provide senior staff with all opportunities to learn about designing and teaching distance courses, to give everyone a chance to master specific teaching skills and share experience and ideas with colleagues. Universities also need to create a system of transfer of scientific experience from the oldest to the youngest colleagues and students to ensure university science will pass through crisis with minimal losses. It is reasonable to think over a new assignment of working hours and rating of teachers and departments taking into account new, temporary realities (sometimes it means to give more hours and points for additional activities in connection with the implementation of distance learning and transfer of experience, but sometimes it means to reduce hours for secondary curricular and extracurricular work so that senior teachers spend less time sitting near computers). And, it is very advisable to give rules for calculating the load of teachers in new conditions before the new academic years starts.

We consider it vital to pay attention to preserving so-called biological component of the human capital of universities, namely the life and health of the scientific and teaching staff. Here you can't think for a short time: once lost health is restored for years, and sometimes it can no longer be completely restored. University administrations finally must recognize that the main value of any university is its academic staff, and everything must be done to maintain the health of personnel. It is much more important than this year ratings and any indicators of university.

We would like to recall that one cannot completely and permanently leave full-time education on the sidelines. The value of a true teacher cannot be replaced by a well-designed distance course. There is an old Greek wisdom that 'a student is not a vessel to be filled, but a torch to be lit'. The true teacher is the one who can do it. And our duty is to save and value these true teachers no matter how old they are.

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# DIGITAL COMMUNICATIONS OF THE GOVERNMENT OF UKRAINE IN HEALTH CARE DURING THE COVID-19 PANDEMIC

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**Abstract:** *During the COVID-19 coronavirus pandemic, governments around the world faced for the first time the need for large-scale communication campaigns to prevent the spread of the global infection. Against the background of lack of experience in conducting this type of behavior change campaigns, there is a need to assess the practice of digital communication and develop steps to address problematic communication aspects. The article presents the results of the study of digital communication content and tools of the Ministry of Health Care of Ukraine during the pandemic of coronavirus infection COVID-19, analyzes communication messages through the prism of factors influencing behavior change (MINDSPACE). The study substantiated recommendations for improving government digital communication in health care in the context of global challenges.*

**Keywords:** *Communications for the sake of behavior change, Digital communications, Government communications.*

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The COVID-19 pandemic has become a large-scale crisis for humanity. The main features of the pandemic were uncertainty, emotional messages, fear. In these circumstances, the main tool to combat the spread of fear and panic is to ensure continuous access to objective information. Communication campaigns of government authorities in a pandemic should be targeted towards changing the behavior patterns of the population, as almost the only measure to combat the coronavirus at present is the observance of hygiene rules and social distancing. In order to develop recommendations for the use of communication tools and technologies by government agencies for behavioral change in the context of the COVID-19 pandemic, a study of digital communication practices of the Ministry of Health Care of Ukraine was conducted. The content analysis method was used to analyze the content, including through the prism of MINDSPACE and communication tools in the Telegram channel „Coronavirus\_info” in the period from March 12, 2020 to May 10, 2020. The hypothesis of the study is that if in the first months of quarantine restrictions the authorities’ communication were aimed only at informing citizens and there was no full implementation of factors influencing behavior in communication strategies, the majority of the population would eventually stop following the rules of hygiene and social distancing, and this in turn would lead to the increase of morbidity and a new wave of COVID – 19 pandemics.

Studies show that in a pandemic COVID-19 it is important for government agencies to establish accessible official channels for the transmission of coronavirus information. Moreover, the 2020 study by The Edelman Trust Barometer Spring Update recorded a change in the level of trust in

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the government due to the coronary virus pandemic worldwide: The issue of *trust and the COVID-19 Pandemic* reveals that trust in government (65%) surged 11 points since January making it the most trusted institution for the first time. Respondents want governments to lead in all areas of the pandemic response: containing the pandemic (73%); helping people cope with the pandemic (72%); informing the public (72%); providing economic relief and support (86%); and getting the country back to normal (79%). The study covered 11 countries. Although Ukraine did not participate in the study, the likelihood that the expectations of the country's population in the crucial role of government agencies in overcoming the pandemic and disseminating objective information about the coronavirus has increased is quite high.

During the quarantine period, there was an increase in time spent online in all countries of the world, including Ukraine, where Internet traffic increased by 25%. Social networks have become one of the main channels for finding and obtaining information about the pandemic. According to KantarTNS (Ukraine) CMeter in March 2020, the level of coverage of Internet users of Google, YouTube, Facebook increased compared to February 2020 (by 0.13%, 1.44% and 3.13% respectively) and amounted in March 2020 to 93.56%, 73.95% and 67.92%. Telegram began to be used more often on PCs, not just smartphones. This allowed the messenger to rise from the 51<sup>st</sup> to the 28<sup>th</sup> position in the ranking of popular sites.

With the beginning of the epidemic, the main communication channels of the Ministry of Health Care of Ukraine became not only websites ([www.moz.gov.ua](http://www.moz.gov.ua), [www.covid19.com.ua](http://www.covid19.com.ua)), but also pages in social networks, which covered different parts of the country's population (see Table 1).

**Table 1.** Communication channels of the Ministry of Health Care of Ukraine about coronavirus in the Internet

	Communication Channel	Number of Subscribers
1	The page of the Ministry of Health Care of Ukraine on Facebook ( <a href="https://fb.com/moz.ukr">fb.com/moz.ukr</a> )	209 thousand preferences, 390 thousand to follow
2	The page of the Ministry of Health Care on the YouTube channel ( <a href="https://www.youtube.com/channel/UC-kYPlo9h8F2--Xyesbh-8w">https://www.youtube.com/channel/UC-kYPlo9h8F2--Xyesbh-8w</a> )	7,71 thousand
3	Telegram channel of the Ministry of Health Care (@mozofficial)	38,3 thousand
4	Twitter channel of the Ministry of Health Care (@MoH_Ukraine)	8,7 thousand
5	Facebook page of the Health Care Minister ( <a href="https://fb.com/maksym.stepanov.official">fb.com/maksym.stepanov.official</a> )	18.2 thousand liked it, 20.4 thousand watched
6	Telegram-Channel "Coronavirus_info" about COVID-19 in Ukraine ( <a href="https://t.me/COVID19_Ukraine">https://t.me/COVID19_Ukraine</a> )	782, 3 thousand
7	Instagram account «Covid19_ukraine» ( <a href="https://www.instagram.com/covid19_ukraine/">https://www.instagram.com/covid19_ukraine/</a> )	1587
8	Viber Community «Corona Virus Info» ( <a href="https://vb.me/covid19_ua">https://vb.me/covid19_ua</a> )	3 380,3 thousand
9	Page in TikTok "Coronavirus_info" (@coronainfoua)	14,8 thousand

Such channels of information dissemination were also used as SMS-messages (from 14.03.2020 for the release of the main recommendations for the fight against coronavirus), the DRUG (Friend) system (<https://friend.mfa.gov.ua/#/>) for the registration of citizens of Ukraine, who were in other countries and wanted to return home. The chat bot of the Ministry of Health Care (@ COVID19\_Ukraine\_Bot) was launched on March 7, 2020 to answer common questions about the coronavirus in Ukraine, and on April 17, 2020 it was restarted. Chatbot Doctor Elon

Musk provides up-to-date information on coronavirus verified by the Ministry of Health Care, in particular, morbidity statistics; updated information on quarantine restrictions; advises how to protect yourself and loved ones; tells you how to act in different situations related to coronavirus disease, according to the protocols of the Ministry of Health Care.

In order to minimize the use of unreliable sources, the Ministry of Health Care together with Facebook launched expanded access to local Facebook notifications with up-to-date information on coronavirus from official sources of the Ministry of Health Care of Ukraine, such as the official website (“moz.gov.ua”) and the site with answers to basic questions about COVID - 19 (“covid19.com.ua”). The Ministry of Health Care of Ukraine also agreed to cooperate with Google in the framework of information support. At the end of March 2020, the Ministry of Health Care expanded its communication platforms and created the official Viber-community „Coronavirus Info”. The site was authorized by Rakuten Viber. In-app notifications are also sent via messenger to all users registered in Ukraine.

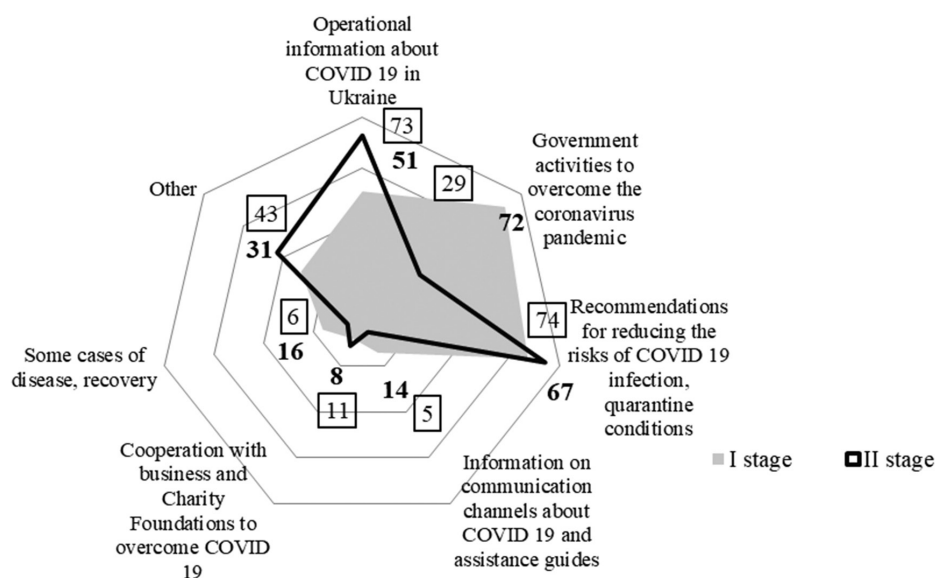
On March 31, 2020, the Ministry of Health Care launched the Coronavirus Info @coronainfoua channel for younger people on TikTok and Instagram. The channels started with the announcement of the #мийруки (#Washhands) challenge. Under the terms of the challenge, you had to record your own videos and encourage your friends to take care of your health. To remind once again how important it is to be at home, on the page of Coronavirus\_info on Instagram on the eve of Easter (April 19, 2020) they launched a flash mob VdomaDobre (#BetterAtHome) (post a photo at home, put the hashtag #DomaDobre) .

The most popular Telegram channel „Coronavirus\_info” started publishing messages on March 6, 2020. The channel uses a different arsenal of messages - from daily reports on the number of sick, dead and recovered, data on the age characteristics of infected to informational videos aimed at spreading recommendations to help reduce risks coronavirus infection, explanation of quarantine conditions, the Government actions to overcome coronavirus, etc. (Figure 1). From 4 to 11 messages were published daily. The number of people who scrolled the information was varying from 49.6 thousand (message from 7.03.2020) to 1 million (message from 26.03.2020). Almost 40% of the messages were presented in the format of infographics and videos at the 1<sup>st</sup> stage of quarantine and almost 50% at the 2<sup>nd</sup> stage of quarantine. Interactive infographics with disease statistics in Ukraine are published daily (twice a day during March-April). It should be noted that this information diversity works to maximize the assimilation of critical information.

During the 1<sup>st</sup> quarantine period (March 12, 2020 to April 3, 2020), the largest number of publications concerned the Government’s actions to prevent and overcome the pandemic, including video appeals of the President of Ukraine, the Minister of Health Care and recommendations to help reduce the risk of infection. quarantine. They accounted for more than 27.8% and 25.9%, respectively. Quite a large proportion of publications disclosed operational information about COVID 19 in Ukraine (19.7%). It should be noted that the tone of most of the messages was formal and neutral.

During the second stage of quarantine (4.04.2020-10.05.2020) 30% of publications were operational information about COVID 19 in Ukraine, 12% - about the Government’s actions to prevent and overcome the pandemic, including the addresses of the President of Ukraine, briefings of the Minister of Health Care or his deputies. It should also be noted that the share of such publications in comparison with the first stage of quarantine has halved). 27% of the publications concerned coronavirus prevention and precautionary measures. The official and neutral tone of the messages was preserved.

However, in the new column „Good morning, The Country!”, which was launched on March 24, 2020, the tone of the messages has become significantly more caring, there appeared soft reminders of the need to take care of your health and the health of others. The messages in this section often used the genre of literary meme, which made it possible to relieve official information of anxiety. So, for example, from March 25, 2020 in information messages characters from the Ukrainian history and their well-known statements were used: „Fight and you will overcome!” by Taras Shevchenko, „Down with sad thoughts!” by Lesia Ukrainka, „Show your courage!” by Bohdan Khmelnytsky and even the figures of the legendary founders of Kyiv - Kyiv, Shchek and Khoriv: „Keep the distance!”.



**Figure 1.** Number of publications made at the Telegram Channel “Coronavirus\_info” by types at the I and II stage of quarantine

During March-mid-May 2020, several information campaigns continued on the Coronavirus\_info Telegram channel. #SimpleThingsSaveLife (13.03.2020 - 5.04.2020) was represented by 14 messages. As part of the campaign, a video was shot in which Ukrainian show stars called to obey simple rules that would help to maintain people’s health. Several video clips were produced for communication campaign promotion: e.g. “Moms remind: quarantine is not a holiday”, „Dads recall: set an example for your family during an outbreak of coronavirus infection, follow sanitary and hygienic norms, take care of your loved ones and be responsible. Stay at home and be healthy! „ There were also 7 infographics, 4 of which were created jointly with UNICEF Ukraine. These messages were explaining in an accessible form the main rules that reduce the risk of COVID 19 infection: „Good nutrition and sleep. Avoid „fatigue”, „Avoid crowds”, „Wash hands always and everywhere”, „Cover your mouth and nose when coughing or sneezing.”

Since March 18, 2020 22 messages have been posted as part of the #StopCoronavirus information campaign. Among them: a video message from doctors - experts of the Ministry of Health Care with an explanation of the possibility of getting sick in a large crowd, the need to use a mask, etc.; rubric „Myth” - „Truth”; clarification of quarantine conditions and basic rules that will help reduce the risk of infection COVID 19. Ukrainian singers, actors, presenters supported this information campaign.

In mid-March 2020, the Ministry of Health Care also launched an information campaign #SupportDoctors and called on everyone to be grateful for the dedicated work of physicians who oppose the spread of coronavirus. The Telegram channel „Coronavirus\_info” published 18 mes-

sages with this hashtag (14 of them - video). In total, more than 30 Ukrainian show stars took part in the #SupportDoctors campaign.

The campaign # Stay at Home (March 28, 2020 - April 18, 2020) was represented by 8 publications, of which 6 were videos. The Ministry of Health Care, together with the National Bank of Ukraine, shot and posted a video calling to teach the elderly to pay for utilities online. On the eve of Easter, videos with online footage of online services abroad and a call to stay at home during Easter were posted.

Summing up, it should be noted that the information messages of the first two stages of quarantine in the Telegram channel „Coronavirus\_info” mainly contained recommendations that would help reduce the risk of infection (25.9% of all publications during the 1<sup>st</sup> stage of quarantine and 27 % - in the 2<sup>nd</sup> quarantine period). The share of communication messages covering the Government’s actions to overcome the pandemic (27.8% and 12%) and operational information on the spread of COVID 19 (19.7% and 30%) was also quite high. The communication messages of the 1<sup>st</sup> quarantine period mostly contained a significant amount of information and were characterized by a formal tone of information presentation.

The whole communication process was significantly complicated by a lack of trust in the Government authorities (according to the Razumkov Polling Center, the level of trust in the Government in February 2020 in Ukraine was 28%). At the 2<sup>nd</sup> stage of quarantine, the tone and content of messages was changed. Experts note that the change in the tone is necessary, because you need novelty and creativity in communications. Communication expert for social and behavioral change A. Nurzhynska (2020) notes that having too much information and not enough time for reflection, a person relies on automatic, subconscious and quick solutions for action. Accordingly, people act as others do.

With this in mind, British experts have developed the MINDSPACE concept, which, based on thorough research in the field of social psychology and behavioral economics, identifies the main factors of behavior change and communication tools that can influence people’s behavior (Dolan P., Hallsworth M., Halpern D. and other, 2010). If the communications of the Ministry of Health Care during 12.03-12.05.2020 in the Telegram channel „Coronavirus\_info” on MINDSPACE are analyzed, it turns out that almost half of the MINDSPACE factors were used (see Table 2).

**Table 2.** Communication tools of the Ministry of Health Care of Ukraine according to the MINDSPACE concept, which was used in the Telegram channel „Coronavirus\_info” (12.03-12.05.2020)

Behavior Change Factors	Communication Instruments
Messenger	Well-known Ukrainian singers, actors and presenters were actively involved in communications. To a lesser extent, doctors were involved.
Incentives	The communication mostly used regular reminders about the need to follow the recommendations that would help reduce the risk of infection, emphasizing on the ease of these action (hand washing, social distancing, etc.), as well as on their benefits - “Keep a good mood and remember that we sit in quarantine not for quarantine, but to live and stay healthy. In the meantime, think about what you will do on the first day after it’s all over!”
Norms	“Believers stay at home and attend worship services online. Everything to save lives and health.”
Defaults	Distance stickers in stores. “Add markings to help people keep their distance.”
Salience	The use of characters from Ukrainian history and their famous sayings: “Fight and you will win!” by Taras Shevchenko, “Down with sad thoughts!” by Lesya Ukrainka, etc.
Priming	-
Affect	-
Commitments	-
Ego	-



Although Messenger has been widely used in Ministry of Health Care's campaigns, communication message developers have not taken into account the fact that, according to research, Ukrainians trust COVID-19 reports from physicians, WHO representatives and experts the most. Statements about COVID-19 by others, including celebrities, journalists, government officials and politicians, appeared to be not that credible (GfK Ukraine, 2020).

Actually, the Norms factor was not used. Only once in the messages on the eve of Easter a video was posted stating that on April 10-12, 2020, the faithful of the Vatican and Israel stayed at home and joined the services online. „Everything to save lives and health.” However, the same video also contained information that residents of Chernivtsi (in the region with the largest number of patients) came to the churches on Palm Sunday.

## CONCLUSION

It should be noted that the Ministry of Health Care of Ukraine used a sufficient number of digital communication channels, which were targeted at different age groups. The use of various information channels, a significant number of users of these channels indicates that communication messages were available to a large number of people. However, an analysis of one of the Ministry of Health Care most popular digital communication channels, *Coronavirus\_info*, shows that communication messages were mostly official, with a share of information on COVID 19 dissemination and government action to counteract recommendations to help reduce the risk of infection. Communication messages of the Ministry of Health Care did not fully use the main factors of behavior change and communication tools that can influence people's behavior and focused mainly on raising public awareness. The hypothesis of our study was confirmed because there was no large-scale implementation of behavioral factors in communication strategies, the majority of the country's population (as well as its leadership) stopped following the rules of hygiene and social distancing, and this, in turn, led to the increased morbidity. With this in mind, the authorities need to consider the following.

Assuming the fact that people do not always think rationally in the decision-making process, and information alone in 80% of cases does not change people's behavior (Dolan P., Hallsworth M., Halpern D. and other, 2010), the concept of MINDSPACE must be used when developing communication on combating the spread of COVID 19. At the same time, special attention should be paid on focusing on support and motivation, by framing messages in terms of thinking about the future, the effectiveness of precautionary measures, emphasizing that more and more people start following all the rules of quarantine and precautionary measures. It should also be kept in mind that the amount of information provided in the messages should not be overflowing, and we have to create a shorter list of the most effective actions that people in the country can follow. The spread of the coronavirus pandemic is a protracted crisis characterized by a considerable uncertainty and communication should be built according to the stages of the crisis (see the McKinsey guide (2020) for details. The practice of government communication needs further research. Effective communication practices for behavioral change must be implemented as soon as possible in communication strategies aimed at counteracting the spread of COVID-19, because in many cases, people's lives and health depend on it.

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# FINANCIAL CRISES AND STRUCTURAL CHARACTERISTICS OF THE ECONOMY

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**Abstract:** *Economic structures are a major cause of long-term growth or stagnation. Different economic structures have different ranges of structural learning, innovation, and different effects on income distribution, which are key determinants of economic performance. Through theory about economic structures it is explained why institutions work differently in space and time. This paper shows using a case study in the United States, that the source of recent financial crises rests on the structural characteristics of the economy. Constant deindustrialization is increasing inequality, and a debt-intensive credit boom has emerged to offset the deflationary effects of this structural change. The strong application of the austerity system in Europe and other parts of the world, even after the evidence points to less frugal policies, illustrates the theory of power it has over public policy. The economic structure should be put at the center of analysis, to better understand the economic changes, income disparities and differences in the dynamics of political economy through time and space. This paper provides a critical overview of the rapidly developing comparative studies of institutions and economic performance, with an emphasis on its analytical and political implications. The paper tries to identify some conceptual gaps in the literature on economic growth policy. Emphasis is placed on the contrasting experiences of East Asia and Latin America. This paper argues that the future investments in this field should be based on rigorous conceptual difference between the rules of the game and the game, and between the political and institutional, embedded in the concept of management. It also emphasizes the importance of a serious understanding of the endogenous and distributive nature of institutions and steps beyond the narrow approach of property law relations in management and development. By providing insights from the political channels through which institutions affect economic performance, this paper aims to contribute to the consolidation of theoretically based, empirically based and relevant to policy research on political and institutional foundations of growth and prosperity.*

**Keywords:** *Financial crises, Structure, Economy.*

## 1. INTRODUCTION

The claim that “inclusive” institutions are a deep determinant of economic growth remains unsatisfactory. This paper also develops an alternative theoretical and empirical case that economic structures are the root cause of economic performance. Economic structures determine the rate of structural learning, affect institutional performance, affect income distribution, and establish the direction of political transitions, and thus economic performance. The paper highlights the feedback loops between institutions, political power and economic structures, so markets alone will not provide transformations that increase growth. The operation of this framework is illustrated by the use of a case study in the US and the discovery of the structural origins of the financial crisis.

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## **2. ECONOMIC STRUCTURES, INSTITUTIONS AND ECONOMIC PERFORMANCE**

The first explanation of why some countries are rich and some poor was tried by Solov (1956), who cited the main reason for the difference in capital accumulation and technical changes, but this explanation was not enough. Growth theories (Aghion and Hovit 1992; Grossman and Helpman 1991; Romer 1990) argue that differences in research and development and human capital lead to different growths in technical change and accumulation. Yet why do some countries invest more in education and innovation?

North (1990), Acemoglu and Robinson (2013) and other new institutional economists argue that differences in institutions can explain differences in economic performance across time and space. Institutionalists believe that economic growth is a function of economic and political institutions, but they neglect the role of economic structures in the dynamics of growth. In their opinion, institutions do not cause growth, but the economic structure of the state is the basic cause of economic performance. Therefore, differences in economic structures through time and space can explain differences in economic development. This paper presents a new theoretical framework that explains how important economic structures are for growth and this is supported by the American case study.

But what are economic structures? Some goods like high-tech production have room to increase yields, and others like bananas are known for showing reduced yields. Today, a country has an increased production structure of yield if it produces high-value goods that are technically sophisticated and vice versa, which means that the economic structure of declining yields consists of low value-added goods that are technologically simple. Basically, economic activities reflect the productive capabilities of the economy, and the production structure of a country is simply a summary of its technological capabilities.

High value-added goods and technologically complex goods are produced in market structures that favor innovation (Nelson and Winter 1990; Schumpeter 2008) and they maintain higher wages and profits over a longer period (Reinert 2008). Also, increasing economic rates of return provide longer career scales and they serve as an important means of labor success, which improves income distribution. Furthermore, democratic transitions help to increase the production structures of yields and this increases the spread of technical knowledge (Acemoglu 2008), which is the most important immediate cause of growth. Based on the above, it can be concluded that a country acquires an economic structure when the state adequately applies production.

It is obvious that without a minimum rule of law and some form of ownership, no production will be undertaken. It follows that exchange institutions have non-trivial effects on production. However, exchange institutions do not guarantee the production or production of goods with increasing yields. Institutions are in the best conditions necessary, but in themselves insufficient to produce production. Government subsidies and tax breaks, if applied appropriately, can have direct effects on the level of production and encourage the production of certain goods relative to others. This difference makes it possible to emphasize the analytical limitations of the new institutional economy, especially the work of Acemoglu et al. (2005) and Acemoglu and Robinson (2013). These theorists distinguish between „extractive” and „inclusive” institutions. The first concerns undemocratic political institutions on the one hand and the weak rule of law and the absence of private property rights on the other.

However, poor countries, which by definition lack production technologies, cannot record strong growth by “taking over” exchange institutions from developed countries. In fact, their resources are poorly allocated, with imperfect exchanges becoming less problematic when it is realized that poor countries have little to exchange. Some theorists argue that exchange institutions cannot produce structural transformations that increase growth. Their theory is that the work of institutions is determined by the economic structure of the country. Empowering institutions is not expensive, but reduced returns on economic activity simply do not produce enough added value to cover the costs of setting them up. The reverse is true in rich countries with increasing return economic structures.

The paper argues that professional rents are becoming an important source of de facto political power, which in turn is used to strengthen the economic structure in order to preserve the distribution of professional leases. This creates a balance between political power, institutions and economic structures and explains why structural changes to boost growth are the exception rather than the rule.

### 3. ECONOMIC STRUCTURES AND INSTITUTIONS

The debate on institutions and development is focused on the direction of the cause-and-effect relationship. While new institutional economists argue that institutions cause growth, the literature on industrial policies (Chang 2003; Khan and Jomo 2000; Reinert 2008) argues, among other things, that growth and development determine the direction and rate of institutional change. Based on the above, two statements can be made:

- There is a two-way cause-and-effect relationship between institutions and economic structures,
- The type of economic structure determines the performance or efficiency of formal institutions.

Institutions do not exist in abstraction; they co-evolve with the productive structure of the economy. The IMF’s structural adjustment programs and World Bank’s second-generation reforms are major institutional changes that revise the rules for managing business and social interactions. These reforms affect economic performance because they change the structure of economies. However, structural transformations also trigger institutional changes (Ancochea 1999; Chang 2011; Reinert 2007). The discovery of gold in California led to what is popularly known as the California Gold Rush. This discovery changed both the sectoral distribution of GDP and the type of economic activities produced. As with institutions, the exploitation of this natural resource does not exist in abstraction; it must be regulated in the new institutional framework. Similarly, institutional changes are needed when oil is discovered.

Accordingly, it is concluded that institutions cannot be underestimated and their causal effects in isolation are production structures. Even new institutional economists understand the importance of economic structure and its relationship to institutions. Their emphasis on property rights and the rule of law, etc. is a means of reducing market transaction costs in order to maximize profits from trade. By focusing on exchange, they imply that the problem of production is solved, but with such an assumption, no development policy can be made.

The view that institutions are the rules that shape human interaction (North 1990) does not encompass the link between institutions and economic structures. This definition allows for one direction of cause - from rule to consequence. But even with the consequent events (state intervention and / or external shocks), institutions are formed or modified.



#### 4. CASE STUDY IN THE USA

During the 1800s, the agrarian economy contributed the most to U.S. GDP and much of world production. But the shocks of productivity on farms and the expansion of cultivation significantly reduced agricultural prices and incomes in the early 1900s (League of Nations 1931; Tymoshenko 1933), and this had an important effect on the structure of the economy. The decline was particularly severe between 1929 and 1932 - agricultural incomes were reduced by 50%. One of the important implications of this secular decline is the decline in agricultural employment, which has led to huge unemployment, as new sectors and economic activities have not taken full advantage of the growing number of unemployed.

This period of structural change inevitably changed the distribution of occupational rents to rural labor, which increased inequality between villages and cities and worsened deflationary tendencies of transformation. It is useful to keep in mind that the initial levels of inequality were already high during this period. Piketti (2014) notes that from 1800-1910, private capital as a percentage of national income averaged 700% in Germany, France and Britain, while in the United States it ranged from 300 to 500%. In agrarian economies, ownership of capital was highly concentrated, leading to significant inequalities in wealth and income. Although some landowners lost private wealth during the agrarian transformation, the decline in agricultural employment has countered any tendency to reduce wealth inequality. During this transformation, manufacturing, construction and trade services were emerging sectors, which showed a structural change towards the center of production space or towards an increasing structure of yield production.

World War I (VVI) served as a temporary stimulus to the economic growth of the American economy and accelerated the transformation in the growing economic structure of yields, but the process remained incomplete. Rising rural and urban inequality and mass unemployment in agriculture are changing de facto political power, which has de jure affected political power, among other things, to reduce the highest income tax rates, and this has worsened inequality. Great inequality and forced austerity during the First World War created a large base of borrowed funds that did not find profitable paths in agriculture, and the newly emerging industrial sector was not enough to take advantage of the excess savings. They gave way to the unfortunate idea of a cheap loan or model, buy now and pay later. Consequently, this created a debt-driven growth model as consumption exceeded declining agricultural and urban revenues.

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# SOCIOLOGICAL AND SECURITY ASPECTS OF GEOPOLITICAL POSITIONING OF THE REPUBLIC OF SERBIA IN THE EU ACCESSION PROCESS

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**Abstract:** *Sociological and safety aspects of the geopolitical integration of the Republic of Serbia into the EU are part of the reality the country and the society have been confronting since the beginning of the 21<sup>st</sup> century. To single out and determine every sociological and safety factor is almost impossible since there is no definiteness of factors affecting the positioning of a country within the association of new countries. Neither is there any unique prototype applicable to all countries. Each country possesses cultural, national, religious, institutional and economic uniqueness; hence, it can be concluded that each country undergoes various experiences in the process of integration into a new institutional family. Since the creation, the European Union by its structure has presented a challenge to the society in all respects. This may certainly be measured and explained by sociological and safety standards. This paper presents the past correlations of the Republic of Serbia from two decades ago to the present, using a synthetic method to carry out a comparative analysis of the descriptive pattern, position, and capacities of the national in relation to supranational.*

**Keywords:** *Sociological, Security, European Union, Geopolitics, National, Supranational, International relations.*

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## 1. INTRODUCTION

The geographical area of Serbia belongs to the central part of the southern Slavic region of the Balkan Peninsula. Throughout history, several civilizations have developed in the wider environment of Serbian geographical region: Ancient Greek, Roman, Byzantine, Germanic, Hungarian, and Islamic-Turkish. These civilizations had a significant influence on the development of the entire Balkans, due to frequent conflicts among them. The contemporary cultural-religious position of Serbia is complex since it is determined by the position at the crossroads of three cultural-religious spheres, i.e., the collision of various ethnic, cultural and religious factors.

The Republic of Serbia represents an area of religious crossroads, where different cultural-civilizational spheres and geopolitical lines intersect, and great powers' interests and projects collide. "The geo-cultural history of Serbia portrays Balkanization as a cultural and geopolitical phenomenon and an expression of constant division and clashes, where frequent conflicts accompany cultural pluralism coexisting through the centuries. In addition to its multiconfessional and multicultural determination, the geo-cultural history of Serbia is characterized by specific ethnocultural processes primarily marked by the continuous ethnic separation of the unique Serbian ethnos that has existed in this geographical area since the twelfth century. Namely, a double ethnic separation of Serbian ethnicity is currently in progress. The first, based on reli-

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gious separation from the Serbian ethnic group and the second on the basis of politics and state” (Sekulovic & Gigovic, 2009).

## **2. GENERAL CHARACTERISTICS OF GEOPOLITICAL POSITION OF SERBIA**

“Geopolitical position defines the Republic of Serbia as an unavoidable area in connecting North, West, East and Southeast Europe. Analyzing the geopolitical position of Serbia, it may be noticed that its geographical area represents a region of the infusion of various geopolitical interests. In terms of geostrategy, it represents the physical connection between Europe, Asia, Near-East and the Mediterranean. A particular geostrategic dimension is a fact that certain areas, three of the ten Pan-European corridors, identified by the European Commission as being of vital strategic importance for Europe, extend across and in the immediate vicinity of Serbia’s geographical area. Such an analysis of the position of Serbia indicates that being a transit area is the basic geostrategic determinant of Serbia. The fragmentation of a part of the territory and the placement of Kosovo and Metohija under a protectorate significantly undermined Serbia’s geopolitical position. Kosmet, in addition to the ethnic space of the Albanians in the south of Central Serbia, gravitates significantly towards the Vardar-Aegean direction, and may thus be of crucial military strategic importance for Serbia concerning potential geostrategic constellations of powers in the Balkans. Therefore, the existential geopolitical issue of Serbia is the preservation of its territorial integrity and sovereignty over that part of the territory. The geopolitical position of Serbia may be successfully valorised in the conditions of its full European integration. The valorisation is only possible by stabilizing the interior state of affairs, harmonizing the relations with the social environment and cooperating with European and world’s institutions and associations. Hence, the priority geopolitical interest of Serbia is the integration in European economic, political and security systems” (Sekulovic & Gigovic, 2008).

Due to its geographical position, Serbia has quite frequently been an area of great powers’ interest. Therefore, a dilemma arises over the choice of the most appropriate geopolitical strategy that will guarantee national integrity and security, internal and external, political, and economic stability.

„The basic criteria for defining Serbia’s geopolitical priorities should be established depending on the reality of its geopolitical and geostrategic position. Considering the cultural and historical development, geographical position and regional geopolitical structure, Serbia should actively engage in further geopolitical initiatives to achieve European integration. The state should take advantage of its unique position at the crossroads of three important European subregions to strengthen the role in the processes of integration and to maintain a balanced relationship with the great powers“ (Sekulovic & Gigovic, 2008).

## **3. GEOPOLITICAL POSITIONING OF THE REPUBLIC OF SERBIA AT THE BEGINNING (IN THE FIRST TWO DECADES) OF THE 21<sup>ST</sup> CENTURY**

The historical, cultural and state-building development of the Republic of Serbia has predetermined its current positioning in the global geopolitical environment of the modern world. The development of international relations, international law, and international security systems has influenced the perception of political decision-makers in the Republic of Serbia about a new approach and establishment of an adequate geopolitical position of Serbia both in the Balkans and in Europe and the world.

The integration processes on the „old continent” started with the creation of the European Union and due to its enlargement towards the East and Southeast of Europe subsequently influenced the re-examination and determination of Serbia’s future geopolitical trend under conditions of significant economic, cultural and political interdependence and integration of European states. Following a tumultuous and socially and politically devastating decade of the collapse of Yugoslavia at the turn of the 20<sup>th</sup> century and a civil war outbreak, this period was marked by the NATO bombing contrary to accepted norms of international law, resulting in Serbia’s social, economic and existential losses of incomprehensible proportions. This was a turning point in accepting the harsh geopolitical reality that required a change and re-shaping of Serbia’s position in the future. Nowadays, the following questions arise, both in public and in scientific circles: How is it possible that Serbia, after being on the victorious side in two world wars with confirmed allies, was left alone, with no allies at all? How is it possible that the political elite overlooked geopolitical reality and put its own citizens, society, and state into the position of biological survival? The answers to these questions will remain the subject of a long-standing debate among historians and experts on international law and international relations.

The first two decades of the 21<sup>st</sup> century indicate that Serbia has nevertheless learned lessons regarding its future geopolitical positioning under new conditions and circumstances, accompanied by increased integration, cooperation and the impact of globalization on the entire humanity. Particular indicators of this process are the process of Serbia’s accession to the European Union (hereinafter the EU) and the advancement of economic and political relations with major geopolitical players in the global arena such as the USA, Russia, and China. Although at first glance such co-operation may seem like an impossible mission or „sitting on two chairs”, as often referred to by Western political leaders and EU representatives, maintaining this way of cooperating is nonetheless possible up to the period of a year or two prior to Serbia signing the treaty of accession to the EU and obtaining a full EU membership of the sovereign European states community. This is possible primarily due to the indefinite duration of the accession process that has been in progress for almost 15 years and the alignment with the EU Foreign and Security Policy, as one of the final stages of the accession process.

Geopolitical balancing and such constellation of relations in the case of Serbia are quite justified while waiting for Kosovo and Metohija issue to be resolved and struggling to preserve national sovereignty over a part of the territory where Serbian nation and state have been historically and culturally created and developed. According to the classical theory of international relations, no sovereign state has voluntarily renounced sovereignty over a part of its territory since the protection of territorial integrity demonstrates the capability of a state and a nation to take care of itself and defend its national identity while protecting its territory. This is, *inter alia*, an ongoing challenge for the United Nations, due to a constant conflict between two fundamental principles of international law and two forms of collective rights guaranteed to modern states. These are the right to territorial integrity and the right to self-determination. The positioning of Serbia on the contemporary global geopolitical scene requires a pragmatic approach, clear understanding, consideration and reflection on the current global development trends, a direction the entire humanity is heading in, the division of geopolitical power and a territorial overlap between „hard” and „soft” powers of the major actors involved in geopolitical relations.

As already mentioned, throughout history the region of Serbia has always been a kind of a boundary of great powers’ overlapping interests, and quite frequently an area where opposing forces established borders and policies through battles and wars. However, it has also been a



point of interaction, cooperation, and coexistence of diverse ethnic groups and various nations. In this respect, based on previous centuries of coexistence and conflicts, it is of utmost importance to take a realistic, pragmatic geopolitical view on the future development of the Serbian state and society in the conditions of high international interdependence, integration and global balance of power, bearing in mind well balanced, realistic and achievable national interests as a common denominator, i.e., national interests that are carefully defined and aligned with the current global geopolitical reality and the interests of major international geopolitical actors.

#### **4. THE EU AS A GEOPOLITICAL POWER AND A MODEL FOR THE PROTECTION OF MEMBER STATES' NATIONAL INTERESTS**

As previously mentioned, Serbia has been on the road to EU accession for more than 15 years. This path should ultimately result in the Republic of Serbia's membership of a specific community of sovereign states with supranational elements that has been developing on the European continent for the last 70 years. As a community of six European states created to contribute to peace, economic prosperity and the well-being of citizens after World War II, the EU has today grown from an economic community of founding members into a community of 27 sovereign states with a high degree of economic power, thus creating its geopolitical identity in global contexts.

These are significant parameters for the future positioning and accession of Serbia to a unique collective, economic and geopolitical alliance. A digression should be taken to emphasize that the EU is not a perfect concept of connecting states; it is neither a super (federal) state nor a community of European states possessing a „magic formula” for solving all the problems of the member states. On the other hand, bearing in mind what it is not, we will very briefly touch upon what the EU is, based on the aforementioned segments.

The EU supranationality represents nation-states' sovereignty conferred on the EU institutions upon accession to the EU, or simply put, the states reduce their sovereignty in favour of the EU to primarily regulate the areas of economic cooperation as a common interest, by applying legal regulations enacted by the EU institutions and defined as exclusive EU competences according to The Treaty on European Union.<sup>3</sup> It should be noted that in addition to these, there are both shared competences between the EU and the Member States and the exclusive competences of the Member States.<sup>4</sup> Thus, it may be concluded that the Member States have not lost their sovereignty; the EU accepts and respects the Member States' sovereignty, territorial integrity, the maintenance of public order and the preservation of the national security, thus both exercising conferred competencies and sharing competences for the benefit of the union. To put it differently, the member states have created and relinquished some of their sovereign rights to the EU, retained much of their sovereignty, and agreed to share part of their sovereignty with the EU institutions in certain areas.

On the other hand, the EU has been founded on European values and objectives common to all Member States and accepted and shared by candidate countries. These values include respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights, including the rights of persons belonging to minorities, pluralism, non-discrimination, toler-

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<sup>3</sup> By the new Treaty of Lisbon, which entered into force in December 2009, the EU was established based on the following two treaties: The Treaty on European Union and the Treaty on the Functioning of the EU. Treaty on European Union (Consolidated version 2016), OJ C 202/37, 7 June 2016.

<sup>4</sup> For more information on EU competences, see Articles 4 and 5 of the Treaty on EU and Articles 2-6 of the Treaty on the Functioning of the EU

ance, justice, solidarity, and gender equality.<sup>5</sup> The EU respects the equality, national identity, culture and traditions of each Member State and is often referred to as a community of states governed by the united diversity.

In addition, as a powerful geopolitical actor, the Union defines and ensures both the external and internal security of the community. The internal security is an integral part of the area of freedom, security and justice guaranteed by the Union to all EU citizens and its content is defined in Title 5 of the Treaty on the Functioning of the European Union. External security is an integral part of The Common Foreign and Security Policy and The Common Security and Defence Policy. These policies set parameters for the Union's diplomatic action and military cooperation by establishing joint armed forces, to ensure geopolitical activity and involve elements of the Union's hard and soft power in global relations. These external security segments have been developed separately and independently from the NATO Alliance which has interfered with the establishment and development of a joint EU defence project in the last 30 years. Based on the aforementioned indicators, of primarily historical, social, cultural and economic relationship to the European continent and belonging to the same legal tradition, considering all the advantages and disadvantages of European integration, it may be concluded that the Republic of Serbia is more likely to achieve the protection of national interests, rapid economic development, high level of respect for human rights and fundamental freedoms, the establishment of an effective rule of law, sociological transformation and citizens' security, by establishing geopolitical connections with the European community of sovereign states i.e., the accession to the EU, than by surviving and developing as an "isolated island" of the Western Balkans.

## 5. CONCLUSION

The research on geopolitics, particularly of its social, economic and safety aspects in the modern global world, is directly related to the historical heritage, international relations, international law, and integrative processes, both regionally and globally. The positioning of small countries, such as the Republic of Serbia, in the global geopolitical relations, is no easy task.

Being a country with a long national and state tradition over the last 200 years, the modern Serbian state underwent uprisings, liberation, international recognition, the Balkan wars, and participating on the victorious side in two world wars. After the breakup of Yugoslavia and civil wars, as well as the NATO aggression at the end of the 20<sup>th</sup> century, the geopolitical positioning of Serbia was conditioned by the improvement of the international relations with the Second World War allies and China, for the preservation of national interests and sovereignty, particularly in Kosovo and Metohija. Economic development, trade and connecting economies within the European frameworks are prerequisites for the citizens' standard of living and for strengthening the economic, political and social influence in the region.

Hence, the national interest of the Republic of Serbia is to provide citizens with rapid economic growth, a decent standard of living, high-level respect for human rights and fundamental freedoms, an effective rule of law, social and sociological transformation and security of each individual. New and old EU Member States have adopted a common model for the protection of national interests and geopolitical action for the benefit of all countries and their citizens. Quite a few European countries have decided not to participate in geopolitical integrative processes within the EU, such as Norway which has rejected EU membership twice in a referendum despite its partial economic and security ties within the Schengen area.

<sup>5</sup> For more information on values and objectives of the EU see Articles 2 and 3 of the Treaty on EU

Sociological factors contributing to national rootedness are a synthesis of the past and trust in the institutional order of the state, which is the essence of overall progress, both nationally and internationally. The symbiosis of citizens' sociological values and the sense of security, as well as the perspective of the development of a nation both domestically and internationally, determine the way of a country's development. This article outlines geopolitical and historical factors indicating the current position of the Republic of Serbia, its aspirations for EU integration, the challenges of the past and uncertain future, a nation that is experiencing a severe birth rate decline and human capital flight. All these factors contribute to social disorientation, thus both directly and indirectly affecting the security of citizens, but also the priorities of national policy that must include the elements of international development and multilateral cooperation.

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# RESEARCH OF THE ROLE OF FINANCIAL INSTITUTIONS IN THE COMMUNITY ECONOMIC DEVELOPMENT IN ONE OF THE WORLD'S LEADING COUNTRIES

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**Abstract:** *The article addressed the community as the smallest unit in geography scope, which unites individuals, companies, and government. The role of each one is significant and irreplaceable. For this paper, the community is as a synergy between group of individuals, institutions, and a government that live and (or) operate within geographical, political, social, and economic boundaries. This article focuses on banks, as a link between individuals and government in the development process. In particular, the supply and retention of financial and human capital. The authors try to prove financial companies and banks play a key role in the community and economic development because they deliver financial capital to individuals and businesses. This research allows concluding that the Finance & Insurance industry contributes toward the development of both national and local levels with the high share and positive mix and competitive components.*

**Keywords:** *Community, Financial Institutes, CRA examination, The Shift-Share analysis.*

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## 1. INTRODUCTION

The perception of the community depends on multiple factors. Economists assess the economy regionally, nationally, and globally. Within this approach, the community is the smallest unit of the region, state, and nation. While it is as a component of a regional and national sphere, each community has its unique structure, participants, and governance. Actors play a vital role in the development, the cooperation of them is crucial. This article focuses on banks, as a link between individuals and government in the development process. In particular, the supply and retention of financial and human capital. For the finance segment, the affordable loans create a monetary flow in the local economy. They are supplied by banks and regulated by the Community Reinvestment Act (1977). The human capital describes the employment, in the industry; the Shift-and-Share tool helps to analyze the trend and direction of it within the finance sector.

Most of the definition of community refers to area, it can also include social and economic relations. There are five approaches for the study of it: qualitative, ecological, ethnographical, sociological, and economic (Shaffer, 2004). The qualitative view defines community as a place to live; ecological relates to spatial unit. The ethnographical approach addresses the way of life, and sociological is a social relationship and social capital within the boundaries. The economic approach examines a community as a system of relationship between sectors. For this paper, the community is as a synergy between group of individuals, institutions, and a government that live and (or) operate within geographical, political, social, and economic boundaries.

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The first and critical part of the definition is a group of people. The main actors are individuals, who create flows in the economy, through institutions and supported by the government. The flows can be internal and external. The export base theory is a demand-based approach and considers monetary inflows as a driving force (Blair, 2009). They depend on export. The idea incorporated into this approach is that income earned from export activities will be spent and reused within the local economy.

Institutions have the power to employ people and supply produce and service. Individuals and companies are tight as they have a mutual benefit of partnership. The Central Place Theory reflects the importance of connections between business and consumers. Two assumptions of CPT are that companies will attempt to maximize profit, and consumers will minimize the travel distance. Accordingly, depending on the locality size and number of local entrepreneurship, each community will fall in the hierarchy (Shaffer, 2004). The business functions define the level, and the highest is metropolitan that includes more than five hundred establishments' wit convenience, specialty, and wholesale businesses. The New York City, in this case, falls in the highest level because it has more establishments of various specialties from basic groceries to high-end retailers.

In the market economy, the public institutions are fundamental for local economic development, as they create, implement, and enforce rules of operations (Shaffer, 2004). The government plays the role of policymaker, implementation, and control for the community development. Economists define two alternative perspectives for government involvement in the economy – conservative and liberal (Blair, 2009). The conservative approach values economic freedom and efficiency, the liberals tend to value equity, and interference of government in the local finances. In terms of development, there are basic strategies of government for the growth. They include incentives, regulations, joint ownership, market expansion, and capacity-building (Shaffer, 2004). The incentive part consists of capital financing for communities, including soft loans, grants, and subsidies.

The capital often relates to the financials and assets that can be converted into cash (Blair, 2009). However, economists consider produced goods that can be used for further production; it involves the input of physical, and human resources (Blair, 2009). Therefore, the capital includes financial, physical, and human components. Some approaches classify the capital assets more narrowly to private financial and public (Shaffer, 2004). A key element in community economic development is the availability of funds - financial capital and defining its vital role. The physical capital includes machinery, buildings, and infrastructure and can be accessed in a money equivalent. Human is combination of labor, skills, and knowledge available in the community or area.

The capital creates a linkage between all actors in the development field, as the government provides incentives, individuals consume and produce, and institutions support both. Financial companies and banks play a key role in the community and economic development because they deliver financial capital to individuals and businesses. Moreover, they support human capital by providing employment opportunities, and public welfare investments. Therefore, to understand the full impact of banks and financial institutions, we need to review every function in depth.

First, the most essential function of any bank is capital management, they offer investments and provide lending solutions. Banks are the first stop for small business loans, housing loans for individuals, and support for the development of state or local development programs (Shaffer,



2004). The government regulates financial institutions to ensure transparency and fair service for every customer in every community. The modern banking system is highly controlled by many regulations to avoid discrimination and provide availability of financing, among them, are:

1. Community Reinvestment Act (1977);
2. Truth in Lending Act (1968);
3. Fair Housing Act (1968) & Equal Credit Opportunities (1974);
4. Care Act (2020).

The Community Reinvestment Act established a requirement of a financial institution to serve the credit needs of low – and moderate-income communities (LMI), including minorities (Bates & Robb, 2015). It applies to institutions insured by the Federal Deposit Insurance Corporation (FDIC), such as national banks and savings associations. This act was signed into law in 1977 as a response to prevent discrimination for financing purposes. By design, CRA makes banks and financial institutions responsible to fulfill the credit need in the community, in which they operate, and provide capital for housing and economic development (Bates & Robb, 2015). Federal Reserve System, the Office of Comptroller of the Currency and FDIC are responsible for CRA administration and compliance. The act evaluates the performance of every financial institution based on their community involvement and assigns an appropriate rating. The assessment includes three tests: lending, investment, and services. Banks have a wide variety of options to complete tests with a high rank. Evaluation is vary based on the size and business model of the bank. The size of bank is defined by asset and indexed to inflation and Consumer Price Index, where “small” is less than \$307 million, “intermediate” has at least \$307 million, and large is more than \$1.216 billion in asset (CSR Report, 2017). The overall rating consists of combine score, for three tests, however they have different weight. Table 1 demonstrate the point system applicable for the examination with a minimum ranking requirement.

**Table 1.** Point system for CRA examination

Rating	Lending Test	Investment Test	Service Test	Minimum total score for large bank
<b>Outstanding</b>	12	6	6	20
<b>High Satisfactory</b>	9	4	4	12
<b>Low Satisfactory</b>	6	3	3	11
<b>Needs to Improve</b>	3	1	1	5
<b>Non-Compliance</b>	0	0	0	0

**Source:** Federal Financial Institutions Council, 2017

The lending test evaluates the number, amount, and distribution of mortgages, small business loans, personal loans, small farms loans across LMI communities. The investment test related to community development investments and service test assess the retail (branch) service, for example, discounted checking account. The points or credits for CRA tests may be awarded for the following activities:

1. Investing in special-purpose community development entities, which facilitate investment in LMI,
2. Enhancing the ability to serve the community through affordable banking services for women and minorities;
3. Facilitating financial literacy education;
4. Open or maintaining branches in LMI communities;
5. Providing low-cost education loans to low-income borrowers.



Regulators review rating as a factor when banks are looking to open branches or plan merge or accusation with another financial institution. It is critical to have at least a satisfactory rating to proceed. In case, the institution does not meet the requirement, the application will be declined until the score improves.

JP Morgan Chase is one of the largest financial corporations in New York City. The Office of Comptroller of Currency has a most recent examination of the bank completed in 2013 for the period starting January 1, 2011, through December 31, 2013. The performance evaluation consists of a comprehensive review of activities across the United States. The overall rating is satisfactory, which allows the company to proceed with opening new branches, or actions related to the bank's growth. The company received an outstanding rating for the investment test and highly satisfactory for lending and service.

The bank originated more than \$9.5 billion community development loans across the 24 states, 73% of loans provided affordable housing, and 8% sponsored social services for individuals with low or moderate-income. The letters of credit for the total amount of \$700 million were issued in New York State to support community development projects. JP Morgan Chase participated in multiple government grant programs, made over 394 000 FHA, VA and USDA loans, additionally issued about 13 000 loans for small businesses. In New York City are a mixed-use project was financed in the East Harlem area that included financing of the creation of affordable housing units with the DREAM Charter School, offices for a nonprofit organization and community park, the total loan amount is over \$40 million.

The investment test shows that the bank made direct investments in the Low-Income Housing Tax Credit partnership of funds or acted as an agent for other institutions. The total amount invested through the period is close to \$9 billion across the US. The largest investment in NYC was a total of \$52.2 million for a project for housing rehabilitation in West Harlem with a total of 167 units and \$25.7 million for 526 affordable housing units in the Bronx.

The service test demonstrated that during the period bank opened 563 branches, with 112 in LMI geographies. The critical part of the evaluation is providing financial and homeownership education. Bank collaborated with non-profit organizations to target more families in need. However, the number of partnerships declined that negatively affected the accessibility of financial literacy. The employees provided their leadership services for organizations as part of the board committee. In New York City the branch footprint is large and accessible for LMI communities, employees lead numerous classes for financial literacy. Branches hosted "Mortgage Days at the Branch" to educate customers about homeownership.

The Community Reinvestment Act requires banks and financial corporations to participate in the development process of the community where they operate. If an institution does not comply with regulations, it can lead to the limitation of bank operations. Since the CRA implementation, it positively affected many LMI areas by attracting capital inflows. However, it remains uncertain if the system covers all the regions in the US and not only the ones where the bank operates. The example of JP Morgan Chase proves that examination applies only to the twenty-four states, based where the bank operates. The rural areas, in this case, may suffer because the small bank in their communities will not be able to provide similar investments. Another challenge for the CRA is digitalization, the general trend of most financial institutions is online access, which is positive in terms of accessibility for individuals, but shrinks the bank presence in a certain area.

Another significant role that banks and financial corporations play in the community economic development is employment and skills enhancement. Banks are present in every community, and it requires staff to operate. Some of the positions require a High School diploma, and some will need a specialized degree. Moreover, banks participate in multiple projects for the teaching skills essential for working in a bank. Some institutions have a special student program, that allows high school students to apply for a job in a school branch that operates based on the same procedures, technology, and structure as the regular branch. The JP Morgan Chase encourages employees to participate in “Skilled Volunteerism”, where professionals share their knowledge with individuals. In 2019 as a result, the fifty-six thousand volunteers dedicated 383 thousand hours and participated in almost four thousand projects (JP Morgan Chase Institute). The signature programs for community development include:

1. Tech for Social Good;
2. Fellowship Initiative;
3. The Service Corp.

All programs include the technological aspect ensuring the following of general banking trend. Last program allows top-performing employees to join a non-profit for three weeks, where they can share their skills and help the organization. It accompanied by three-month remote support from experts. Participation in projects allow developing a strong sense of social responsibility. Moreover, it creates social ties between community, company, and employee.

For better understanding the significance of financial companies in economic development, the employment component can be analyzed using the Shift-Share tool. The tool allows measuring the growth of a particular industry. There are three components of the area of growth (Shaffer, 2004). The first is the industry is growing at the same pace as at the national level, so the share in the same (Blair, 2009). Second, the local level has a faster or slower trend. Third and the last shows if the area may have a competitive advantage. Many developers utilize these tools and it requires the information on employment in the community and in the US. The data for analysis of NYC finance and insurance industry provided in Table 2.

**Table 2.** Shift- Share Analysis Data

Sector	New York City		US	
	2008	2018	2008	2018
<b>Finance &amp; Insurance</b>	377,866	445,174	9,107,200	10,394,600
<b>Total employment</b>	2,689,340	3,121,586	179,213,900	200,746,000

**Source:** Bureau of Economic Analysis

For the 10 years, the number of jobs in the US grew by approximately 12%, accordingly, the NYC total employment should be 3,012,457. The City jobs grew faster than the national level and exceeded the expected jobs number by 109,129 and the Finance & Insurance industry will show 423,265, which is 21,908 less than the actual result. Consequently, the total employment and the industry grew faster than the national. Both mix and competitive components of Shift and Share analysis resulted in positive numbers of 8,015 and 69,578 respectfully. This allows concluding that the Finance & Insurance industry contributes toward the development of both national and local levels with the high share and positive mix and competitive components. However, the NYC economy is unique with one of the biggest financial industry in the United States, which explains a highly competitive result. The data shows the importance of the financial industry and may be utilized as a perspective for development in the areas where this industry is not growing.

## 2. CONCLUSION

The article addressed the community as the smallest unit in geography scope, which unites individuals, companies, and government. The role of each one is significant and irreplaceable. Banks and financial institutions possess their place in this field. The capital is a link between all actors and the bank, which is responsible for the capital generation, distribution, and maintenance. The government implemented various regulations to control and assure fair banking policies. The Community Reinvestment act signed in 1977, created a control system, where banks are required to invest in community development, and low- and moderate-income neighborhoods. The evaluation is performed based on three tests. The lending test assesses the number of loans, the investment measures the community investments, and service ensures affordable and accessible retail services. A satisfactory rating is critical for the bank to perform further operations. The CRA review of JP Morgan Chase confirmed the importance of government stimulus to invest in communities. The bank invested billions in affordable housing, community project, and LMI development. In spite of CRA being a comprehensive instrument for the community development, it remains hard to ensure equal investment distribution through all the US. Additionally, with the change of banking business towards a digital perspective, the coverage of the Act may be limited because of shrinking the retail branches' presence. Considering these new circumstances, the CRA needs to be redesigned accordingly. All the communities need to receive equal capital despite the bank or financial company location. This will lead to the development of rural areas, where now they might be disadvantaged because they have only one community bank.

The Shift-Share analysis supports the importance of the financial industry. It plays a vital role in employment and skills development. Where the jobs grew fast at the national level, at the local level, it performed even better. Besides the job availability, another crucial role of banks is developing social responsibility of employees, who will volunteer through multiple projects to share and teach individuals from LMI communities or minorities, valuable skills from basic budgeting to leadership, and IT systems. The growth of the financial industry can be a development strategy for some areas. The opening of financial centers attracts additional capital inflows, employment opportunities, and community development projects.

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# CHALLENGES AND OPPORTUNITIES TO TRANSITION INTO A KNOWLEDGE-BASED ECONOMY IN LIBYA

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**Abstract:** *Libya is an Oil- Based Economy as a large percentage of its GDP comes from oil and gas sector. The main objective of this paper is to investigate the challenges and opportunities for the transition to a knowledge based economy in Libya.*

*The broader question in this research is firstly, what are the main challenges facing the transition into the knowledge-based economy in Libya? Secondly, what are the major opportunities for transition into a knowledge-based economy in Libya? The research methodology was based on a descriptive and comparative method of analysis.*

*The contribution of this research is to fill the acute shortage in the Libyan literature by presenting a more comprehensive analysis and investigating the challenges and opportunities for the shift to a knowledge-based economy in Libya. The findings of this study indicate several obstacles for a transition to a knowledge-based economy in Libya such as political, social, economic, institutional, and organizational obstacle.*

**Keywords:** *Knowledge based-economy, Challenges, Opportunities, Libya.*

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## 1. INTRODUCTION

On one side, this article illustrates that transition to a knowledge-based economy faces several challenges in Libya in particular and coincides with a substantial knowledge gap compared to other knowledge developing countries such as Saudi Arabia, UAE, and Qatar. On the other side, this research fills the gap in the Libyan literature by presenting a widespread investigation to make a better understanding of the likely opportunities and challenges for the transition to a knowledge-based economy in Libyan country.

The research methodology was based on an expressive and comparative approach to analysis based on the structure and definition of a knowledge-based economy, aiming to indicate the review of the literature to examine the challenges and opportunities for the movement to a knowledge-based economy in Libya.

## 2. THEORETICAL FRAME WORK AND LITERATURE REVIEW

The Organization for Economic Co-operation and Development OECD [1], suggests a differentiation between knowledge-based economies and resource-based economy, which means that the knowledge-based economies are ones that directly supported production, distribution, and use of knowledge and information, with a significant role given to information, technology and learning in the performance of the economy. Contrasting by that, a resource-based economy is the economy of a country whose gross national product or GDP to a large extent comes from natural resources (oil and gas).

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Gorzelak [2] indicated a framework for a knowledge-based economy supported the excellence between the old paradigm (resource-driven economies) and therefore the new paradigm (knowledge-driven economies). Gorzelak further discusses that applying the concepts of the knowledge economy to modern management suggests the necessity for a paradigm shift from resource-driven urban economies (table 1).

**Table 1.** Knowledge economies change in cities

<b>Resource driven economies The old paradigm</b>	<b>Knowledge driven economies The new paradigm</b>
Quantitative factors	Quantitative factors
Labor	Qualification
Raw material	Research and development
Premises	Local supplier
Bulk transportation	Reliable infrastructure
Energy	Good living conditions
Subsidization	Friendly and stable policy environment
Tax allowances	Entrepreneurship
Grants and direct subsidies	Effective and honest promotion
Low user charges and rents	Competitive attraction of capital innovation
	Qualified labour

**Source:** Gorzelak (2001)

Furthermore, the World Bank Institute utilize the Knowledge Index (KI) and the Knowledge economy index (KEI) to analyze knowledge over the world's nations. As indicated by the World Bank, the KI measure a nation's capacity to produce, receive, and diffuse knowledge. The KEI takes into consideration whether the environment is conducive for knowledge to be utilized effectively for economic development. Overall, the index represents the general level of development of a nation or region towards the knowledge economy [3].

Recent research shows that there are many challenges impacting the transition to a knowledge-based economy in Libya [4-5].

### 3. SOCIO-ECONOMIC CHARACTERISTICS OF LIBYA

The general socio-economic and development characteristics of the Libyan country and world regions as measuring of economic growth (GNI per capita), life expectancy, mean years of schooling, literacy rate, and gross enrollment ratios are given in the table 2. It is apparent the real gap between Libya and some Arab countries as well as other world regions regarding HDI components. Overall, the Libyan nation is characterised by low standards of economic development together with low population numbers. Libya is one of the Arab countries classified as low-income economy [6].

Moreover, according to the classification of the UNDP-HDI 2014, the average GDP per capita for Libya is 21,666 in 2013. This means that the country is rated in the world medium-income group and its GDP per capita is lower than for those of the other Arab oil countries. Additionally, the other HDI components: average life expectancy, mean years of schooling, expected years of schooling, literacy rate and gross enrolment ratios for Libya are 75.3%, 7.5%, 16.1%, 89.5% respectively, whereas the gross enrolment ratios are Primary 114 (2012), Secondary 104 (2012), Tertiary 61 (2012) on average, are lower than for those of other world countries. These socio-economic development characteristics of Libya have genuine ramifications, as they force difficulties and obstruct the change to knowledge-based economies [7].



**Table 2.** Socio-economic characteristics of Libya compared to some Arab countries and world regions (2003-2014)

Countries	HDI (years) Value	GNI Per capita (ppp us\$) 2011- 2014	Life Expectancy At birth (Years) 2013	Mean Years of Schooling (Years) 2013	Expected year of Schooling (Years) 2012	Adult literacy rate (% age 15 And older) 2014	Population with at least secondary education 2012	Population Total (millions) 2013	Gross enrolment ratio		
									Primary (%) 2003-2012	Secondary (%) 2003-2012	Tertiary (%) 2003-2012
Libya	0.784	21.660	75.3	7.5	16.1	89.5	49.6	6.2	114	104	61
KSA	0.836	52.109	75.5	8.7	15.6	87.2	66.5	28.8	103	114	51
UAE	0.827	58.068	76.8	9.1	13.3	90.0	62.7	9.3	108	-	-
Qatar	0.851	119.029	78.4	9.1	13.8	96.3	60.5	2.2	103	112	12
<b>HDI groups</b>											
Very high human development	0.890	40.046	80.2	11.7	16.3	-	86.9	1.1897	103	101	76
High human development	0.735	13.231	74.5	8.1	13.4	94.2	64.1	2.4855	118	87	35
Medium human development	0.614	5.960	67.9	5.5	11.7	71.7	47.5	2.2621	111	70	23
Low human development	0.493	2.904	59.4	4.2	9.0	58.2	22.1	1.1456	98	39	8
<b>Regions</b>											
Arab States	0.682	15.817	70.2	6.3	11.8	77.0	41.1	366.0	105	76	28
East Asia and the Pacific	0.703	10.499	74.0	7.4	12.5	94.4	-	2.6359	120	84	-
Europe and Central Asia	0.738	12.415	71.3	9.6	13.6	97.7	75.0	233.4	101	95	50
Latin America and the Caribbean	0.740	13.767	74.9	7.9	13.7	91.5	54.7	611.3	106	85	44
South Asia	0.588	5.195	67.2	4.7	11.2	62.9	38.4	1.7490	110	64	22
Sub-Saharan Africa	0.502	3.152	56.8	4.8	9.7	58.9	28.1	888.2	100	43	8
Least developed countries	0.487	2.126	61.5	3.9	9.4	59.3	-	898.4	105	42	9
<b>World</b>	0.702	13.723	70.8	7.7	12.2	81.2	63.6	7.1621	108	74	31

Source: UNDP Human Development Report (2014)



#### 4. THE CHALLENGES OF A TRANSITION

Significant challenges facing the transition to a knowledge-based economy in Libya and they involve improving opportunity, making great governance accessible, and improving the mindfulness and responsibility of the Libyan government to organize the progress to transformation from an oil-based economy to knowledge-based economy [8].

Another aspect is social and cultural, Libya is facing many obstacles for a transition to a knowledge-based economy by the absence of cultural and social awareness, and more importantly the social and cultural variables such as the political history of the Libyan country, cultural history [9], improvement of political economy, globalisation, and the emergence of the knowledge and communication uprising. As well as, the political structures and enabling environments, that support the transition to knowledge economy progress. These transitions should be prepared by policymakers in the country to emphasis a demographic structure that needs to be culturally changed to show a tough role in taking an important increase in the economic, social, and political structure of the country [10].

The economy, traditionally dependent on oil, has suffered greatly from ongoing conflict and state fragmentation. The sabotage of port terminals and production facilities has caused significant fluctuations in oil exports, and therefore government revenues, throughout the transitional period. Economic growth is flat or negative, as the fighting has damaged infrastructure, and foreign investment has stopped [11].

Libya's labor force continues to be controlled and its labor threatened. Yet, many of the country's labor laws have discouraged job creation in the formal sector, especially, their provisions on the small wage, working hours, night shift systems, and discharge procedures and training requirements. Libyan laws governing discharge are severe. In 1980, the Libyan Social Security Law necessitates employers to pay more severe benefits to lay-off employees, equal to 100 percent of earnings for more than 6 months [7].

The global unemployment rate in Libya is 8.9 % in 2012, whereas youth unemployment rate is 23.9 % in the same year, compared with other Arab oil countries, Qatar stands at 0.6% in 2012 for the unemployment rate and with 1.7 % youth unemployment rate in 2012. In addition to that, UAE has 3.8% in 2012, the level of the unemployment rate and youth unemployment is 11% in 2012. All lower than Libya [10].

**Table 3:** Labor force unemployment rate and Corruption Perceptions Index for Libya and some Arab countries

Country	Labor Force Participation Rate% (2012)	Unemployment Rate (>15years- 2012)	Youth Unemployment Rate (15-24 years- 2012)	Corruption Perceptions Index (CPI) World Ranking (2013)
Libya	53	8.9	23.9	172
Qatar	87	0.6	1.7	28
Saudi Arabia	52	5.6	27.8	63
UAE	79	3.8	11	26

**Source:** UNDP, Arab Knowledge Report 2014

According to the World Bank the lack of employment opportunities among all labor groups reflects low labor productivity, the mismatch between labor force skills and sector demands, and a high rate of job stand in line for public sector occupations. In the same period, the private seg-

ment in Libya has not been able to engage a large number of the unemployed, since the private sector in Libya accounts only for a minor amount of employment [12].

Based on the above (table 3), the ranking of Libya in the Corruption Perceptions Index (2013) was 172 globally, although the Gulf countries in general ought to occupy comparatively advanced positions, reflecting their economic development, and their improvement in the knowledge axes. UAE ranked 26th worldwide, followed by Qatar at 28th and Saudi Arabia at 63th. On another side, Libya came at low positions on the international list [9].

Another challenge for transferring Libya to KBE is supply aspect, the supply of local knowledge products and local production of knowledge is seriously obstructed by the lack of economic, financial and human resources, and enabling environments. More specifically, the insufficient allocation of financial and human resources for building knowledge-based economy arises from an absence of funding, a lack of knowledge capital, investment and spending on knowledge, education, R&D and scientific research. Libyan country does not appear in HDR2014 and HDR 2019 for annual GDP on Research and development expenditure [9].

In the investment freedom category of the 2015 (IEF) which captures the difficulty of investment, Libya stands at 5 out of 100, where 100 is the best value [10]. Concerning the regulatory environment for private sector activities, the Doing Business Index (DBI) 2015 ranked Libya in 180th position from 189 countries. The business influence of the existing rules and regulations on FDI are extremely high, placing Libya in 135th position out of 144 countries around the world. Moreover, in 2008 the World Bank confirmed that the education level of MENA countries did not have what the labour market needed [11].

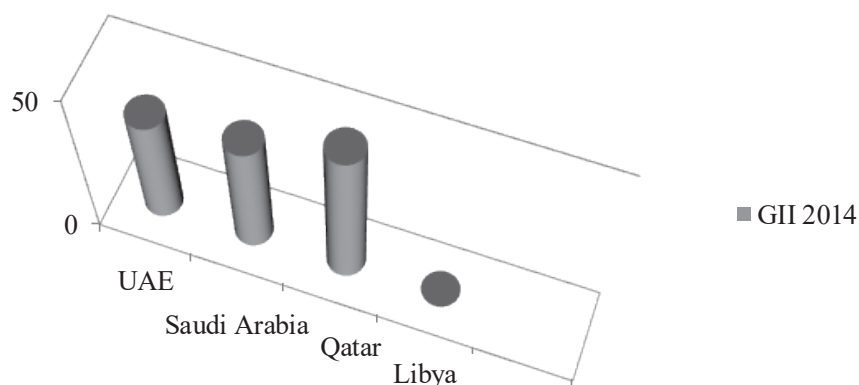
In addition to the above, the transition to a knowledge-based economy in Libya is extremely impeded by the high incidence of youth migration or brain drain. Immigration estimates demonstrate that 9% in 2011 of the Libyan youth migrate, [13] and according to the UNESCO 2014 statistics, more than 10.000 Libyan students were studying abroad in 2012 [9]. Libya is one of the developing countries where many Libyan students have scholarships abroad (Western countries, the US and Canada) and they not return to their country. As a result, this country loses one of the significant sources, its human capital.

Libya also ranks very poorly in terms of the prevalence of foreign ownership of businesses. The New Companies Law which was introduced by the government in 2013, is bound to constrain the development of private-sector further. Under this law, Libyan shareholders can only issue up to 49% of a joint venture to a foreign partner [7].

The transition to knowledge-based economy in Libya is obstructed by weak national system of education, training institutions, scientific research, and improvement of ICT and innovation structure [12]. On the other hand, the obstruction comes from the absence of relations between research centres and universities in Libya and between research centres and production and investment sectors as well as limited capability of benefitting from advanced ICT.

The Global Innovation Index GII (2014) shows the main gap in the innovation system and knowledge structure in Libya, reproduced in the value, rank, and progress of the Global Innovation indices for Libya, by comparing to other oil-based economies such as Qatar, UAE, and Saudi Arabia. The index indicated that UAE ranked 36th worldwide and first with Arabic coun-

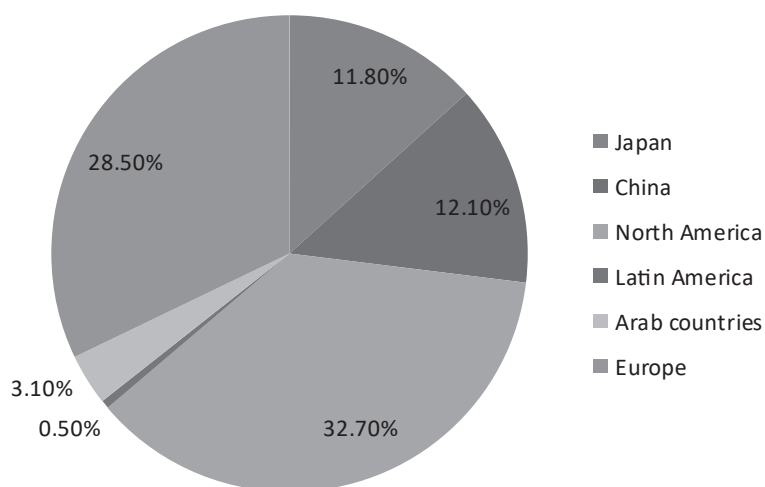
tries, where Saudi Arabia was placed 38th globally and second with the Arab global countries and Qatar stands at 47th in the global innovation index and comes third in the position with Arab countries whereas Libya does not take any position in GII (2014) - figure 1 [12].



**Figure 1.** Global Innovation Index Ranking for Libya and some Arab countries

**Source:** Global Innovation Index 2014

Based on that, HDR (2014) and AKR (2014) illustrated that the total spending on R&D in the Arabic countries including Libya as a percentage of GDP throughout the past four decades is not enough for the requirements of this sector. Recently, it is clear from the figure 2 that Arabic countries did not exceed 3.10% of the total international spending on scientific research in 2009.



**Figure 2.** Arab countries Expenditure on Research and Development Compared with some countries and regions around the World in 2009

**Source:** Adopted from AKR 2014

Furthermore, [9] indicates that the number of full-time researchers per million citizens in 2011 was 61 in Libya and 42 in Saudi Arabia. As well as, proportion number of full-time researchers per million citizens in the Arab region including Libya was 373 in 2007, however the world average was 1,081 (table 4).

There are more than 500 researchers per million nationals in developing countries (table 4). It can be seen that the number of full-time employees who are working in research and development in the Arab countries and Libya was low compared to the number of full-time scientists and researchers in developed countries and the world.

**Table 4:** The number of full-time researchers per million citizens in Arab countries shared and other regions

Region	Share of Total of Researchers in the World (%) 2002 2007	Researchers per Million Citizens 2002 2007	Total Local Expenditure on Research and Development per Researcher 2002 2007
World	100 100	926.1 1,080.8	136 158.9
Developed Countries	69.7 62.1	3,363.5 3,655.8	161.3 105
Developing Countries	29.8 37.4	397.8 580.3	78.5 100
Less Developed Countries	0.5 0.5	40.5 43.4	37.6 43.8
Arab Countries Combined	1.8 1.7	354.9 373.2	34.3 38.4

**Source:** Adopted from UNDP Arab Knowledge Report 2014

Libya is one of Arab countries that has limited number of researchers who are working in research institutions and it does not assist scientists in achieving advanced scientific levels of knowledge in the fields of cognitive production and technical innovations.

From a technological aspect, utilization of ICT is a significant tool of the knowledge economy. However, it might be emphasized that the information technology revolution is important within the development of the knowledge economy. In addition to that the ICT infrastructure is a key component in the knowledge economy and it is the main element of the infrastructure.

Table 5 indicates that Libya is ranked 138 globally for Networked Readiness Index in 2014 and also it does not appear in ICT Development Index in 2012, Qatar came 23 worldwide in 2014 and UAE stands behind on 24<sup>th</sup> position in 2014.

**Table 5.** World Ranking of Networked Readiness Index and ICT

Countries	Networked Readiness Index		ICT Development Index (IDI)	
	World Ranking 2012	Value in 2014	World Ranking 2012	Value in 2011
Libya	138	2.75	-	-
Qatar	23	5.22	31	6.41
UAE	24	5.2	33	5.68
Saudi Arabia	32	4.78	50	48

**Source:** Adopted from AKR 2014

## 5. CONCLUSION

It is clear that Libya as one of the developing countries is increasingly transitioning into knowledge-based economies from the oil-based economies. However, Libya should invest more in science, technology, and innovation to keep up with the economic development and conducting primary research to transfer knowledge in line with the governmental requirements and promote R&D and innovation to increase the country's global competitiveness as well as it should improve effective information communication technologies and infrastructure of ICT. This is helpful for Libya's government to transition into a knowledge economy, hence reaching economic growth and development.

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# GOLD PRICE AND THE CHAOTIC GROWTH MODEL

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**Abstract:** *The basic aims of this paper are: firstly, to create the simple chaotic gold price growth model that is capable of generating stable equilibria, cycles, or chaos; secondly, to analyze the local stability of gold price in the period 2001-2015; and thirdly, to discover the equilibrium gold price with Elliott wave logic in the observed period. This paper confirms the existence of the stable convergent fluctuations of the gold price in the observed period. Also, the golden ratio can be used to define the equilibrium gold price in the presented chaotic model.*

**Keywords:** *Gold price, Stability, Elliot waves, Chaos.*

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## 1. INTRODUCTION

Gold seems to have offered a protection inflation. There is a high positive correlation between inflation and the gold price. When inflation rises, the value of currency goes down and therefore people tend to hold gold. Rising or higher levels of inflation tends to push gold prices higher.

On the other hand, the gross domestic product (GDP) is the market value of all final goods and services produced within a country in a specific time period. The gold price is significantly driven by the investment demand. Declining real GDP boosts gold prices, because investors decide to buy gold. They want to protect their capital value. It is supposed that: (i) there is a negative correlation between the real GDP growth and the price of gold; and (ii) there is a negative correlation between the price of gold and the ratio of the GDP to gold price. In this sense, the price of gold signaled the high probability of the recession and / or expansion.

The basic aim of this analysis is to set up a relatively simple chaotic gold price growth model that is capable of generating stable equilibria, cycles, or chaos. It is important to analyze the local stability of the gold price growth in the period 2001-2015 (<https://www.macrotrends.net/1333/historical-gold-prices-100-year-chart>).

Chaos theory started with Lorenz's (1963) discovery of complex dynamics arising from three nonlinear differential equations leading to turbulence in the weather system. Li and Yorke (1975) discovered that the simple logistic curve can exhibit very complex behavior. Further, May (1976) described chaos in population biology. Chaos theory has been applied in economics by Benhabib and Day (1981,1982), Day (1982, 1983 ), Grandmont (1985), Goodwin (1990), Medio (1993), Lorenz (1993), Jablanovic (2011, 2012, 2013, 2016), Puu, T. (2003), Zhang W.B. (2006), etc.

## 2. THE MODEL

The Phillips curve (1958) is a curve that shows the negative short-run trade-off between inflation ( $\pi$ ) and unemployment ( $u$ ). To illustrate the short-run and long-run relationship between

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inflation and unemployment, Friedman (1968) and Phelps (1967) includes a new variable into the analysis: expected inflation ( $\Pi^e$ ). Expected inflation explains how much people expect the overall price level to change, i.e.:

$$u_t = u_n - \alpha (\Pi_t - \Pi^e) \quad (1)$$

Further, it is supposed:

$$u_n = \beta u_t \quad (2)$$

$$\Pi^e = \gamma \Pi_t \quad (3)$$

Where :  $u_t$  – unemployment rate ;  $u_n$  – natural rate of unemployment;  $\Pi_t$  – actual inflation;  $\Pi^e$  – expected inflation;  $\alpha$  – the coefficient which explains how much unemployment responds to unexpected inflation;  $\beta$  – the coefficient which relates unemployment rate and natural rate of unemployment;  $\gamma$  – the coefficient which explains relation between actual and expected inflation;

Further, it is supposed that the growth rate of unemployment at time t should be proportional to  $(1 - u_t)$ , the fraction of the labor force that is not used up by the unemployment at time t. Assuming that the unemployment is restricted by the labor force, the growth of the unemployment rate should change according the following equation, after introducing a suitable parameter  $\rho$  (Jablanovic, 2011).

$$\frac{u_{t+1} - u_t}{u_t} = \rho (1 - u_t) \quad (4)$$

Where:  $u_t$  – unemployment rate;  $\rho$  – the coefficient which explains relation between unemployment rate growth rate and the fraction of the labor force that is not used up by the unemployment at time t.

By substitution one derives:

$$\Pi_{t+1} = (1 - \rho) \Pi_t - \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \beta)} \right] \Pi_t^2 \quad (5)$$

It is supposed:

$$p_t = \mu \Pi_t \quad (6)$$

Where:  $p_t$  – the gold price;  $\Pi_t$  - actual inflation.  $\mu$  -the coefficient which explains relation between the gold price and actual inflation.

By substitution one derives:

$$p_{t+1} = (1 - \rho) p_t - \mu \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \beta)} \right] p_t^2 \quad (7)$$

Further, it is assumed that the current value of the gold price is restricted by its maximal value in its time series. This premise requires a modification of the growth law. Now, the gold price growth depends on the actual gold price,  $p_t$ , relative to its maximal size in its time series  $p^m$ .

We introduce  $g$ , as  $g = p / p^m$ . Thus,  $g$  range between 0 and 1. Again we index  $g$  by  $t$ , i.e. write  $g_t$  to refer to the size at time steps  $t = 0, 1, 2, 3, \dots$ . Now the gold price growth rate is measured as:

$$g_{t+1} = (1 - \rho) g_t - \mu \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \beta)} \right] g_t^2 \quad (8)$$

This model given by equation (8) is called the logistic model. For most choices of  $\alpha, \beta, \gamma, \mu$ , and  $\rho$ , there is no explicit solution for (8). Namely, knowing  $\alpha, \beta, \gamma, \mu, \rho$ , and measuring  $g_0$  would not suffice to predict  $g_t$  for any point in time, as was previously possible. This is at the heart of the presence of chaos in deterministic feedback processes. Lorenz (1963) discovered this effect - the lack of predictability in deterministic systems. Sensitive dependence on initial conditions is one of the central ingredients of what is called deterministic chaos.

### 3. THE LOGISTIC EQUATION

The logistic map is often cited as an example of how complex, chaotic behavior can arise from very simple non-linear dynamical equations. The map was popularized in a seminal 1976 paper by the biologist Robert May. The logistic model was originally introduced as a demographic model by Pierre François Verhulst.

It is possible to show that iteration process for the logistic equation:

$$z_{t+1} = \pi z_t (1 - z_t), \pi \in [0, 4], z_t \in [0, 1] \quad (9)$$

is equivalent to the iteration of growth model (7) when we use the identification

$$z_t = \mu \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \rho)(1 - \beta)} \right] g_t \text{ and } \pi = (1 - \rho) \quad (10)$$

Using (8) and (10) we obtain:

$$\begin{aligned} z_{t+1} &= \mu \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \rho)(1 - \beta)} \right] g_{t+1} = \\ &= \mu \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \rho)(1 - \beta)} \right] \left\{ (1 - \rho) g_t - \mu \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \beta)} \right] g_t^2 \right\} = \\ &= \mu \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \beta)} \right] g_t - \left( \frac{\mu^2}{1 - \rho} \right) \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \beta)} \right]^2 g_t^2 \end{aligned}$$

On the other hand, using (9) and (10) we obtain:

$$\begin{aligned} z_{t+1} &= \pi z_t (1 - z_t) = (1 - \rho) \mu \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \rho)(1 - \beta)} \right] g_t \left\{ 1 - \mu \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \rho)(1 - \beta)} \right] g_t \right\} = \\ &= \mu \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \beta)} \right] g_t - \left( \frac{\mu^2}{1 - \rho} \right) \left[ \frac{\rho \alpha (\gamma - 1)}{(1 - \beta)} \right]^2 g_t^2 \end{aligned}$$

Thus, we have that iterating (8) is really the same as iterating (9) using (10). It is important because the dynamic properties of the logistic equation (9) have been widely analyzed (Li and Yorke (1975), May (1976)).

It is obtained that: (i) For parameter values  $0 < \pi < 1$  all solutions will converge to  $z = 0$ ; (ii) For  $1 < \pi < 3,57$  there exist fixed points the number of which depends on  $\mu$ ; (iii) For  $1 < \pi < 2$  all solutions monotonically increase to  $z = (\pi - 1) / \pi$ ; (iv) For  $2 < \pi < 3$  fluctuations will converge to  $z = (\pi - 1) / \pi$ ; (v) For  $3 < \pi < 4$  all solutions will continuously fluctuate; (vi) For  $3,57 < \pi < 4$  the solution become „chaotic” which means that there exist totally aperiodic solution or periodic solutions with a very large, complicated period. This means that the path of  $z_t$  fluctuates in an apparently random fashion over time, not settling down into any regular pattern whatsoever. Also, for  $\pi = 2.6178$  then fluctuations will converge to  $z = 0.618$ .

The Fibonacci sequence, starting with zero and one, is created by adding the previous two numbers (0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, ...). This sequence is significant because of the golden ratio. The ratio of any number in the Fibonacci sequence relative to the number directly to its right is approximately 0.618. The Golden Ratio (golden mean, golden number, golden proportion) is 0.618. Adding the number 1 to the Golden Ratio = *Phi* ( $\Phi = 1.618$ ). Both 0.618 and 1.618 are used interchangeably to represent the golden ratio because they represent the same geometric relationship (Lidwell, Holden, and Butler, 2010, p.114).

#### 4. EMPIRICAL EVIDENCE

The main aim of this paper is to analyze the gold price growth stability in the period 2001-2015, by using the presented non-linear, logistic gold price growth model (11):

$$g_{t+1} = \pi g_t - v g_t^2 \quad (11)$$

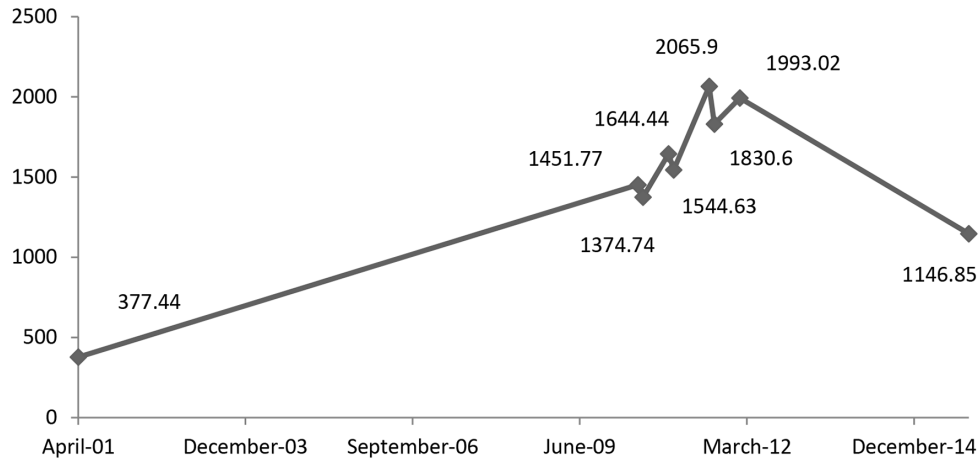
where:  $g$  – the gold price,  $\pi = (1 - \rho)$ ,  $v = [\rho \alpha (\gamma - 1)] / (1 - \beta)$ .



**Figure 1.** Gold Prices - 100 Year Historical Chart of historical data for real (inflation-adjusted) gold prices per ounce back to 1915. The series is deflated using the headline Consumer Price Index (CPI) with the most recent month as the base. The current month is updated on an hourly basis with today's latest value. The current price of gold as of June 12, 2020 is \$1,735.85 per ounce.

**Source:** <https://www.macrotrends.net/1333/historical-gold-prices-100-year-chart>

Waves can be identified in the gold price movements. The Elliot Wave Theory identifies (Frost A.J. & R.P. Prechter, 2006): (i) impulse waves that set up a pattern; and (ii) corrective waves that oppose the larger trend. The gold price movements are divided into: (i) trends (five waves in the direction of the main trend); and (ii) corrections (three corrective waves) (see Fig.2.).



**Figure 2.** Gold prices 2001-2015.

**Source:** <https://www.macrotrends.net/1333/historical-gold-prices-100-year-chart>

Further, data on the gold price per ounce are transformed (Source: <https://www.macrotrends.net/1333/historical-gold-prices-100-year-chart>) from 0 to 1, according to our supposition that actual gold price,  $p$ , is restricted by its highest value in the time-series,  $p^m$ . Further, we obtain time-series of  $g = p / p^m$  (see Table 1).

**Table 1.** Data on the gold price per ounce are transformed

	$p$	$g$
April, 2001	377.44	0.1827
Jun, 2010	1451.77	0.70273
July, 2010	1374.74	0.665444
December, 2010	1644.44	0.795992
January, 2011	1544.63	0.747679
August, 2011	2065.9	1
September, 2011	1830.6	0.886103
February, 2012	1993.02	0.964722
November, 2015	1146.85	0.555133

**Source:** <https://www.macrotrends.net/1333/historical-gold-prices-100-year-chart>

Now, the model (11) is estimated (see Table 2.).

**Table 2.** The estimated model (11)

$N = 8$	$\pi$	$\nu$
<b>Estimate</b>	2.518129	1.810815
<b>Std. Err.</b>	0.622875	0.7213
<b>t (6)</b>	4.042755	2.510405
<b>p-level</b>	0.006782	0.045878

The gold price was increased from 377.44 (April, 2001) to 1,146.85 (November, 2015) (unit of measure: \$ per ounce). According to the logistic equation, for  $2 < \pi < 3$  fluctuations converge to  $z = (\pi - 1) / \pi$ , or  $(2.518129 - 1) / 2.518129 = 0.6029$ . According to (10), the gold price fluctuations were converged to  $0.6029 / (1.810815 / 2.518129)$ , or  $0.6029 / 0.7191$  or  $0.8384$  or  $0.8384 \times 2065.9$  or \$1,732.05056 per ounce.

## 5. CONCLUSION

This paper suggests conclusion for the use of the chaotic gold price growth model in predicting the fluctuations of the gold price. The model (8) has to rely on specified parameters  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\mu$  and  $\rho$ , and initial value of the gold price,  $g_0$ . But even slight deviations from the values of parameters:  $\alpha$ ,  $\beta$ ,  $\gamma$ ,  $\mu$ , and  $\rho$  and initial value of the gold price,  $g_0$ , show the difficulty of predicting a long-term gold price.

A key hypothesis of this work is based on the idea that the coefficient  $\pi = (1 - \rho)$  plays a crucial role in explaining local stability of the gold price, where,  $\rho$  is the coefficient which explains relation between unemployment rate growth rate and the fraction of the labor force that is not used up by the unemployment at time  $t$ .

The estimated value of the coefficient  $\pi$  is 2.518129. This result confirms continuous fluctuations of the gold price in the period 2001-2015. The equilibrium gold price is \$1,732.05056 per ounce in the observed period.

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# NON-FINANCIAL SECTOR AS A MONEY LAUNDERING BARRIER

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**Abstract:** *The variety of professions in a scope of non-financial sector offers the possibility to operate as professional money launderers. As intermediaries, they can support money launderers in concealing the true nature or source of illegally obtained proceeds. Their role in concealing the beneficial ownership while hiding, collecting and moving illegally acquired property is becoming increasingly attractive. The attractiveness of active or passive engagement depends on the ability to act within the specificity of the profession, as well as their competencies in conducting transactions.*

**Keywords:** *Money laundering, Beneficial owner, Independent professions, Risk, Advice.*

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## 1. INTRODUCTION

The first attempts of money laundering mostly involved the financial sector. As the money laundering process evolved its preventive measures developed as well, especially those related to the non-financial sector (lawyers, notaries, accountants, auditors and tax advisers). Considering the obligation to implement the mandatory measures, the specificity of non-financial sector refers to their core business of reaching the ultimate goal of protecting public morality and professional ethics in the scope of anti-money laundering and terrorist financing system.

## 2. BASIC TOOLS OF FINANCIAL ACTION TASK FORCE

At the beginning of the anti-money laundering system the independent professions were merely a secondary barrier relating to the inflow of dirty money into the financial system. In this respect, the Directive 91/308/EEC [1] (hereinafter: the First Directive) required an amendment in order to extend its provisions in whole or in part to professions and to categories of undertakings other than the credit and financial institutions, while the Directive 2001/97/EC [2] (hereinafter the Second Directive) listed them by the type of profession. The Directive 2005/60/EC [3] (hereinafter the Third Directive) did not change the scope of their obligations, although there was a fundamental change in terms of anti-money laundering and terrorist financing prevention, the so-called risk-based approach.

The first Financial Action Task Force (hereinafter FATF) report for the period 1990-1991 [4] highlighted a growing trend of using non-traditional financial institutions and professions that might be involved in money laundering process. They were classified in four categories, whereas one of the categories included lawyers, accountants, notaries and other independent professions. For the first time they are emphasized as an example of high risk area that could possibly be used in the placement stage.

Furthermore, in the report for the period 1993-1994 [5] the same reporting entities were mentioned in the context of due diligence procedure. A lack of beneficial ownership identification was pointed out as an important issue. Furthermore, there was a question as to what extent ex-

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ternal auditors and public authorities should be enabled to report any reasonable suspicions of money laundering activities they encountered during their work, to law enforcement authorities.

The process whereby the European Union member states made changes in national laws by strengthening preventive measures in the banking sector, shifted the money launderers' focus to the non-financial sector. A significant step forward was made in the report for the period 1995-1996 [6] by distinguishing lawyers as particularly sensitive. The report for the period 1996-1997 [7] emphasized significant issues in countries whose money laundering system is being evaluated. The most important question posed by independent professions is the obligation of professional secrecy, closely related to the identification of clients and beneficial owners, and consequently to transactions with shell companies.

The trend of increasing cases of criminals seeking advice and assistance from lawyers, notaries, accountants and other financial practitioners is clearly visible from the report for the period 1997-1998 [8] as well as for the period 1998-1999 [9]. Therefore, the involvement of independent professions in even more complex money laundering processes was often related to transactions via offshore zones. The final analyzed report for the period 1999-2000 concluded the genesis of independent professions' affirmation as the „Gatekeepers”, thus adding to the seriousness of the situation in which money laundering prevention required the incorporation of new elements.

### **3. DEVELOPING ATTITUDES TOWARDS THE OBLIGATIONS OF THE INDEPENDENT PROFESSIONS**

While on the one hand there was a lack of legislation and supervision, on the other hand their active role in legal entities' business was increasingly emphasized leading to the issue of the legal professional privilege as well as other types of professional secrecy. Therefore, the new money laundering modalities, realized through misuse of the independent professions' skills and services, ensured lawyers and other „Gatekeepers“ an adequate influence over all three stages of money laundering [10].

Under the mentioned circumstances, with the alarming cognition of the importance and the role of the independent professions conducting money laundering, the Second Directive came into force in 2001 and for the first time regulated their obligations and the limited scope of preventive measures. Despite their evident involvement in the money laundering process considering the various opportunities created by the obligation of professional secrecy, the Second Directive provided for exemptions from the practice of those professions, respecting the basis of the legal profession.

The Third Directive, notably the novelties presented through the risk assessment in all segments of its application, did not change the basic idea imposed by the Second Directive. It follows that the Third Directive paid particular attention to the obligation of professional secrecy and kept it in force. Thus, legal advice remained subject to the obligation of professional secrecy “unless the legal counsellor is taking part in money laundering or terrorist financing, the legal advice is provided for money laundering or terrorist financing purposes or the lawyer knows that the client is seeking legal advice for money laundering or terrorist financing purposes”.

Directive 2015/849 [11] and Directive 2018/843 (hereinafter the Fifth Directive) [12] emphasized the obligation of treating legal professionals equally in applying preventive measures when engaging in financial or business transactions. Thereby, the Fifth Directive extends the scope of

obliged entities to “any other person that undertakes to provide, directly or by means of other persons to which that other person is related, material aid, assistance or advice on tax matters as principal business or professional activity”.

Similarly, recent threats to global security was conceptualized by the most recent revision of the FATF Recommendations (2012), especially in relation to the issue of beneficial ownership transparency. According to the mentioned, the Fifth Directive has introduced a new legal framework in terms of improving transparency on the real owners of companies or trusts, establishing the interconnection of the beneficial ownership registers at EU level, and improving cooperation and information sharing between anti-money laundering supervisors and between them and prudential supervisors and the European Central Bank [13].

#### 4. BENEFICIAL OWNERSHIP TRANSPARENCY

Given the importance of the independent professions in anti-money laundering and terrorist financing system, their key role in concealing beneficial ownership has to be highlighted, in order to manage, collect or move illegally acquired funds. Accordingly, their role varies depending on each legal system incorporated in a particular country: systems in which legal persons can be established without the involvement of professional intermediaries; systems in which professional intermediaries (other than notaries) are required; notarial systems; and systems in which the company registrar tests the accuracy of filings or takes on the customer due diligence obligations of the professional intermediary [14].

Notwithstanding the foregoing, the FATF standards require independent professions to perform due diligence measures and to keep records of such analyses and transactions conducted, and to report to the national financial-intelligence units on suspicious transactions.

Independent professions play a similar role in concealing beneficial ownership in the financial system, namely opening and transferring money to and from bank accounts held in the names of individuals or offshore entities, other than the true beneficial owners of the accounts. Furthermore, they are making false statements on bank documents required by the bank to identify customers and disclose the true beneficial owners of the accounts, along to using “consulting services” agreements and other similar types of contracts to create an appearance of legitimacy for illicit wire transfers [15].

In order to ensure proportional and balanced access to information on the beneficial owner, as well as to guarantee the right to respect privacy and protection of personal data in accordance with the Directive 2016/680 [16] and the Regulation 2016/679 [17], certain exemptions are provided by the Fourth Directive. The exemptions actually offer possibilities to disclose (via registers) real property information, and access the information if that information would expose the real owner to a disproportionate risk of fraud, kidnapping, blackmail, extortion, harassment, violence or intimidation. For the same purpose to prevent abuse of the information in the registers and to balance the beneficial owner’s rights, it has been proposed to establish the system that would allow the information relating the requesting person and the legal basis of its request available to the beneficial owner.

Central registers at the national level play an even more significant role if they are linked internationally. The interconnection of central systems that store real property information through the European Central Platform established by the Directive 2017/1132 [18] requires coordination of national systems, and consequently the adoption of technical measures and specifications for harmonization.

The FATF Recommendations regulate the subject matter in the same manner, in particular the Recommendations 24 and 25. One of the main FATF objectives is to shape the framework of measures to prevent the misuse of legal persons in the money laundering and terrorist financing process. To achieve this goal, the FATF encourages the collection of adequate, accurate and timely information on the beneficial ownership and control of legal persons that can be obtained and accessed in a timely fashion by the competent authorities. In this section, the revised FATF Recommendations have been extended to companies that are able to issue bearer shares or bearer shares warrants, or those which allow nominee shareholders or nominee directors [19].

In this regard, access to information on beneficial ownership should be easier for the financial sector and the independent professions, in accordance with the FATF Recommendations 10 and 22. The same measures are applied to determining the beneficial ownership of other legal entities, including the provision of information on intermediaries, trustees and settlors of such legal forms.

## **5. PROFESSIONAL MONEY LAUNDERING**

It follows that the scope of independent professions' activities makes them suitable to be in a position of active subjects in the money laundering process due to specificity of their position as objective intermediaries. They can easily enable the basic intent of money launderers - to conceal the true nature or source of illegal money, each profession from its own scope of business.

A basic feature that makes professional money launderers unique is the ability to launder money in exchange for a commission, a fee or some other type of profit. Although the specialization of providing money laundering services is their key feature, professional money launderers often run legitimate businesses as well. They do not have to act solely for the purpose of laundering illegal assets. Their knowledge and expertise are used to find loopholes in the law, and thus to conduct tax avoidance, thereby helping to dispose of and legalize criminal origin. Mostly, they are not directly linked to predicate offense and the source of illegally obtained funds that makes them suitable subjects for money laundering.

Independent businesses are often consulted to register and manage companies or other legal entities as well as serving as nominees for companies and accounts. They can use their expertise to comingling legal and illegal proceeds; providing false documentation; placing and moving illicit cash, purchasing assets; obtaining financing; identifying investment opportunities; indirectly purchasing and holding assets; orchestrating lawsuits; recruiting and managing money mules etc. [20]. Depending on the type of independent profession, an individual may perform several roles simultaneously.

Bottom line, a lack of awareness or lack of education about money laundering and terrorist financing vulnerabilities and red flag indicators reduce the likelihood that legal professionals would be in a position to prevent the misuse of their services and avoid a breach of their professional obligations [21]. Consequently, the abuse of professionals can jeopardize the reputations of businesses, individuals and sectors. Professionals playing the role of gatekeepers for criminal funds can cause the integration and acceptance of criminal behavior into local societies [22].

## 6. CONCLUSION

The complexity of money laundering and terrorist financing issues, along with specifics of a legal profession, require appropriate approach and treatment respecting their unique codes of business and ethic. Raising awareness of all potential problems that arise in this process strengthens the prevention system of the non-financial sector in a whole, thus demotivates legalization of illegal funds provided by weaknesses and vulnerabilities of the anti-money laundering system.

The consequences of increased demand for the legal professions' services are manifested through the negative impact on business decision making process, reputational risk and the possibility to influence market and price disruption. Thereby creating the preconditions for the market imbalance by disrupting the service-price ratio disables law abiding citizens access to their services. Therefore, profitability would be built on the provision of services not available to others, making complicity in that kind of practice and the profession itself more profitable.

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# THE PLANNING PROCESS AS A MODERN FORM OF DIRECTING PROFITABLE BUSINESS ACTIVITIES AND CONSCIOUS COORDINATION

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**Abstract:** *Planning was reaffirmed after the collapse of the neoliberal economic doctrine (at the beginning of this century). The relations between the plan and the market are complementary and non-exclusive. The market is also planned and market spontaneity is suppressed. The planning of all the levels is primarily present in the Eurasian economies that are not in crisis. The plan is also a creativity space.*

**Keywords:** *Planning, Concept, Program, Project, Budget, Direction, Coordination.*

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## 1. PRIOR CONSIDERATIONS

From a more general, theoretical standpoint, the planning process (the micro-level) implies an uninterrupted (continuous) flow of the research in analysis and predictability of the factors of the organizational and overall (external, internal and associated) environment, and on this basis of plan decision-making and the determination of decisions (on the vision, the mission, goals, means, policies, strategies and plans), and the planning process has been gaining in significance in this contemporary time.

The external environment signifies a set of elements (chances, possibilities, spaces, risks, dangers). The internal environment includes internal factors (strengths - strong points), and weaknesses (i.e. “weak points”). There are also interwoven elements related to each other.

From the point of view of time, plans are known to basically (and roughly) be long-term (from 10 to 20 years), mid-term (5 years), and short-term (one year). Tactical-operational plans (of a shorter term) can be those for non-repeating, repeating and related activities. Non-repeating activities encompass one-off plans, programs, projects and budgets. Repeating activities include permanent plans, (business) policy, rules, procedures, actions and technique(s). Combined, mixed elements are also of relevance.

From the sectoral and functional point of view, plans are inclusive of production, services, the market, marketing (market research, procurement, propaganda, sale), material, commodity, financial (capital), human and, especially, personnel resources, sources and potentials.

For example, the analysis of the environment of a company, or a business organization also signifies the process of “monitoring” (the process of surveillance, supervision and control) of the organizational and other, overall environment. The purpose of the anticipation, expectation and analysis of the environment of an organization (generally perceived) is represented by the assessment and estimation of the environment, so as to make it possible for the management structure (“the management”) of the organization to rationally and purposefully react and improve the successfulness of the organization itself.

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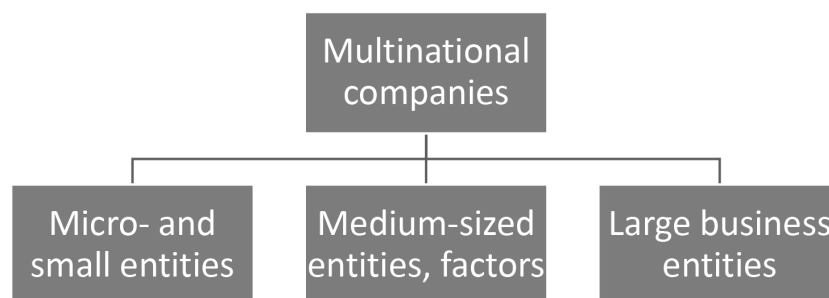
<sup>1</sup> University of Pristina in Kosovska Mitrovica

Furthermore, there is also the disintegration (“disaggregation”) of the structure of the organization’s environment in compliance with diverse criteria, norms and standards (according to content, the action level, institutional regulations, compliance, relatedness, etc.). In the same manner, when speaking about the analysis and anticipation of the factors of the organization’s environment, it is also appropriate and adequate that the environment should be disintegrated into the basic levels: the general (indirect and more distanced) environment, the operational (direct and closer) environment, as well as the internal (and close) environment.

The accent will also be on the other organizational factors (the vision, the mission, goals, strategies, plans, etc.). In the same manner, a reference will also be made to anticipation instruments and techniques. The market space is planned in a contemporary manner. (Masic & Dzeletovic, 2015, p.135).

## 2. FURTHER DETERMINANTS OF PLANNING FLOWS

Observing the size, i.e. the economies of scale, it is possible to differentiate business entities, companies: micro- and small, medium-sized and big, as well as multinational corporations. Smaller organizations accentuate a high level (degree) of the relevance, analysis and foreseeability of the internal and external, operational, labor environments. Large, big business entities favor a high significance degree at all the levels of the analysis and foreseeability of the environment: both internal and operational and general environments. The organization’s general (external) environment consists of diverse factors (social-political, social, legislative, normative-legal, technical-technological, etc.). The operational environment is a system of elements (workforce, suppliers, consumers (i.e. demand), competition, external flows and trade, etc. The internal environment represents a special and specific set of elements (production, services, the market, technology, the organization, employees, the personnel, finance, informatics, etc.). (Masic & Dzeletovic, 2015, pp. 138-145)



**Chart 1.** The size and the economies of scale of business entities or/and corporations

This chart (as well as all the other charts presented in the paper) is individually created by the author.

In the first place, the creators of the strategies of a business entity (organization) have authorizations and bear responsibility for modelling strategic visions and (or) missions. Reliably and optimally devised and shaped visions and missions are a precondition for the successful strategic (as well as related tactical and operational) management of the organization. The following are important strategic values in this century (almost the one-fifth of which has already passed): inventions, innovations, quality, speed (although too great speed may also be wrong), elasticity (flexibility), improvement, active reaction and adaptability (adaptation) to increasingly more dynamic changes. Persons in charge of management (i.e. managers) have been given an important role in the selection of

strategic and plan variants and (or) alternatives. The role of professional planners (which is asserted to be fading away) is gaining in significance in the contemporary conditions of profitable business activities and overcoming the most important premises of the (neo)liberal economic doctrine.

In the economic, business world, a vision implies: horizons, outlines, contours, far-reaching views, vistas, contemporary, more perfect and (or) new methods for and ways of reacting to many and huge challenges, dilemmas, difficulties and problems. Visionaries perceive both the past and the present; they imaginatively, in an inspired manner and creatively illuminate all (possible) business activities domains; they mark different paths, directions and orientations for a nearer or possibly even more distant future, thus surpassing or even eliminating the manner in which processes, things and problems have been solved so far. Apart from this, visionaries should necessarily be characterized by will, energy, motivation, inspiration, acceptability, clarity, assertiveness, provocativeness, the possibilities of successful implementation in a group, team and collective. A vision should be well thought out, “magnetic”, accomplishable, “focused” (depending on possibilities), appropriate for communication, inspired, imaginative, ingenious. The absence of a vision also leads to a failure.

A mission crystalizes the achievement of a desired state. It determines and further specifies the vision of an organization by a philosophical horizon of the business domains in which a business entity endeavors to be present and compete, i.e. target markets, the geographical and territorial spaces of business activities, production-service conditions and circumstances (social responsibility, reliability, quality, etc.). The mission of a business entity denotes a “spectrum” (“panoply”, “diapason”) of elements: the structure of production or services (offers); the aspirations of the important influential factors (demand) which the entity (enterprise) services (provides services to); the modality and form of the goal expressed by means of the social and economic relevance of carefully thought-out profitable business activities; the sense, the purpose of the existence of the organization, and so forth. The important purpose of the business operations of the technoeconomic system and organization is “the shaping, creation of buyers, i.e. consumers”. Namely, the purpose is to form the product and (or) the service which, through their own features, imply value for consumers (demand) and the formation of new buyers. It is, however, important that production and services (the offer) should also be created. The mission deepens and decomposes, i.e. diversifies, the vision. The expression of the mission implies a system, a scope of diverse elements and pieces of information (philosophy, a technique, organization, marketing and goals, etc.). (Masic & Dzeletovic, 2015, pp.146-147)

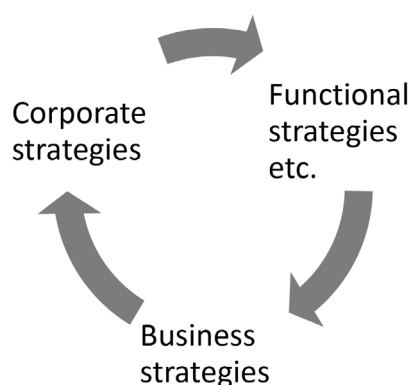
Planning, as the directing document (deed), and the process and the plan, as concrete documents (deeds), are an expression of a business strategy and mark the path and manner how to achieve the vision and the mission of the organization. Strategic-plan (direct, indirect and mixed) goals and tasks are indicative.

The strategy is a new concept of a relatively recent date and the same was already applied in the prior period (i.e. in the 1950s). The word originates from a Greek word *strategos*, which means an army leader, i.e. a military general. From a classical point of view, it implies leading an army, the skill and art of a leader, the central point, i.e. the focus towards which an action is directed (possibly one focus, according to Clausewitz), the strategic direction and line of action of the activity. According to the military terminology, a strategy means the use of armed forces at the theater of war in order to achieve a war goal (while tactics are the use of armed forces in a battle, as interpreted by Clausewitz).



**Chart 2.** The relations of the vision, the mission, the strategy, planning and goals in a business entity

The business operations of business entities (enterprises, companies) is possible to perceive as a struggle (“Let the struggle be incessant,” says Njegoš). This is to say that the business (economic) environment is possible to perceive as a “war environment”, a “front”, with a continuous struggle to achieve the goal and the conditions, circumstances and state analogous with the “state of war”. The “war environment” is represented by the market, the market space, where a continuous struggle is fought to conquer consumers, market demand, i.e. the maintenance, formation and acquisition of competitive advantages based upon comparative advantages. Certain authors (M. Milisavljević) interpret a strategy as a science, as well as the skill of using and applying methods and manners so as to achieve goals; it signifies a rational reaction of a business entity to what is happening in the environment in which it carries out its economic (business) activity; i.e. a strategy is an activity directed (oriented) towards the selection of the field (area) of the business activity, the location and reallocation of the production (or service) factors, with the aim of forming and maintaining the competitive advantage of entities in an adequate environment (ambience). (Masic & Dzeletovic, 2015, p. 153)

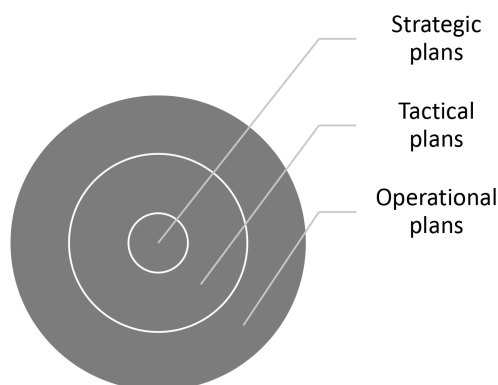


**Chart 3.** The general classification of elementary appropriate organizational strategies

Corporate strategies are implicative of the orientation of the technoeconomic system of the business entity (an enterprise, a corporation) to bring its own growth and development goals to reality through its own business operations and business policy. Besides, business strategies are determined at the lower levels of a corporation (strategic and organizational business units), i.e. the units operating as special, relatively independent (but also related to each other) wholes (or/

and subsystems) with adequate goals and tasks. In the same manner, functional strategies are established at the level of the functions of an organization (economic, managerial, entrepreneurial decisions and related modalities). (Masic & Dzeletovic, 2015, pp. 154-157)

Plans are an expression of the planning process and represent the direction, coordination and implementation of a strategy in the life of the business organization or institution at all levels (micro-, mezzo-, and macro-). Plans serve to concretize projections, concepts and strategies, i.e. strategies are included (incorporated) into the business operations of the organization in a planned manner. The classification and (or) categorization of plans are (is) performed from different points of view and horizons (the scope, the length of time, the scope of application, plan goals and tasks).



**Chart 4.** The basics of the classification and categorization of plans  
of the business and social organizations

Strategic plans arise from the business vision, mission and policy with the creation of the basic spheres, fields and determinants of business operations on the middle, longer and longtime horizons. Tactical plans are the concretization or elaboration of a strategy in a short and shorter period of time. Operational plans are connected with tactical plans and signify the closer and detailed operationalization of plan activities in the current period.

Coordinative (directing) plans are of the more general characteristics (“signposts”) of the guidelines for business (economic) growth and (or) development. Narrower, individual (and one-off) plans encompass programs, projects and “budgets”. Programs are also “one-off plans” (which do not repeat in the same form in the future), inclusive of the basic steps, iterations, time and sequence of the goal achievement, as well as organizational units. Projects are narrower and relatively independent parts of programs; they are limited in space; their content is time- and task-oriented. “Budgets” are the expressions of financial sources and funds allocated for special activities in a relevant term; they are the primary and important factor of programs and projects. Apart from one-off plans, there are also “permanent plans”, where analogous states and situations are resolved in a predefined and preadjusted manner, and they appear when there is the repetition of organizational activities. The main forms of permanent (constant) plans are: rules, procedures, or (and) techniques. (Masic & Dzeletovic, 2015, pp. 157-159)

Goals decompose and deepen the vision and mission of an organization as desirable and acceptable states, situations and effects. There are different classifications of goals (the hierarchical, organizational, technical-technological and managerial levels); qualitative, quantitative and structural, plan domains and reaches; the level of individual, group, team, collective or (and) social responsibility, and so on. (Masic & Dzeletovic, 2015, pp. 148-152)



Diverse planning mechanisms, instruments and techniques are applied (anticipation, goal “gap” analysis, the break-even “threshold”, innovativeness growth, the “scenario” method, the lifecycle concept, comparative and combined analysis, the determination of external or (and) internal factors). (Masic & Dzeletovic, 2015, pp. 112-135)

### 3. CERTAIN ECONOMIC TRENDS IN SERBIA

Observing important economic flows, the gross domestic product growth trends of the important, although not the only or (and) the most crucial social category will be presented.

**Table 1.** The trends of the real growth of the gross domestic product of Serbia in a long-term period:

	2001	2007	2013	2019	Plan 2025
R. growth (%)	6.9	6.4	2.9	1.2	1.5

**Source:** Ministry of Finance of the Republic of Serbia (December 2019), “Public Finance Bulletin” Belgrade: pp. 12-13.

Note: The indicator for the year 2019 represents the assessment made by the Ministry of Finance.

It is possible to observe an economically unfavorable falling trend of the real growth of the Serbian GDP in the long term as an expression of objectively declining economic dynamic and inflationary tendencies. The starting observation period (2001) was also the maximum reach of the real growth of the magnitude. The Mid-Term Plan for the year 2025 is an expression of a realistically optimistic variant.

**Table 2.** The structural share of the gross domestic and net foreign investments in Serbia’s GDP:

Elements	2001	2007	2013	2019	Plan 2025
Domicile	12.2	23.8	16.5	21.3	22.5
FDIs	1.3	8.0	3.6	7.1	7.5

**Source:** Ministry of Finance of the Republic of Serbia (December 2019), “Public Finance Bulletin” Belgrade: pp. 12-13.

Note: The parameter for domestic investments in 2019 pertains to the period from January to September.

The indicator of the structural share of foreign investments in 2019 pertains to the year 2018.

The structural (formative) share of domicile investments in fixed (basic) funds demonstrates a changeable (variable) trend in the observed long-term period. The maximum point (reach) is achieved prior to the commencement of the phenomenal impetus of the economic-financial crisis in the USA and other western countries (the peak having been reached in 2007). When domestic investments are concerned, the nominal growth of the indicators was also acted upon by the pronounced inflationary tendencies. The indicators of the net foreign direct investments are, in the same manner, of a fluctuating nature (and they were maximum at the same time in 2007), comparatively achieving a considerably lower structural share in the GDP.

#### 4. FINAL STATEMENTS

Planning, as a process, and the plan, as a concrete deed, are the important function of the management structure that can be both state and mixed, not only private. The main “levers” of an organization are the plan, management and entrepreneurship (Dragutinovic et al, 2005, pp. 368-369). The technique and technology of production and (or) services are an important associated indicator (Milicevic, 2011, pp. 471-479). The successfulness of planning strategic, tactical and operational management is the basis of business success (Jancetovic & Djuric, 2005, pp. 181-219; Djuric, 2011, pp. 169-194). The realized and planned economic principles – productivity, cost-effectiveness and the earning capacity – are expressed in the efficiency and (or) effectiveness of business operations (Maric, 2011, pp. 364-372). Planning does not become deprived of its role and does not “fade away”, but it also continually gains in contemporary significance at all the hierarchical levels (micro-, mezzo- and macro-) by the development of informatics. The collapse of the neoliberal doctrine (at the beginning of this century) reaffirmed and strengthened the position of planning and the plan. Market spontaneity and chaos is suppressed by the plan. This is especially pronounced in Russia, China and India, i.e. in the biggest and most populated states in the world, which are not faced with a crisis, as is the case with western countries.

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# THE ROLE OF AGE AND GENDER IN GROUP DECISION-MAKING PROPENSITY

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**Abstract:** *Increasingly, organizations are oriented towards groups to make decisions. This is because some contextual factors have undergone significant changes. Companies are operating in a competitive, dynamic and complex environment, having to face with unstructured and non-programmed decisions. Organizations are also oriented towards participatory processes in order to benefit from the important advantages that these processes offer. The main goal of the current research is to understand if there is a correlation between group decision-making propensity, age and gender. The motivation for the current research starts from the consideration that the degree of preference for group decision-making processes determines the contribution and commitment of the members, with important consequences on the decisions' effectiveness. The processing and analysis of the collected data indicate that adults prefer group decision-making processes more than young people and women prefer group decision-making processes less than men.*

**Keywords:** *Group decision-making, Group propensity, Age, Gender, Decision's effectiveness.*

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## 1. INTRODUCTION

Nowadays there is so much discussed about group decision-making processes. This is because some contextual factors have undergone significant changes. Thus, companies are operating more and more in a competitive, dynamic and complex environment, having to make unstructured and non-programmed decisions. Apart from the need, organizations are also oriented towards participatory processes in order to be able to benefit from the important advantages that these processes offer. Companies have understood the importance of group decision-making processes to create sustainable competitive advantages. The attention and the greatest commitment in understanding various aspects and problems of these processes is evidenced by the numerous researches in this domain, researches that confirm the orientation of organizations towards group decision-making processes.

Group decision-making leads to important benefits and is also accompanied by limits that influence the effectiveness of decisions. But what is the preference for group decision-making? Previous studies have shown, directly or indirectly, that demographic characteristics such as age and gender influence the propensity towards group decision-making processes.

## 2. AIM OF THE STUDY AND RESEARCH QUESTIONS

The motivation for the current research derives from the consideration that the degree of preference for group decision-making processes determines the contribution and personal commitment as a member of the group, with important consequences on the effectiveness of the decisions made by the group.

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The main goal of the current research is to understand if there is a correlation between group decision-making propensity, age and gender, and if yes what kind of relationship it is. The intention is to identify variables and elements and to discover possible relationships between them, so as to be able to define some general reflections about the impact of age and gender on group decision-making processes. To support the main purpose, the research questions are as follows:

1. What is the age's impact on group decision-making propensity?
2. Does the gender influence the preference to make decisions in group?

In consistency with the main goal and the research questions the hypotheses to be tested are formulated as below:

- H<sub>1</sub>:** There is a positive correlation between age and group decision-making propensity;  
**H<sub>2</sub>:** Women have a greater preference for group decision-making than men.

### **3. RESEARCH METHODOLOGY**

For the current study is adopted the quantitative research and for the data collection is used the questionnaire, which is designed to investigate the relationship between group decision-making propensity, age and gender. The participants had to assess their preference for group decision-making based on the Likert scale 1-5.

To test the hypotheses of the research is first used the statistical independence analysis to assess the dependence between the two variables and then is used the nonparametric analysis of Spearman correlation to judge on the direction and statistical significance of the correlation.

### **4. LITERATURE REVIEW**

Increasingly, managers make decisions for new problems or situations. Uncertainty and the degree of complexity that the decision maker have to face increases. Under these conditions, organizations are moving towards group decision-making. Empirical studies have shown that on average the result of a group exceeds that of the single individual who is part of the same group [1], [2], [3]. The differences between individual decision-making and group decision-making are not a few. Group decision-making is characterized by important advantages, but also by many limits that should not be underestimated.

Recalling [4], the group has a greater amount of information. Moreover, talking about creativity, the author argues that group creativity is greater than individual creativity. On the other hand, discussions and different points of view make it easier to generate more alternatives. Group decision-making increases also decision legitimacy [5]. A not very good decision, but accompanied by a high level of legitimacy, can be much more effective than a very good decision, which is not accepted.

Group decision-making processes can lead to a better understanding of the implementation phase and therefore to a more effective decision [6]. This is because often within the group there are members who, after the decision made, will give directives or will work for its implementation. The probability for a decision to fail is low when the individuals who contributed to the decision will also have the responsibility to implement it. Moreover, participatory decision-making improves personal motivation [7], job satisfaction [8] and self-confidence [9].

Some aspects considered problematic for group decision-making must also be reported. Within a group, it may happen that the final decision is made by one individual. The typical disadvantages of group decision-making are groupthink and polarization. [10] defined groupthink as the tendency of groups to converge rapidly on a decision. Polarization occurs when the group's decision is more extreme than the average of individual opinions [11]. Another important problem that accompanies group decision-making concerns the time required to arrive at the final decision [5], [12]. This may be because of the conflict between group members or the high diversity of ideas and opinions that make consensus difficult. Empirical studies have reached the conclusion that unique information is not taken into account and the group's tendency is to rely only on common information. This is the effect of common knowledge [13].

The present research analyses group decision-making propensity, trying to highlight the impact of age and gender. Adults generally prefer the group when have to decide [14]. Previous researches have shown that as we age, we become more risk averse [15], [16]. Since within a group the responsibilities are distributed, adults should prefer the group to make decisions. On the other hand, starting from several studies that showed that with the age, cognitive and decision-making skills worsened it was hypothesized that adults are less overconfident than young people. In support of this, [17] and [18] have concluded that adults are less prone to overconfidence. If adults are less overconfident, they should prefer more group decision-making, in order to compensate for their lesser abilities. According to [19], adults are more prone to regret than young people. As a result, they often try to avoid the decision-making or make a less risky decision. Moreover, adults feel less strong and less concentrated when have to make a choice [15]. If the regret is greater and the concentration is less than young decision makers, adults should prefer more the group. Other empirical researches have shown that some of the cognitive processes get worse over time. Thus, it has been found that when decision's complexity increases, due to the decline of the cognitive abilities, adults are unable to make good decisions [15]. This represents another conclusion that leads us to hypothesize that adults prefer group decision-making more than young people.

But what happens in the case of gender? Overconfidence is a cognitive bias that differentiates the behaviour between men and women. Many studies show that women are less overconfident than men [20]. [21] believe that women attribute their past successes to the luck, while men attribute them to their abilities and skills. [22] argue that there are differences between men and women particularly in the way problems are perceived. The authors believe that men in general show a more positive orientation towards problems, while women have a more negative orientation. [23] also concluded that women are more pessimistic than men. Thus, starting from these results we think that women should prefer group decision-making processes more than men. In an attempt to highlight the differences between men and women in making decisions, risk tolerance can be considered one of the most studied aspects. Referring to some researches in this regard, women are more risk averse than men [24], [25], [26], [27]. The main explanation for the differences due to gender regarding the attitude towards risk are emotions [28]. The authors concluded that women experience emotions more strongly than men. So, women are more nervous and fearful [29]. All these conclusions lead to the opinion that women have a greater propensity towards group decision-making than men.

## 5. EMPIRICAL APPROACH

A total of 382 questionnaires is distributed and 247 collected, with a response rate of 65%. As discussed above, the relationship between group decision-making propensity, age and gender is



quite complex. Starting from the results of previous empirical evidences, directly or indirectly, we have formulated the hypotheses as follows:

**H<sub>1</sub>:** There is a positive correlation between age and group decision-making propensity

**Table 1:** Spearman correlation coefficient for age-group propensity

			Age	If I have to make a decision, I prefer group decision-making.
Spearman's rho	Age	Correlation Coefficient	1.000	.199
		Sig. (2-tailed)	.	.002
		N	247	247
	If I have to make a decision, I prefer group decision-making.	Correlation Coefficient	.199	1.000
		Sig. (2-tailed)	.002	.
		N	247	247

Referring to Table 1, we note a statistically relevant relationship between age and group decision-making propensity (Sig =  $p = 0.002 < 0.05$ ). The correlation coefficient of Spearman is positive, which means that adults prefer group decision-making processes more than young people ( $r_s = 0.199$ ).

**H<sub>2</sub>:** Women have a greater preference for group decision-making than men

**Table 2:** Spearman correlation coefficient for gender-group propensity

			Gender	If I have to make a decision, I prefer group decision-making.
Spearman's rho	Gender	Correlation Coefficient	1.000	-.108
		Sig. (2-tailed)	.	.090
		N	247	247
	If I have to make a decision, I prefer group decision-making.	Correlation Coefficient	-.108	1.000
		Sig. (2-tailed)	.090	.
		N	247	247

From Table 2, we note a statistically irrelevant relationship between gender and group decision-making propensity for  $\alpha=0.05$ , but the correlation is relevant for  $\alpha=0.1$  (Sig= $p=0.09>0.05$ ). The correlation coefficient of Spearman is negative, which means that women prefer group decision-making processes less than men ( $r_s=-0.108$ ).

## 6. CONCLUSION AND FUTURE RESEARCH

The current research was focused on the understanding of age and gender impact on group decision-making propensity. The basic idea of the study is that group decision-making has important benefits if compared to individual decision-making, but group's effectiveness is also affected by the propensity towards it. Is true that companies are oriented towards groups, but organization's members are not all able or do not want to work and decide in group.

Starting from previous studies, that show a decline of cognitive and decisional abilities as age advances, that adults are more risk averse and less overconfident than young people, it has been hypothesized that the correlation between age and group decision-making propensity is positive. On the other hand, previous studies have reached the conclusions that women are more risk

averse and less overconfident than men and their cognitive and decisional abilities are less good than those of men. Regarding this, we hypothesized that women prefer group decision-making processes more than men.

Referring to the current research, the processing and analysis of the collected data indicate that there is a statistically relevant relationship between age and group decision-making propensity. Adults prefer group decision-making processes more than young people. Also, we found a correlation between gender and group propensity. Women prefer group decision-making processes less than men.

It would be interesting to understand the reasons of these results, and then to investigate in depth the relationship between group decision-making preferences, age and gender. For example, we may investigate how experience, the perception of control or self-attribution influence group decision-making propensity.

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# NAIVE BAYES CLASSIFIER, DECISION TREE AND ADABOOST ENSEMBLE ALGORITHM – ADVANTAGES AND DISADVANTAGES

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**Abstract:** *The purpose of the publication is to analyse popular classification algorithms in machine learning. The following classifiers were studied: Naive Bayes Classifier, Decision Tree and AdaBoost Ensemble Algorithm. Their advantages and disadvantages are discussed. Research shows that there is no comprehensive universal method or algorithm for classification in machine learning. Each method or algorithm works well depending on the specifics of the task and the data used.*

**Keywords:** *Classification, Machine learning, Naive Bayes classifier, Decision tree, Ada Boost Ensemble algorithm.*

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## 1. INTRODUCTION

In machine learning, classification is defined as a task for determining the class of an unknown object on the basis of empirical data. There is a relationship between an object and a class that is unknown. The analysis of the nature and characteristics of the objects are directly related to the synthesis of the classification model. This is the main reason why no universal and unambiguous method for classification of objects has been found.

In the exposition we look at the following algorithms:

- probabilistic algorithm – Naive Bayes classifier,
- logical - Decision trees,
- ensemble algorithm - AdaBoost.

## 2. CLASSIFIERS

### 2.1. Naive Bayes classifier

One of the classical algorithms in machine learning is the Naive Bayesian Classifier, which is based on Bayes' theorem for determining a posteriori probability of an event.

Bayes' theorem

$$P(y = c|x) = \frac{P(x|y = c)P(y = c)}{P(x)} \quad (1)$$

where:

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$P(y=c|x)$  is the probability that an object belongs to class  $c$  (a posteriori probability of the class)

$P(x|y=c)$  – probability that the object  $x$  is in the range of the class  $c$

$P(y=c)$  – unconditional probability of encountering an object  $y$  in class  $c$  (a priori probability of the class)

$P(x)$  – unconditional probability of the object  $x$

The purpose of the classification is to determine to which class the object  $x$  belongs. Therefore, it is necessary to find the probability class of the object  $x$ , i.e. it is necessary to choose from all classes the one that gives the maximum probability  $P(y = c | x)$

$$c_{opt} = \arg \max_{c \in C} P(x|y = c)P(y = c) \quad (2)$$

Known algorithms of the type Naive Bayes classifier are: Bernoulli, Multinomial and Gaussian, associated with different assumptions for the distribution of features.

#### *Advantages:*

- main strength is its efficiency; training and classification can be accomplished with one pass over the data (Manning, 2008);
- robust to noise features (Manning, 2008);
- requires a small amount of training data to estimate the parameters necessary for classification. (Khan, 2010, pp. 4-20, Raghunath, 2019, pp. 149-153);
- Works with a small amount of data, handles multiple classes (Harrington, 2012)

#### *Disadvantages:*

- conditional independence assumption can be violated by real-world data (Khan, 2010, pp. 4-20, Manning, 2008);
- perform very poorly when features are highly correlated (Khan, 2010, pp. 4-20);
- does not consider frequency of word occurrences. (Khan, 2010, pp. 4-20);
- sensitive to how input data is prepared (Harrington, 2012);

## **2.2. Decision trees**

The Decision tree algorithm (Classification trees) is a powerful tool for presenting and solving classification problems and it is an example of a logical classification methods. The model is built on the basis of statistical estimates and a series of checks on logical conditions.

The tree as a structure in graph theory is described as an oriented graph without cycles. Each tree structure consists of nodes and connections (arcs) between them, each node having one input and two or more output arcs to adjacent nodes.

The root of the tree corresponds to the initial state of the classification process. Each internal node is connected to a logic function that calculates the branch condition. Usually the division is based on one of the characteristics of the input quantity or on a predefined set of division rules. The initial state corresponds to the first logical check to be performed. Each internal, intermediate node corresponds to the following logical checks. The end nodes, the leaves, represent the resulting classes. When traversing the tree, starting from the root, each node divides the set of solutions until it reaches the final node that defines the class. Each inner node has an associated dividing predicate – i.e. logical function related to the calculation of the branching condition.

The classification is considered complete when one of the leaves is reached (end nodes, nodes without heirs). The value of this leaf determines the class to which the object in question belongs. The classification tree model can be represented as a series of control structures of the if-then-else type.

The main parameters of the decision tree algorithm concern the different ways of choosing division rules and rules for ending the growth of the tree.

For each node of the tree, an optimal splitting rule is selected, including the selection of an attribute and the value of that attribute by which to split. The selection of an attribute is based on the information gain that comes from dividing the objects by the respective attribute.

The information gain of the A attribute, in regards to a set of examples S, is calculated as such:

$$Gain(S, A) = E(S) - \sum_{v \in Values(A)} \frac{|S_v|}{|S|} E(S_v) \quad (3)$$

where  $S_v$  is set of examples, which have a value of v for the attribute A,  $E(S)$  - entropy of the S set of examples.

Entropy is defined as such:

$$E(S) = \sum_{i=1}^n -p_i \log_2(p_i) \quad (4)$$

where

- n – number of examples
- $p_i$  – the probability of picking i class.

Some algorithms that implement decision trees are the following CART (Classification And Regression Tree), ID3 (Iterative Dichotomiser 3), C4.5 (successor of ID3) and its subsequent version C5.0, CHAID (Chi-square automatic interaction detection), CN2, NewId, ITRule and others.

*Advantages:*

- intuitively understandable (Gareth, 2015);
- visually clear (Gareth, 2015)
- able to train data that contains errors or missing values (Batura, 2017);
- computationally cheap (Harrington, 2012);
- fast and scalable, both in the number of variables, and the size of the training set (Hotho, 2005, pp.19-62);

*Disadvantages:*

- prone to overfitting (Harrington, 2012);
- the final decision can depend on relatively few terms, when dealing with text mining (Hotho, 2005, pp.19-62);
- needs a large volume of data for accurate results (Batura, 2017);
- can lead to large and excessively complex tree structures, when the dataset has a large number of entries (Khan, 2010, pp. 4-20).



### 3. ADABOOST

The adaptive boosting algorithm AdaBoost is an example of an ensemble boosting algorithm. This is an iterative algorithm in which the „strong” classifier makes small learning errors based on the „weak” classifier, which correctly classifies more than 50%. In the ensemble algorithm AdaBoost, the different classifiers are trained sequentially. Each new classifier is trained based on the effectiveness of existing trained classifiers. The reinforcement consists in focusing the new classifiers on data that have been misclassified by previous classifiers.

The AdaBoost adaptive algorithm calculates weight for each example in the training data. A „weak” classifier is trained first. The errors are calculated, after which the „weak” is trained a second time with the same data set. Next, the weights of the training set are adjusted so that the correctly classified examples from the first iteration are weighed less, and the examples that are incorrectly classified in the first iteration are weighed more.

To obtain an answer from all weak classifiers, the AdaBoost algorithm determines the  $\alpha$  values of each classifier (6). The  $\alpha$  values are based on the error of each weak classifier.

The error  $\varepsilon$  is calculated using the following formula:

$$\varepsilon = \frac{\text{count of incorrectly classified examples}}{\text{total number of examples}} \quad (5)$$

$\alpha$  is calculated through  $\varepsilon$

$$\alpha = \frac{1}{2} \ln \left( \frac{1-\varepsilon}{\varepsilon} \right) \quad (6)$$

*Advantages:*

- low generalization error; easy to code (Harrington, 2012);
- computationally efficient (Witkin, 2011);
- applicable to complex tasks (Witkin, 2011);
- able to be easily modified (Witkin, 2011);
- flexible; can be easily combined with other learning algorithms (Jaakkola, 2012);

*Disadvantages:*

- sensitive to outliers (Harrington, 2012);
- there can be a lot of noise when training (Voronov, 2008);
- needs a large sample (Voronov, 2008);
- can lead to “unwieldy” compositions (Voronov, 2008).

### 4. CONCLUSION

Research shows that there is no comprehensive universal method or algorithm for classification in machine learning, with a 100% accuracy for any applied task. Each method or algorithm works well depending on the specifics of the task and the data used. Thus, many different algorithms ought to be explored before picking the right one. The strengths and weaknesses of each one should be noted when making a decision.

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# MANAGEMENT AND INNOVATION OF PERSONAL DEVELOPMENT OF TEACHERS IN CHINA'S EDUCATION AND TRAINING INDUSTRY

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**Abstract:** *After years of development, the number of education and training institutions has decreased but the market size has continued to increase. The reason is the rise of online education. The development trend of combining online and offline education needs to innovate the personal development of teachers. This paper studies the development trend of the education and training industry, draws inspiration from the development trend for the personal development of teachers, and builds a personal development model for teachers based on the iceberg model. It is intended to provide innovative suggestions for the development of teachers in the education and training industry.*

**Keywords:** *Education and training industry, Teacher's personal development, Management and innovation.*

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## 1. INTRODUCTION

Development and innovation are eternal themes of education. The personal development of teachers is closely related to the development of training institutions. To improve the quality of education, we must first promote the personal development of teachers in institutions.

The former Soviet Union's famous educator Krupskaya once said: „The profession of teachers is the most important and glorious profession.” The value and honour of teachers lies in training talents and fulfilling their due responsibilities for social progress. Domestic and foreign scholars have the following views on the definition of teacher development:

Haiyan Wang (2009) believes that according to the current research on the connotation of teacher development in China, the concept of teacher development basically involves the teacher's own life experience and experience, as well as the external environment that is closely related to teacher growth. It includes not only the personal development process of teachers' growth, but also the attention to the whole teacher team. It can be said that teacher development refers to the promotion of professional qualities of teachers in the educational process, and also refers to the educational process of promoting professional qualities of teachers [1].

British scholar Evans (2002) wrote in „What is Teacher Development? The article defines teacher development as „a process in which the professionalism of teachers and the professional status of teachers are considered to be likely to be improved” [2].

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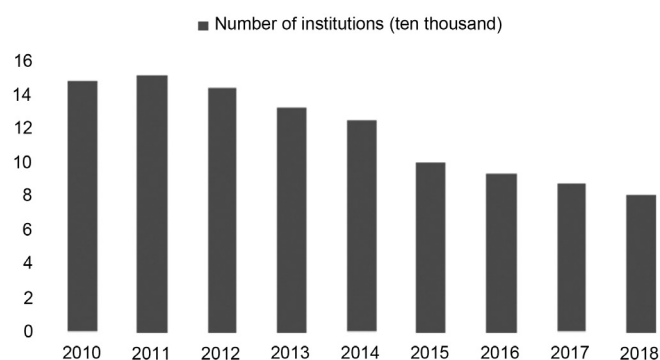
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Congman Rao (2009) pointed out that teacher development is a lifelong or long-term process. In teacher development, the result is temporary and the process is long-term and continuous. At the same time, in terms of the elements and dimensions of teacher development, teacher development should be a combination of teacher personal development, professional development and social development [3].

It can be seen from this that scholars believe that teacher development is a process, a process of continuous evolution and change and innovation. The content of teacher development should be a combination of professional development, personal development and social development.

## 2. ANALYSIS OF THE DEVELOPMENT TREND OF CHINA'S EDUCATION AND TRAINING INDUSTRY

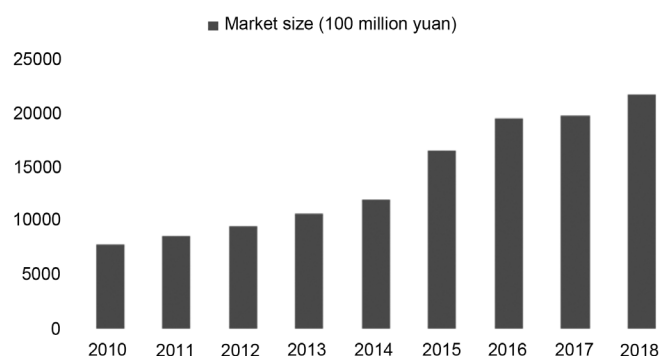
With the economic development, China is paying more and more attention to education, and some preferential policies have introduced education and training institutions into the market in large numbers. After years of development, competition among education and training institutions has become extremely fierce. The number of education and training institutions in China has decreased from 147,700 in 2010 to 81,100 in 2018, which has decreased by nearly 70,000 in nine years [4].



**Figure 1.** Number of educational and training institutions in China from 2010 to 2018

Source: Culture committee, 2019

### 2.1. Numbered Lists



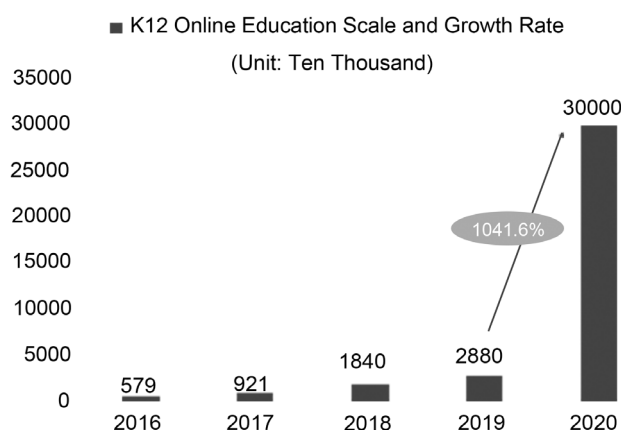
**Figure 2.** Market Size of China's Education and Training Industry, 2010-2018

Source: Culture committee, 2019

Although the number of education and training institutions has decreased in recent years, capital injection has not decreased, and the market size has increased. The reason is that online education has become an emerging hotspot in the consumer market. Prospective Industry Research Institute's „2019

China Online Education Industry Market Outlook Analysis Report” shows that In the next few years, the scale of online education users will continue to grow at a rate of about 15%, and it is expected to exceed 400 million people by 2024, and the overall market size will exceed 450 billion yuan [5].

COVID-19 has swept the world since January 2020, leading to the demise of many companies and causing damage to the global economy. In China, many small and medium-sized education and training institutions have stopped work or even closed down during the epidemic, but online education and online office have become new „needs” and appear vibrant, especially online education. According to the calculations of the EO Intelligence, only in the K12 stage, the epidemic has promoted the scale of online education personnel by nearly 10 times [6].



**Figure 3.** K12 online education scale and growth rate

Source: EO Intelligence, 2020

The new coronary pneumonia epidemic will help reshape the entire education industry and promote the transformation of the education industry. However, no matter how great the advantage of online education is, the “atmosphere” of offline learning is irreplaceable online. Most online education will rely on offline venues, and then integrate online resources for brand traffic. Therefore, the mixed education ecological model of online and offline is the mainstream of the future.

### 3. ENLIGHTENMENT OF THE DEVELOPMENT TREND OF ONLINE AND OFFLINE INTEGRATION OF EDUCATION AND TRAINING INDUSTRY ON PERSONAL DEVELOPMENT OF TEACHERS

- Learning new knowledge and skills such as internet and live broadcast. In addition to the knowledge and skills of teachers in offline institutions, the development of the Internet requires teachers not only to understand education, but also to understand the Internet and marketing and services, which requires teachers must improve their various aspects ability and value.
- The development of teachers’ „host” ability. In a sense, distance teaching is actually forcing teachers to become „anchors” and learning to face the camera instead of demonstrating their prepared teaching content in institutional classrooms. Demonstrate teacher’s teaching ability, and review your teaching ability from the perspective of the audience by watching the recording.
- Teachers’ innovation and communication skills improvement. Online teaching methods and atmosphere are completely different from offline. Make full use of network resources and innovate teaching methods and courses. Teachers’ language expression should



be more attractive and inspiring, maximizing the benefits of each online class; in addition to innovative ability, online education makes it easier for teachers to communicate with each student and their parents and understand the teaching effect.

- d. The improvement of teachers' personal sense of accomplishment. Without being bound by institutions, stand out online. Zhang Hao, the founder of „Crazy Teacher”, said: „A teacher, if he can show himself without any effort, is in itself the best textbook in the minds of students.” The Internet has endless charm, so that the teachers who only used to teach have grown into experts in building brands, becoming spiritual and material. Double „millionaire” [7].
- e. Provide new promotion positions for teachers. Training institutions are generally not large in scale. Small training institutions lack planning for the career development of teachers and the career path is narrow, resulting in high teacher mobility and high turnover rates. Many teachers use training institutions as a springboard to jump into the public-school system or start their own businesses. New job promotion and salary benefits can better retain teachers and enable teachers to develop.

#### 4. THE CONSTRUCTION OF TEACHER'S PERSONAL DEVELOPMENT MODEL AND SUGGESTIONS TO THE INDUSTRY

##### a. Personal development model construction

The iceberg model is a famous model proposed by the famous American psychologist McClelland in 1973. The so-called „iceberg model” is to divide the different expressions of individual personal qualities into the surface „above the iceberg” and the hidden „The part below the iceberg”.



Figure 4. The iceberg model

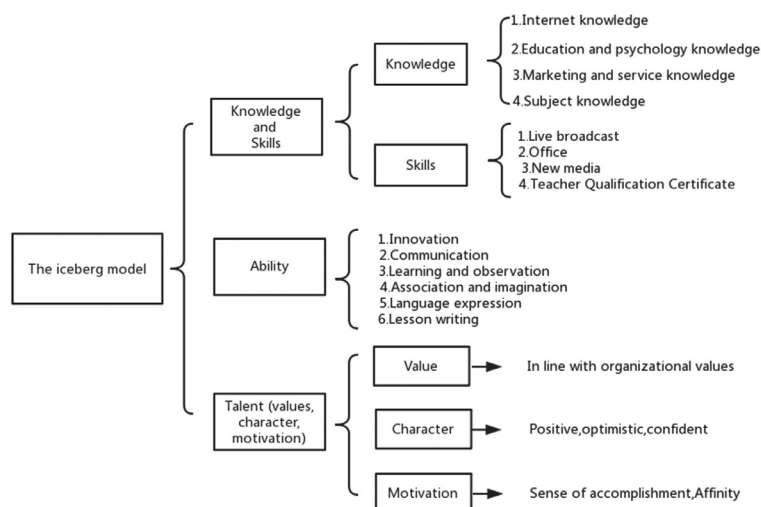


Figure 5. Personal development model construction

Source: Author's

## **b. Suggestions on personal development management of industry teachers**

The iceberg model is described from three aspects of personal development.

Knowledge and skills are easily acquired by teachers through learning. If knowledge, skills and work do not match, teachers will feel panicked and feel heavy workload. Training institution's solution to this problem is to make up classes and train teachers.

Competence is part of the general field and is not easily acquired by teachers. If the ability does not match the work, the teacher often feels deeply powerless because of the low efficiency of the work. Training institutions need to train teachers' abilities in all aspects for a longer period of time.

The level of talent (values, character, motivation) is difficult to observe and hard to cultivate. If the personality of the teacher does not match the work, the teacher will feel tired, and the institution needs to adjust the teacher's psychology. Institutions need to hire psychologists or establish psychological departments. The completion of teaching projects, parent and student recognition, and institutional rewards can greatly increase teachers' sense of accomplishment. Affinity enables the staff of the organization to coexist peacefully, with a good working atmosphere and a comfortable mood.

## **5. FUTURE RESEARCH DIRECTIONS**

Online education in the education and training industry is constantly emerging and slowly maturing. There are a large number of institutions in China that focus on online teaching, such as zhangmen one-on-one, VIPKID, DaDa English ... enter 2020, in China has opened a new offline education counselling institution. If there is no online teaching system or online assisted learning system, the starting point of this institution will no doubt fall behind. In the future, the education and training industry will be mainly offline, supplemented by online and offline teaching methods. With the continuous development of society and technology, the requirements for teachers are becoming higher and higher. Institutions and teachers must work together to develop themselves.

## **6. CONCLUSION**

Personal development changes with the times and keeps pace with the times. Institutions should follow the trend of social development and inject new vitality into the development of institutions. Innovate the internal teacher personal development system to assist teacher development, so as to achieve mutual benefit and win-win for personnel and institutions.

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# ADVANTAGES OF DECENTRALIZED CONSTRUCTION LOGISTICS

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**Abstract:** *It has to be admitted that the idea decentralized construction logistics, respectively construction site logistics is strongly contested in the scientific literature at the moment. This paper deals with the advantages of decentralized construction logistics. The prevailing view in research is that centralized construction logistics is preferable to decentralized ones. Based on a systematic review of the literature, it is shown that decentralized construction logistics can be advantageous due to the specialization of the construction, different degrees of professionalization, difficulties in cooperation, avoidance of costs and technological inconsistencies and properties as well as with regard to the objects of the construction process.*

**Keywords:** *Manufacturing, Supply chain, Procurement, Service provider.*

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## 1. INTRODUCTION

It has to be admitted that the idea decentralized construction logistics, respectively construction site logistics is strongly contested in scientific literature at the moment. For example, in a quite recent paper, Le, P. L., et al. (2018) write, referring to the subject of construction supply chain, abbreviated CSC: „An integrated CSC network can solve the existing problems in the construction industry that is known as a decentralized SC“ (p. 1). Decentralized supply chain is identified as a problem. Hofstadler and Mostafa (2010) have been even more blunt: „For large construction projects, when the logistics processes are centrally planned, controlled and monitored, faults can be prevented rather than with individual trades through the decentralized logistics“ (p. 310). Thus, centralized logistics in the domain of construction are believed to be much more reliable than decentralized logistics.

The question how construction logistics should be organized has become almost inevitable for the construction industry. The reason for this lies in the cost-sensitive competition of the construction industry. Expensive deliveries are not timely incoming deliveries, no timely unloading, ineffective warehouse management, use of wrong or damaged parts, missing waste separation on the construction site.

But in view of the diversity of the tasks given, the question arises as to whether the client or with the economic feasibility of involved stakeholders of a construction project should centralize construction logistics, i.e. commission an overall service provider, or whether it would be better, at least for the individual areas - supply or procurement logistics, construction site logistics, waste disposal logistics - resort to appropriate specialists.

Even in this brief overview, the topic seems extremely complex. In this publication, therefore, only a sub-area is dealt with, namely the strengths of decentralized construction logistics. Despite the

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strong tendency towards centralized construction logistics there might be some reasons to promote decentralized construction logistics. Because by inductive reasoning, in at least five cases decentralized construction logistics might be useful: If there is a lack of framework to integrate the different contributions of logistics; if advanced technology has not been fully implemented; if technology for construction logistics seems to support decentralized tendencies; if there is a strong competition among contributors which does not allow central planning; and if synergy effects should be realized. The discussion in the presented paper will verify these and other arguments.

## **2. RESEARCH METHOD**

The research method applied in the paper is the systematic literature review. The aim is to find scientific literature that can help clarify whether and to what extent decentralization in construction logistics bears advantages. To carry out a literature analysis as systematically as possible, it seems helpful to subject it to a kind of configuration process. It is necessary to clarify which elements in which connections should be used therein. Webster and Watson (2002) provide clues such as levels of analysis, temporal and contextual limitations, the range, and the implicit values that the review is subject to.

Almost an examination grid, however, offers Cooper (1988), his taxonomy clarifies which focus, which goals and perspectives, which coverage, which organization and which target group are targeted. Focus is on what kind of material the literature review should scrutinize. In fact, looked for are all the information about advantages of decentralized construction logistics.

As sources for the literature research are chosen: Google Scholar: an easily accessible database that unfortunately does not provide a search mask for elements such as abstract, full text, etc.; Science Direct: freely accessible English-language database with search options for authors, contents, keywords etc. of peer-reviewed journals, articles, books and book chapters on the most diverse fields of knowledge.

## **3. CONSTRUCTION LOGISTICS**

### **1.1. Concept of construction logistics**

According to Schach and Schubert (2010), construction logistics can be understood as follows: „Construction logistics deals with the planning, execution and control of material, personnel and information flows from the point of view of optimized construction-related service provision with regard to deadlines, costs and qualities, while at the same time taking into account safety and health protection as well as ecological aspects“ (p. 7).

For Giesa (2010) the construction logistics service provider is involved in the realization of various services: “These include supply logistics (in particular delivery management and access control), construction site logistics (in particular warehouse management and the organization of crane and elevator capacities) and the disposal logistics (here the collection and disposal of construction site waste). In addition, the construction logistics service providers can also make offers for the rental of equipment that belongs to the site equipment.” (p. 62].

Kirsch (2008), on the other hand, regards construction site logistics as „the design of object flows (goods, information, values) along the supply chain process stages.” He takes a closer look at the

subsections of procurement logistics and production logistics. The former deals with the part „suppliers to the incoming warehouse / construction site”, the latter refers to the „material and goods flows with their accompanying information in their own value creation stages” (p. 68). He points out to the fact that “the flow of materials and information in both subsections can be well distinguished, but on the other hand, the flow of information is always closely linked to the material flow” (p. 68). Thus, various aspects are touched, which concern the field of construction logistics.

## **1.2. Distinction between centralized and decentralized construction logistics**

In the context of the present paper, decentralization in economics and technology has to be pointed out because of the relevance of the subject. (Serugendo, et al., 2004) suggests that “in the field of economics, decentralization does mean usually the distribution of subtasks in different places” (p. 22). He continues (2004) that “in the realm of technology, decentralization can help to manage small, repetitive units that can combine several systems (for example shading, heating and ventilation of a room), the supply to the low-voltage grid to supplement and replace central structures, multiple meshed computing units, in automation technology, the decentralized periphery” (p. 24).

The state of research shows that the difference between centralized and decentralized in construction logistics has not been sufficiently explored. However, the general definitions can be applied to construction logistics. The centralized logistics is characterized by integrating the task of logistics in a single functional area. Pfohl (2018) argues that there are two ways to realize this: “First, one can build up an independent logistic functional area in addition to the other functions or to establish a cross-sectional function overlaying the basic business functions. Second, the logistics tasks can be taken to an existing functional area” (p. 267).

The understanding of decentralized logistics is directly connected to perceived advantages. According to Pfohl (2018), “they might be extremely suitable for large companies with rather independent business divisions which have to take into consideration crucial characteristics of their products as well as requirements of the market. So, it might be of benefit to deploy logistic units over different divisions” (p. 271).

To apply these definitions to construction logistics, it seems suitable to replace the underlying concept of enterprise by the term project. Thus, in the frame of a construction project, centralized logistics can be assigned to an independent functional area, while decentralized logistics can belong to different parts of the process of the project or to different contributors.

## **3. PARAMETERS OF ADVANTAGES IN CONSTRUCTION SITE LOGISTICS**

The current state of research gives information on parameters or factors which seem to decide over the benefit of logistic strategies. In the following, the parameters of framework, area, objects, and phases will be introduced.

### **3.1. Parameter of framework**

The parameter of framework has to be subdivided into different subparameters. They are focused on particularities of the branch, the field of economics, the technology involved, and working in the construction site.



### **3.1.1. Branch**

According to Günthner, et al. (2006) and Hofstadler (2014), construction logistics is characterized by certain properties determined by the branch. “First, one has to take notice of the fact that every construction project including its planning and its execution has to be regarded as unique. Second, the different actions in the construction process have to be periodized in regard to material flow planning, on the one hand, and development of material consolidation on the other hand. Third, limited storage capacity is the rule, therefore, building according to just in time is necessary. Fourth, route optimization is limited because of the domination of single destination trips. Fifth, transport planning depends on the goods to be transported. Sixth, vehicles on the construction site are only individually disposable. Seventh, planning and building depends on weather conditions. Eighth, transportation of custom-made products can only be optimized to a limited extent. Ninth, consortium-orientated coordination needs require compatible logistics systems of the actors. Tenth, the logistics have to be adapted to the condition of disruption-related (repair, malfunctioning, etc.) and personal interruptions of work (breaks, exposure, etc.)” (p. 11 and 82).

### **3.1.2. Management**

Berner, et al. (2013) distinguishes between construction business management and construction logistics. The former deals with the „calculation and billing of construction prices”, the „contract issues in construction”, the „tendering, awarding and billing” of orders, abbreviated AVA, the „contract and contract forms” and the „expiry mechanisms of the construction market”. In contrast, construction logistics, together with project management, occupational science, controlling, risk management and quality management, belong to the field of only construction management (p. 53).

### **3.1.3. Technology**

In construction logistics, technological shifts are mainly triggered by digitization. But there is a wide range of differences according to the state of digitization among enterprises of the branch. Before this background, it seems to be reasonable to differentiate various degrees of digitization with impact on strategies and practices of construction logistics. According to a survey from Germany, only a minority of enterprises has fully digitally developed construction logistics. Most companies have only grade 1, which corresponds more to a persistence on analog media. And the second degree can only be equated with the digital possibilities of the Internet 1.0, insofar as the corresponding applications can only be used to exchange information and knowledge. Simbeck and Bühler (2018) assert that “the level of Web 2.0 with intensive reciprocal interaction is only reached with the third degree, which includes online (project) platforms for planning, preparation, execution, and control and documentation for cloud storage” (pp. 181-199).

Grade 4 represents the level of Industry 4.0 in construction logistics, which is not yet very widely represented in the industry. Industry 4.0 circumscribes the networking between physical and virtual entities. A whole family of technical devices play a key role in the conception of Industry 4.0. To name are BIM design tools, that is Building Information Modeling in 3D, Global Positioning System (GPS) for precise unloading of transports on construction sites, the Radio Frequency Identification technology (RFID), which allows contactless identification, assignment and traceability of construction and building materials and the documentation. The systems

for visual pattern recognition refer to cyber-physical systems (CPS) that is the self-control and self-organization of real and virtual elements, which at least partially operate independently and thereby can gain the status of production units, abbreviated CPPS. According to Simbeck and Bühler (2018), CPPS consists of „flexible, autonomous and self-configuring production resources that can communicate with each other and with products (so-called smart products, that is products with CPS architecture) and make situation-specific decisions.” (p. 190).

#### **3.1.4. *Compliance with the construction logistics manual***

The construction logistics manual provides the contractual basis for all rights and obligations for all actors involved in the construction project. These stakeholders include not only builders and planners, but also the contractors and all active downstream companies plus suppliers and other service providers. They have to deal with a set of rules whose non-compliance is sanctioned. Based on the construction logistics handbook, written by Ruhl, et al. (2018), the construction logistics concept is realized and cooperation in the building logistics processes is placed on a systematic basis. In the course of this, the individual construction logistics processes and their implementation are precisely defined and assigned to the responsible persons.

### **3.2. Parameter of domain**

Based on the handbook by Girmscheid (2016), construction logistics is generally subdivided into three areas of supply logistics (includes logistics right to the construction site), construction site and production logistics (deals with logistics on the construction site), and waste disposal logistics (the logistics after the construction site), which are subordinate in terms of time.

### **3.3. Parameter of objects**

Central construction logistics can also become relevant for the efficient handling of objects in construction logistics, where the resources required for the services to be created are named as objects, regardless of whether an object is a house or an infrastructure or something else. Furthermore, according to Schach and Schubert (2010), there is a difference between object planning and object realization. There are “supply logistics objects, site logistics objects, which relate to all transfer movements relating to transport, handling and storage, and objects of the waste disposal logistics concerning the recovery and disposal of construction waste accumulating on a construction site” (p. 7-13).

### **3.4. Parameter of phases**

To construction logistics, the structure of different phases of work also matters. Especially the phase of expansion is of importance. This applies to the organization of the trades as well as to the transportation tasks which are indispensable during all phases. Each construction phase goes through a planning phase and a realization phase. Ruhl, et al. (2018) have listed four phases that the construction logistics have to go through and which Ruhl assigns to his multi-stage process model under the planner heading to the overall process: construction logistics initiation (Phase 1), construction logistics planning (Phase 2), construction logistics organization (Phase 3), construction logistics realization (Phase 4).

## **4. POSSIBLE ADVANTAGES OF DECENTRALIZED CONSTRUCTION SITE LOGISTICS**

### **4.1. Discussing the parameter of framework**

The state of affairs in the branch of construction itself seems to require decentralized logistics. One reason is that customer demands are often very specific. To fulfill the needs of the customer, there is little chance that a single company may be sufficient. Instead, specialists from other companies have to be brought in. But in this case, as Gollos (2014) argues, “it is hardly imaginable that these actors might work under a general logistics umbrella” (p. 45). Due to the fact that the different tasks of construction can hardly be compared, it appears doubtful if not only cross-company but also cross-task logistics can be realizable.

Second, the situation of competition among companies as well as low capacities and cost-pressure have led to off-shoring or the use of subcontractors. Thus, different conditions of work, different corporate cultures and different kinds and levels of professional qualifications are at work on a construction site. Because of the differences among the people involved it seems to be improbable that they can be adapted to common rules and a required set of technical devices. At least, it might cost much time, effort and money to create such a situation. Therefore, decentralized logistics seem to be much more realistic.

Third, there is little evidence for willingness to work together among companies. On the contrary, studies have brought to light that members of construction companies are filled with psychological distrust of other companies and fears of loss of identity and self-reliance. So, it appears advisable, according to Brandt, (et al.) (2016), “to let the different companies have their own set of logistics to avoid conflicts and distrust” (p. 18).

But there are also economic reasons which shed light on the advantages of decentralized logistics as well. From the construction business management point of view, central construction logistics are higher compared to decentralized construction logistics.

As far as technology is concerned, different problems arise to which point to decentralize logistics as a good solution. First of all, it has to be taken into consideration that the construction companies on the market operate at different technology levels. In the context of centralized logistics, it would be difficult to oblige all companies involved in a project to make their logistics work at a certain technological level. Theoretically, it would be conceivable, for example, to make a medium level - about level 2 - or a high level - level 4 of the digitalization of logistics binding. However, this would most likely disrupt the well-established work processes or their organization. In any case, whether the level of digitization is below or above the usual standard, companies would be hampered in their performance and others would be overwhelmed. In order to guarantee the individual performance of the companies, decentralized logistics seems suitable because it is tailored to the requirements and potential of the individual companies.

Furthermore, it is not absolutely clear if advanced technology would be successfully applied by the involved agents. For example, log-on systems for transportation purposes might not work efficiently because of reluctance to use them. Another disadvantage arises if the deliveries not registered via the online system, but delayed, or even not registered, are rejected.

In addition, the highest level of digitization that is accessible to logistics, namely at the level of the Internet of Things, raises the question of whether central logistics is still possible or just decentralized. It should be borne in mind that the objects in the sense of the CPS are at least partially autonomous and have artificial intelligence. This enables them to make decisions independently, based on communication with other objects. Under these conditions, doubts arise as to whether logistics can be thought and organized hierarchically for a long time.

#### **4.2. Discussing the parameter of objects**

Regarding the objects used in the building process, it has already been determined that decentralized logistics is recommended for them because they can act independently. They can make local decisions based on their artificial intelligence and can communicate with other objects as well as people. It should now be added that these so-called smart objects are able to adapt flexibly to their environment and the tasks they perform due to their described skills. They can also be considered autonomous in this regard. However, in this respect Anderseck, et al. (2013) suggests that “the building logistics should not be organized from a central point, but from the objects that are involved in the building process” (p. 54).

A completely different kind of objects are models and simulations for the building process. They are not installed, but they manage the installation process and have a major impact on logistics. The concept of the digital construction site according to Günthner, et al. (2006) stipulates that “a BIM model is the central requirement for all logistical activities” (p. 77). In reality, however, this is often not the case. According to Greiner and Scherer (2014), “the conflict is rather that, on the one hand, data is to be collected and made accessible by means of a central building model, but, on the other hand, there is an increasing tendency among contractors to build their own models for their own cost calculations and work preparations, because there are always doubts concerning the actuality and completeness of the other models. It is therefore an adjustment to existing conditions to accept not only the existence of one’s own construction models, but also independent logistics that are based on this model and that therefore can only be realized in a decentralized form (p. 151-166).

### **5. FUTURE RESEARCH DIRECTIONS**

As the paper suggests, decentralized construction logistics has its own advantages. However, the same can be said about centralized construction logistics. As this paper focuses on the advantages of decentralized construction logistics, it is advisable to analyze also the advantages of centralized construction logistics and to compare these two types of logistics.

### **6. CONCLUSION**

The conclusions are drawn that refer to the general framework in the subject-specific scientific literature. These consist in the fact that the highly specialized manufacturing entails independent logistics systems, that different degrees of professionalization and corporate cultures do not allow any other than decentralized logistics, as well as the widespread unwillingness to work together. In addition, decentralized logistics is considered less expensive than centralized. Finally, decentralized logistics does justice to the different technology levels of the company. But even if digitization shows the last point of development in the company, decentralized logistics seem to be more accommodating due to the decentralization of the Internet of Things. In addi-

tion to the general framework, you can also state that objects handled on the construction site, whether they are intelligent, decisive smart objects or models or simulations, seem to be more useful with decentralized logistics. There are no advantages for decentralized logistics in other areas such as domain and phases discovered in the literature.

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# LINGUISTIC FEATURES OF TV COMMERCIALS AND MARKETING STRATEGIES FOR ADDRESSING CONSUMERS

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**Abstract:** *Advertisements are unavoidable and ubiquitous. We encounter them on television and the radio, in newspapers and magazines, on billboards, in public transport vehicles and mailboxes, on mobile phones or on websites we visit on the Internet. The aim of this paper is to examine linguistic features and marketing strategies used by advertisers to attract and hold consumers' attention, make them remember advertisements and encourage them to buy advertised products. This paper discusses the way advertisers, using the advertising discourse, manipulate consumers' opinions, beliefs and behaviour. Starting from previous research of the advertising discourse, this paper shows the results of the analysis of the most important linguistic features as well as marketing strategies for addressing consumers used in TV commercials broadcast on four Serbian TV channels - TV Prva, RTS 1, TV B92 / 02 and TV Pink, from March 2016 to September 2019. The analysis is based on the theoretical principles of Critical Discourse Analysis.*

**Keywords:** *Advertising discourse, TV advertisements, Marketing, Manipulation.*

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## 1. INTRODUCTION

The development of mass media caused the expansion of advertising, which enabled the growth of modern consumer capitalism. In order to increase wealth, economy and industry have to produce more goods and services and in order to sell them the number of consumers must be increased. Advertising plays a crucial role in persuading potential customers to purchase a product or a service. Advertisers use important aspects of consumer ideology in the form of the following strategies: stimulating greed, envy and desire to possess power; provoking a feeling of dissatisfaction in potential customers if they do not purchase a product irrespective of their needs; presenting purchase as a way of solving problems or acquiring positive characteristics of the advertised product; promising potential customers a new identity if they purchase the advertised product; inviting potential customers to identify with the success of celebrities endorsing a product; promising receivers of the advertised message that by acquiring an exclusive, unique or traditional advertised product they will differentiate themselves from others, become superior to them or lead a lifestyle which accompanies the product (Goatly, 2000).

## 1. LITERATURE REVIEW

### 1.1. The concept of manipulation in Critical Discourse Analysis

Manipulation is one of the crucial notions of Critical Discourse Analysis. According to Van Dijk, manipulation is a social, cognitive and discursive-semiotic phenomenon. Unlike persuasion, which represents legitimate mind control, manipulation represents its illegitimate control.

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Manipulation is an abuse of social power, i.e. domination and recipients of a message are victims of manipulation due to their passive role in the process and their inability to understand the real intentions and consequences of the manipulator's actions as well as a lack of knowledge necessary to resist manipulation. It is a cognitive phenomenon because it always involves control of the minds of recipients of a message (their beliefs, knowledge, opinions and ideology) and a discursive-semiotic one since it is exercised through both verbal and non-verbal means (Van Dijk, 2006).

Manipulation as a social phenomenon is illegitimate in a democratic society since it produces and may reproduce social inequality - it serves the interests of powerful groups against the interests of less powerful groups because it is exercised against their will and to their disadvantage. On the one hand, the power of elite is represented in the ability of preferential access and control of the mass media and public discourse. On the other hand, public discourse is a mean of reproduction of elite power (Van Dijk, 2006).

The cognitive dimension of manipulation has three levels. The first level refers to the control of information processing in the short-term memory, namely to the control of discourse understanding, i.e. specific features of text and talk direct the attention of recipients of a message to some pieces of information, while others stay hidden. The second level of the cognitive dimension of manipulation refers to the formation of mental models in the episodic memory. Mental models include our opinions and feelings about specific events we hear or read about. They are unique, individual and personal and their formation and activation is automatized so that recipients of a message are often unaware of manipulation. The third and most important level of manipulation refers to the formation or change of social representations, i.e. general, abstract, stable and permanent beliefs, such as knowledge, attitudes, ideologies, norms and values. Social representations are acquired gradually throughout life and they do not change fast. That process occurs in the long-term memory and we share social representations with other members of the same social group and culture (Van Dijk, 2006).

The discursive-semiotic dimension of manipulation includes both verbal (text and talk) and non-verbal communication (gestures, facial expressions, text layout, sound, music, photography and film). The main strategy of the manipulator is positive self-presentation and negative other-presentation (Van Dijk, 2006). Advertisements represent typical medium of manipulation in a broad semiotic sense.

Fairclough distinguishes between two types of exercising power: through coercion, including physical violence, and through manufacturing consent. Ideology is a crucial mechanism of exercising power through manufacturing consent, and discourse plays an important role in it. Two main aspects of the relationship between power and language are power in discourse and power behind discourse. Power in discourse refers to participants in discourse who have the power to control and constrain the participation in discourse of those who do not have it. Power behind discourse is hidden and people are unaware of it (Fairclough, 1989).

Fairclough states that discourse is a form of social practice which is determined by social structures. Discourse is a process of social interaction which involves text as well as the process of production of which the text is a product and the process of interpretation for which the text is a resource. The three key dimensions of discourse are text, interaction and social context (Fairclough, 1989).

According to Fairclough, the advertising discourse is marked by inequality in communication. Advertisements work ideologically in three ways: by building relations between the producer / advertiser and the audience, by building specific image for the advertised product and by building of consumption communities. The relationship between the producer and the large and indeterminable audience is one-way and therefore usually personalised, but the personalization is artificial (Fairclough, 1989).

## **1.2. The main features of the advertising discourse**

One of the key features of the advertising discourse is its multimedial nature, i.e. intertwining of verbal, visual and auditory code. The visual code is often more dominant than the verbal one since nowadays message recipients are more affected by images than words. However, the linguistic code of the advertising message is still extremely significant (Gjuran-Coha i Pavlović, 2009). Music and images create atmosphere, strengthen the force of an advertisement and affect the emotions of viewers. Paralinguistic features – accent, tone, volume and pitch of voice, rate of speech, body language, gestures and facial expressions add emphasis and shades to a verbal message or may be completely opposed to it (Cook, 2001). Another important feature of the advertising discourse is its persuasive nature. Although all linguistic functions are present in the advertising discourse, conative function is dominant since its purpose is predominantly persuasion and it is always directed to message recipients and contains ideology elements (Katić-Bakaršić, 1999). The aim of the advertising discourse is to inform potential customers about qualities of the advertised product and to induce them to purchase it. The force of the advertising discourse lies in glorification of the advertised product and implicit reproach of those who do not possess it (Marcoci, 2014). The advertising discourse has always been based on the rhetoric of persuasion. In the past, potential customers were persuaded of the quality of the advertised product. Nowadays, they are promised to become part of an exclusive group by acquiring the advertised product (Bagić, 2006). Due to the oversaturation of the market with advertisements, there is a need for new means of attracting attention of recipients of the advertising message, which results in significant use of various original and witty linguistic and stylistic devices (Gjuran-Coha & Pavlović, 2009). Surface layer of the advertising message is used to attract attention and create the desired atmosphere and its true meaning is on the level of connotation. Multiple meaning is created using rhetorical devices and figures (Lekić, 2009). Breaking grammar rules is another typical feature of the advertising discourse used in order to surprise potential customers with the unusual or unexpected and attract their attention (Leech, 1966). Humour is widely used in TV commercials as well, with the aim of entertaining recipients of the advertising message and attracting their attention (Leech, 1966).

## **2. ANALYSIS OF LINGUISTIC FEATURES OF SERBIAN TV COMMERCIALS**

The TV commercials analysed in this paper were broadcast from March 2016 to September 2019 on four Serbian TV channels: TV Prva, TV Pink, RTS 1 and TV B 92/O2. For the purpose of this paper, the TV commercials which best illustrate the most important linguistic features used with the aim of manipulation of recipients of the advertising message were excerpted from the extensive corpus. Despite the multimedial nature of TV commercials, the focus of the analysis was on their linguistic code.

## 2.1. Strategies for addressing consumers

In the analysed sample of TV commercials addressing consumers is in some cases formal, using the second person plural, which demonstrates respect. In other cases, it is informal, using the second person singular, which, together with colloquial language, creates a relaxing, close and friendly relationship with recipients of the advertising message (Udier, 2006) and thus masks the inequality of power between them (Blommaert & Bulcaen, 2000), which makes manipulation easier. The first person singular is common in the type of commercial called 'testimony' (Tadić, 2006) with a trustworthy person describing their experience with the advertised product and creating the impression of intimacy with potential customers. In some commercials advertisers use the first person plural with the intention of conveying the impression of stability and building trust in the manufacturer of the advertised product. Using the inclusive first person plural advertisers want to create the atmosphere of closeness between the consumer and the manufacturer (Katnić-Bakaršić, 1999).

The first person singular

- *I like taking care of my skin and now I can do the same with my laundry* (Silan fabric softener).  
(In Serbian: *Volim da negujem svoju kožu, a sada to mogu da uradim i sa svojim vešom.*)

The first person inclusive plural

- *OTP bank. We trust each other* (OTP bank).  
(In Serbian: *OTP banka. Verujemo jedni drugima.*)

The second person singular

- *In order not to miss anything, Vip offers you free TV or film content on your phone* (Vip mobile operator).  
(In Serbian: *Da ništa ne propustiš, Vip ti daje besplatan TV ili filmski sadržaj na tvom telefonu.*)

The second person plural

- *Enjoy longer the cleanliness of your face* (Nivea micellar water makeup remover).  
(In Serbian: *Uživajte duže u čistoći svog lica.*)

The first person plural

- *We use the best quality cereals from our best climes and turn them into delicious and appealing products* (Vitanova Pionir biscuits).  
(In Serbian: *Uzimamo najkvalitetnije žitarice sa naših najboljih podneblja i pretvaramo u ukusne i primamljive proizvode.*)

## 1.2. Question form

In the analysed sample of TV commercial a 'vignette of problem and solution' (Tadić, 2006) is very frequent. This type of commercial begins with a rhetorical question which identifies a problem or an unfavourable situation which recipients of the advertising message might be in. Advertisers provide a solution to the problem in the form of the advertised product (Goddard, 1998). Using this type of commercial, advertisers attempt to involve recipients of the advertising message and create a close relationship with them in order to fog the inequality between them, which is a form of manipulation.

- *Is your blood sugar level high in spite of treatment? We have a solution. Regulex capsules lower the blood sugar level and reduce complications of diabetes, having a beneficial effect on pancreas, kidneys, liver and blood vessels* (Regulex diabetes capsules).  
(In Serbian: *Da li je vaš šećer visok i pored terapije koju imate? Imamo rešenje. Regulex kapsule snižavaju nivo šećera u krvi i ublažavaju komplikacije dijabetesa delujući blagotvorno na pankreas, bubrege, jetru i krvne sudove.*)

### 1.3. Imperative

Verb phrases in the advertising discourse are very simple. Passive voice is rarely used. The most common verb forms are imperative and present (Leech, 1966). Appellative function of the advertising discourse is reflected in the frequent use of the second person singular/plural imperative, often followed by an exclamation mark (Udier, 2006). Advertisers use the imperative to create a close relationship with potential customers and thus manipulate them into purchasing the advertised product.

- *Beat the pain!* (Vitalis sports cream).  
(In Serbian: *Pobedi bol!*)

### 2.4. Adjectives

Noun phrases in the advertising discourse are more complex than verb phrases. They often include two, three or more adjectives, especially those which express emotions or praise (Leech, 1966). Comparatives and superlatives, particularly of adjectives with positive connotation, are widely used in order to emphasize quality and distinctive features of the advertised product, with the aim of manipulation. Advertisers stress higher effectiveness and quality of the advertised product in comparison with competitive products in the market which results in greater customer satisfaction.

#### Comparative

- *For healthier and stronger teeth from day one* (Blend-a-med toothpaste).  
(In Serbian: *Za zdravije i jače zube od prvog dana.*)

#### Superlative

- *The gentlest Nivea deodorant* (Nivea deodorant).  
(In Serbian: *Najnežniji Nivea dezodorans.*)

### 2.5. Foreign words and phrases

In the analysed sample of TV commercials foreign words and phrases are very common. Commercials aimed at younger population are rich in foreign words and phrases, mainly from English, usually used together with informal, everyday language in order to create a close and intimate relationship with that target group. In some TV commercials advertisers use foreign words, mostly from French and German, in order to emphasize quality, luxury, tradition and origin of the advertised product and convince potential consumers that they purchase a lifestyle together with the product.

- *OMG, everything has changed!* (Fanta fizzy drink)  
(In Serbian: *OMG, sve se promenilo!*) The English acronym OMG (Oh, my God), typical of electronic communication, was used in the commercial in Serbian.
- *Garnier discovers Ultra Doux Mythique Olive nutritional care for hair* (Garnier shampoo).  
(In Serbian: *Garnier otkriva hranljivu negu za kosu Ultra Doux Mythique Olive.*) The name of the product is in French to highlight exclusivity of the product.



## 2.6. Neologisms

The use of neologisms demonstrates creativity of the advertising discourse. Most neologisms in the analysed sample of TV commercials are blends. Advertisers use neologisms to make commercials memorable and thus attract the attention of recipients of the advertising message and make them remember the advertised product, which is a sign of manipulation.

- *Fairyconomical* (Fairy washing-up liquid).  
(In Serbian: *Fairykonomično*.) The blend consists of parts of two words – the brand name Fairy and the adjective economical.
- *Feel Fantastic* (Fa deodorant).  
(In Serbian: *Osećaj se Fantastično*.) The blend comprises parts of two words – the brand name Fa and the adjective fantastic.

## 2.7. Technicisms (technical terms)

Technicisms are widely used in advertising medicines and curatives. They are often used instead of ordinary words since their meaning is unknown to average viewers. The use of incomprehensible, complex sentences and technical and scientific terminology makes the understanding of the message more difficult and thus reassures potential customers about the quality of the advertised product as well as about the manufacturer's technical knowledge, inspires respect and consequently eases manipulation.

- *Treatment of gastroesophageal reflux symptoms* (Gaviscon heartburn pills).  
(In Serbian: *Tretman simptoma gastroezofagealnog refluksa*.)

## 2.8. Idioms

Idioms and their modifications are very frequently used in the analysed sample of TV commercials. Since idioms are common in everyday conversation, advertisers use them in the advertising discourse in order to create relaxing and informal atmosphere and make a close relationship with potential customers and consequently manipulate them.

- *When you know that everything you love is always within arm's length. Moja kravica yoghurt. Always in the family circle* (Moja kravica yoghurt).  
(In Serbian: *Kada znaš da ti je sve što voliš uvek nadohvat ruke. Moja kravica jogurt. Uvek u krugu porodice*.)

## 2.9. Stylistic devices

Although the focus of the analysis was not on stylistic devices, the authors noticed a significant number of them in the analysed sample of TV commercials. They reflect expressiveness, richness and variety of the advertising discourse. Stylistic devices affect emotions of recipients of the advertising message, attract their attention in a creative way and make them remember the brand and the product. They can also make potential customers laugh and thus create the feeling of intimacy with advertisers for the purpose of manipulation. The salient stylistic devices in the analysed sample are: rhyme, anaphora, metaphor, personification, simile, hyperbole and pun.

- *The chimney sweep of your throat – Negro* (Negro Pionir candies).  
(In Serbian: *Odžaćar Vašeg grla – Negro*.) An example of metaphor.
- *Always fresh. Always close. Always Maxi* (Maxi supermarket chain).  
(In Serbian: *Uvek sveže. Uvek blizu. Uvek Maxi*.) An example of anaphora.

- *Fresh like a mountain morning* (Rosa mineral water).  
(In Serbian: *Sveža kao planinsko jutro*.) An example of simile.
- *What are you waiting for? Crack a problem!* (Nescafé 3 in 1 with a hazelnut and chocolate flavour).  
(In Serbian: *Šta čekaš? Skrekaj problem!*) The creative and witty pun is based on the polysemy of the verb crack. Its literal meaning, break into pieces, refers to a hazelnut and the other one, figurative, refers to finding a solution to a problem. The visual part of the commercial displays a hazelnut surrounded by words 'you' and 'exam'. The implied advertising message is that having a coffee with hazelnut flavour will help you pass an exam.

### 2.11. Evocativeness

Evocativeness is very common in the sample of the analysed TV commercials. It is manifested in emulating features of other types of discourse or in the form of a humorous paraphrase of a well-known saying, song or a film or book title (Bagić, 2006). Using the aforementioned forms of evocativeness, advertisers make advertising messages more attractive and memorable, affect consumers' emotions, entertain them and consequently manipulate them.

- *Once upon a time there was a cough...and that was the end of the cough story* (Hemo-farm children's cough syrup).  
(In Serbian: *Bio jednom jedan kašalj...čiča miča i gotova kašalj priča*.) The beginning of the commercial evokes a typical beginning of a fairy tale and its ending is a humorous paraphrase of a typical ending of a children's story. The evocative elements were probably used with the intention of easier approach to children.
- *Some like it sweet!!!* (Grand Black 'n' Easy coffee with sugar).  
(In Serbian: *Neki to vole slatko!!!*) The advertising slogan is a humorous paraphrase of the title of the film 'Some like it hot'. Many coffee lovers like it hot and some of them like it sweet.

## 3. CONCLUSION

This paper presents the results of the content analysis of TV commercials broadcast from March 2016 to September 2019 on four Serbian TV channels: TV Prva, TV Pink, RTS 1 and TV B 92/O2. The analysis is based on the theoretical principles of Critical Discourse Analysis. It confirmed the presence of most linguistic and stylistic devices used with the aim of manipulation of consumers' opinions, beliefs and behaviour as noticed in previous research of the advertising discourse. The analysis attested multimedial and persuasive nature of the discourse of Serbian TV commercials as well as its imaginative, informal and humorous character. In the analysed TV commercials advertisers break grammar rules, use informal, everyday language, neologisms in the form of blends, idioms and their modifications and foreign words and phrases, mainly from the English language, in order to attract consumers' attention, make a close and friendly relationship with them and consequently manipulate them. In TV commercials for medicines advertisers use technical terms, incomprehensible to average consumers, in order to convey the impression of scientific knowledge and thus create consumers' trust and respect and manipulate them. Positive adjectives, particularly comparatives and superlatives, are widely used so as to emphasize the quality of the advertised product and consequently convince potential customers that they will acquire positive characteristics of the advertised product and the accompanying lifestyle by purchasing the product. Advertisers address potential customers in the first person singular and plural and use rhetorical questions to create a close and friendly relationship with

them and thus hide manipulation. The appellative nature of the advertising discourse is evident in the frequent use of the imperative verb form and addressing potential customers either informally, in the second person singular, or formally, in the second person plural. Stylistic devices, especially metaphor, simile, rhyme, anaphora, personification, hyperbole and pun, are very common in the advertising discourse and they indicate advertisers' creativity with the aim of attracting attention of potential customers with a memorable, humorous, witty and original advertising message, which makes manipulation easier. Evocativeness is one of the main features of the advertising discourse and it is manifested in the form of emulating features of other types of discourse or a humorous paraphrase of a famous saying, song or a book or film title with the aim of entertaining potential customers. All the aforementioned linguistic features are used as tools of marketing strategies for addressing potential customers for the sole purpose of persuading them to purchase the advertised product, i.e. to manipulate their opinions, beliefs and behaviour.

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# IMPROVING EFFICIENCY OF HEALTH CARE ORGANIZATIONS USING LEAN CONCEPT

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**Abstract:** *Lean, as relatively new management concept, surpasses the traditional mass production and creating stockpiles of goods which have to be placed on the market, without analyzing the customers' needs. The focus of lean is on creating the value that customers demand and forming the value streams which contain only processes and activities that generate that value and eliminating all types of wastes and non-value adding activities. Lean concept was founded in Toyota company i.e. in manufacturing system called Toyota production system. Nowadays, this concept has been implemented by many worlds known organizations as the crucial part of their production system, but also other supportive processes in the company. Application of the lean concept can significantly improve process efficiency, lead to drastic cost-reduction, improved quality of the products/services provided, but also can be a main factor of increased employees productivity and resource saving. Profitable and unprofitable health care organizations have determined business strategy and adjusted mission and vision of their path thus, they strive for resource optimization in the process of providing satisfactoral level of service. Accordingly, the examination of possibilities in implementing lean concept in Health Care organizations, as well as analyzing executed techniques and performed activities in leading companies is more than justified. Health Care organizations can be characterized as complex systems with numerous participants and the need for strict coordination of activities in order to provide demanded value for the customers. Monitoring and measuring the performances on various levels and areas of accountability is highly valuable for the Health Care organizations. Regarding that, the subject of this paper will be indicating specifics of measuring the performances in Health Care organizations and possibilities of their improvement.*

**Keywords:** *Customers, Lean techniques, Process, Value-adding activities, Non-value adding activities, Implementation, Patient, Organization, Value, Value stream, Performance, Employees, Management, Measurement, Waste, Reducing, Continuous, Waiting time*

## 1. INTRODUCTION

The modern-day changing economic world is throwing new challenges to the managers in forming development strategies, organizational techniques, applying new calculation methods and managing the expenses. To become a leader on the chosen market, the firm needs to adjust its driving policy to the customers wishes and demands, and to do so it must expand its perspective to the outside of its walls. One of the new concepts, which has found its place in numerous world-known corporations, is Lean concept. This concept was founded in Japanese multinational corporation Toyota. With the use of Lean techniques significant improvements in the company were made and the whole Japan's Economy has flourished.

Lean managerial concept enables creating demanded customers value expressed in better quality, product functionality, reduced delivery and waiting time, while maximizing the company's

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value stream profit, reducing supplies inventory and unnecessary waste of resources. Also, from the social aspect, Lean has achieved to increase productivity level as the result of greater satisfaction of the employees.

Wide utilization of the Lean concept in many different areas during the years and its positive outcomes made it interesting for the Health Care institutions. As they have discovered how the implementation of this new managing concept may boost their performances by standardizing complex processes, creating quality time management, conducting and improving activities which generate value, and eliminating those which do not add value and also making a work atmosphere which inspires dedication of their employees, soon the Lean concept was broadly applied in Health care organizations all over the globe.

Regarding that, this article is divided in three parts. In the first part are described the Lean principles in the Health Care institutions. How to measure the performances of one Health Care organization in order to improve its efficiency is shown in the second part. The end of the article focuses on example of exceptional practice in applying Lean concept.

## **2. LEAN PRINCIPLES IN HEALTH CARE ORGANIZATIONS**

When the Lean concept occurred, many looked on it from the manufacturing aspect, neglecting its other possibilities. With the popularization of the concept and its significant outcomes in terms of raising the whole business on a higher level, it became clear that Lean could be applied in each department of the organization and within diverse activities (Maskell, 2018). Lean thinking is not a manufacturing tactic or cost-reduction program, it represents a universal management strategy that can be applied in all types of organizations as a process improving tool and it is known that all organizations- including health care organizations- are composed of series of different processes i.e. set of activities accountable for creating value for those who expect it (customers/patients) (James P. Womack, 2005).

Successful implementation of the lean concept implies on following the main principles that are universal for all types of organizations with additional adjustments for specific activities in a certain organization. Lean principles are promoted as a universal guide to its implementation (Radnor, 2011; Olesen P., 2015; Womack J., 2003).

- 1) *Define value from the customer's perspective.* Value is created by producers or service providers. Value in the company is created if the internal wastes are reduced in terms of activities which do not add value and related expenses, in that case the whole value for the customers increases (Čečević, 2016). If the service providers did not take under consideration the wishes and needs of its consumers in the process of creating value, there would be no consumers for those services. To become a leader on the chosen market, organizations have to stop assessing the internal demands, and start changing their perspective to the outside of its walls. Young and McClean (Young T., 2008) define value from a patient pathway perspective – the route of a patient from entering the hospital to leaving the same, forming a pathway where the value is created on each step, instead of considering only patient-centred activities like: radiology, pathology or some other department as isolated process.
- 2) *Identify the value stream for each product/service provided and design a map of all the necessary steps in those streams.* To identify all value streams, it is necessary conducting the value stream map. The map will show all on-going processes and time and resources



crucial for their flow. This kind of view can be used for separation of the activities in three groups. These are: activities which add value for the customers, activities which do not add value but it is impossible to exclude them from the regular processes and those activities which do not add value but their elimination is achievable (Schimann & Brewton, 2009). Regarding that, value stream indicates on a set of specific activities which are fundamental in attaining three main business objectives: solving business problems, managing the information and physical transformation (Antić, Stevanović, Novićević Čečević, 2019). For example, one might map the stroke patient pathway to identify value and non-value adding activity. Process start and end points under consideration need to be agreed in advance to keep the improvement focused and manageable; for example, the mapped process might start from stroke onset, hospital journey (ambulance, walk-in patient or GP referral) and the process end-point in an acute care setting context might be patient discharge. In the mapping process have to be included all those who participated in the patient care, from the beginning to the end i.e., those who ‘touched’ the patient (call handler, paramedic, nurse, matron, specialist doctor, departmental manager, etc.).

- 3) *Assure continuous flow in providing services and standardize processes.* After the value and the value streams are identified, all the value adding activities need to be organized in a continuous flow. Impeccable transmission of resources, materials and information is required. Regarding that, Lean management concept has its focus on eliminating all inessential wastes which occur in the value streams. In health care institutions it would mean redesigning processes and erasing all non-value adding activities as waiting on an empty bed, waiting for the doctors’ admission, for the medications etc.
- 4) *Initiate Pull system.* Pull is triggered by the customers’ demands and aims for establishing the circumstances in which production starts when the external signal is received (Melton, 2005). The goal is reducing as much waste as possible (e.g. waiting) using pull system i.e. pulling patients to the next step on their pathway. That way, operation room personnel can notify the nurse in a certain department to make arrangements in time and provide an empty bed for the patient’s postoperative care. This is how the waste in time of waiting in-between steps of the value chain is reduced.
- 5) *Strive for perfection (continuous improvement).* Once the value streams are established and their continuous flow guaranteed it doesn’t mean that the lean adjustments are over. Lean signifies continuous improvement in every single department, using variety of lean techniques and methods. Potential of resource saving exists in every area of the organization and each conducted activity and that is the reason why the lean concept is never ending process. It is said that „Lean is not a destination, it is a journey” (Huntzinger, 2007).

In the interest of this paper, the definition of the Lean concept can be concluded: Lean is integrated strategical, operational and social approach of the value system with the main purpose of maximizing value while eliminating all parts of wastes and looking for constant improvement (Joosten, Bongers, & Jansen, 2009).

### 3. THE MEASUREMENT OF HEALTH CARE PERFORMANCE

The reason why organizations do performance measurement is to analyze their position on the market, relation between competitors and also their own progress or regression in the period. In the most of them performance measurement became the structural part of the business and others do it for the specific purposes. Either way, organizations have to evaluate their performances all the time, so that the actions they take can be estimated. If they know which activities



pull more resources than needed, or take more time than necessary to complete the result, they can redesign the steps, create more efficient transmissions and carry out determined strategy.

Performance measurement is considered to be an efficient instrument in business strategy realization. High-level performance measurement system facilitates evaluation of the key activities and possible improvements. There are different motives for measuring performances of the organization and they can be classified in the following way (Marković , Petković , Trbojević , & Bokonjić, 2013):

- Estimate organization's profitability,
- Evaluate customers' satisfaction,
- Assess the problems and desirable changes,
- Ensure decision making based on facts rather than assumptions,
- Appraise the realization of the planned improvements.

Health care organizations can measure their performances in terms of quality, efficiency and value of the provided services with the utilization of: Financial Performance (FP), Customer Satisfaction (CS) and Employee Performance (EP) (Shazali, Habidin, Khaidir, Jamaludin, & Ali\*, 2013).

Financial performance in health care organizations refers to measuring and controlling the expenses. This fulfills one of the main goals- reducing the expenses and increasing the customer satisfaction. Logically, inefficient processes with surplus of non-value adding activities only result in increased expenses. Using lean techniques these expenses can be reduced and that is only possible if the right financial performances are measured continuously.

Patient Satisfaction is providing the evidentiary basis for measuring patient, clinicians and organizational outcomes. The most relevant score about the quality of the provided care is the one the patient gives. Measuring quality of provided services in health care organizations are very complex and it is hard to define it. The appropriate measurement system has not been developed yet. Each one of the stakeholders has a different view of the quality which depends on the needs that have to be satisfied. In the literature three main types of expected patient services are stated (Farid , Nejtí , & Mirfakhredini , 2008): desired service, adequate service and regular service. Customers have a level of service they would like to receive and it is called a desired service. There is also a minimal level of service quality- adequate service and the patients are aware that they can't always get an ideal treatment, so they will be satisfied with the adequate service. The third type is a service patient expect to receive- regular service. The great outcome for the patient implies on: impeccable care, better in-bed conditions, availability of the medications, reduced treatment and waiting time.

Employee Performance score depends on working and social conditions of the employees. How one employee feels at work, how he is treated by his colleagues and his superiors, do they respect him, appreciate his devotion and effort. Those could be a relevant factor that affect this performance. Considering that the Lean concept incorporates the human aspect indeed it is suitable for the health care organizations. Investing in employees and their conditions is essential part of the lean philosophy. All of the employees are equally important in accomplishing the lean targets, from support staff, nurses, technicians and doctors to management directors. Success of the organization is the success of all its employees and not just those at the top. Devotion of the employees in implementing determined strategy depends on established business culture and social conditions. If those elements are compatible, the working satisfaction will rise and so will the better business outcomes.

When we talk about improving the health care system it includes an array of tasks which needs to be managed: from patient entry to the exit in the healthcare system. Foley (Foley, 2006) endorses a lean approach in providing healthcare and argues that a lean healthcare transformation cuts across organizational boundaries of departments involved because:

- The aim is to create smooth-flowing consumption streams (patients with needs) matched up with smooth-flowing provision streams (healthcare services).
- The criterion of success is that patients get what they need, where they need it, when they need it, without waiting.
- Consumption and provision streams run across organisational departments.
- Most improvement efforts have been aimed at particularly deficient single points within discrete departments along the stream rather than viewing the whole stream.
- No one tool will help and we may have to invent our own; just start doing something, get it wrong, learn and start again.

Regarding that, goals of applying lean concept would be: improving the quality of products and services, i.e. product or service attributes conform to the expectations and requirements of the consumers, eliminating wastes, i.e. any activity that does not add value in the production process and reduces lead time in the completion of an array of tasks in the process.

Some research shows that health care organizations can not improve their performances only by investing more money or employing more staff and capacity. Real changes come with re-designing process of service providing, e.g. Emergency department can remake its policy of organizing patients in categories, the patients can be separated according to similarity of their value stream (small injuries, serious injuries, resuscitation). Value stream will contain groups of patients which need similar activities in process of providing health care (e.g. routine exams or complex procedures). This type of organizing is distinct from the separation according to clinical image, e.g. chest pain, considering that there could be variety of different approaches to the same clinical state and they have to be adjusted to the particular needs of a patient. Standardizing separate value streams boosted the patient flow and reduced the waiting time in the emergency department (Cookson, Read, Mukherjee, & Cooke, 2011).

#### **4. IMPROVING PERFORMANCE OF HEALTH CARE ORGANIZATION USING LEAN CONCEPT**

Many world-known Health Care organizations have already successfully implemented Lean concept in their business and raised their performance on a higher level. One of them is *Hôtel-Dieu Grace* hospital in Ontario (Canada).

With the increasing problems in functioning of the emergency department, which have negatively implied on customers and employee satisfaction, management of the *Hôtel-Dieu Grace* decided to start the lean transformation by building a value stream map (Ng, Vail, Thomas, & Schmidt, 2010). The value stream map of a current state represents the exact steps in the course of every process providing health care in emergency department, from the registration and admission of a patient until leaving and following control. Every step has participators, process duration time, waiting time based on anterior experience, frequency of repeating steps and accuracy of the data. Also, the map shows information flow, like lab results, diagnostic imaging and development of doctor's consultations. Process duration time and total waiting time, shown on the map, in summary reflect a total lead time. On the value stream map of a current state,

there are 19 steps identified in the process. In order to improve efficiency and productivity of this department, management decided to pay more attention to the following indicators:

- Average admission waiting time (from the registration to entering the doctor's office),
- Average duration time of the visit (from the registration to leaving the emergency department),
- Average duration time of all ED patients visit (including admitted patients),
- Percentage of the patients who have left ED without entering the doctor's office,
- Patients satisfaction level,
- Total number of patients who visited emergency department,
- Number of admitted in-bed patients in ED at 06:00AM.

Process duration time was in the range of 24 to 19 hours, total waiting time from 37 minutes to 57 hours and total lead time from 61 minute to 76 hours. There was only 2% of registered patients who received impeccable care and 40% of patients had to repeat the same steps in the value stream.

Taking under consideration mentioned flaws in the process and identified bottle-necks, the value stream map of the future state sets the total lead time of 215 minutes which has to be achieved in 84% of the cases. Accomplishing predicted lead time means applying appropriate lean techniques, e.g. 5 S, just in time, kaizen, standardization of work etc.

5 S is the simplest lean technique for implementing and the results of it can be seen in a short time. This technique is consisted of following elements:

- Sorting (Sort)- separating necessary from unnecessary,
- Organizing space (Set in order) - organizing work space,
- Cleaning (Shine)- cleaning and moving everything that might get in the way of working,
- Standardizing (Standardize)- implementing procedures and assure that employees understand them,
- Maintenance (Sustain) - secure sustained process flow and constant communication.

Project like reorganization of the medical supplies had positive outcomes. 90% of the most used medical supplies were placed in the steps of the patient's pathway, arrangements with the pharmaceutical companies made possible that procurements arrive just in right amount, on the right place and in the right time (*just in time*), this resulted with reduced stockpiling of materials.

All of the arrived patients were automatically classified in one of the three categories: "admitted", "unspecified" and "discharged". Their charts were instantly placed in the right category (*standardization of work*). Nurses were in charge of organizing patients according to their charts and preparing empty beds in time. Besides that, nurses had all the authorities to conduct necessary procedures of discharging a patient when it is needed and clear the bed for the next arrival. That significantly reduced time of waiting for the patients who were supposed to leave the emergency department and time of waiting for on the empty bed for admitted ones.

Doctors were allowed to prescribe medications and give all the instructions when discharging a patient and to pull IV catheters which also reduced the waiting time. Printing lab results directly in the certain value stream boosted the information flow. This way, increased efficiency of the patient's care was responsible for improved efficiency of the whole emergency department.

Finally, the outcomes of applying the lean concept were better than expected. Patients satisfaction level was notably higher during the first year of implementation of the lean techniques and remained constant in the following period. From the beginning of the lean implementation, in September 2005, average admission waiting time was reduced. From October 2005, to march 2006, the same was reduced on 89 minutes. Average duration time of the visit was 3,3 hours and 5% of patients left ED without entering the doctor's office.

Considering that achieved positive outcomes enhanced the reputation of the health care organization and in the purpose of continuous improvement, *Hôtel-Dieu Grace* hospital pursue with the application of lean principles and techniques. In march 2007, average admission time was 78 minutes, average duration time of the visit 2,8 hours and only 4,3% of patients left the ED without entering the doctor's office. These results prove that lean techniques reduce waiting time significantly. Total number of patients who visited emergency department remain constant during time, on the other hand number of admitted in-bed patients increased. The average number of admitted patients who were waiting for the empty bed in ED at 6:00AM was 1,3 in 2004, 1,8 in 2005, 4,1 in 2006 and 6,1 in the period from January to March 2007.

The key of the lean implementation is involvement of the employees in building a value stream map, giving exact all the necessary information about process flow and on-going procedures in the organization, in giving propositions for the new projects of improving existing bottle-necks and removing wastes. Lean is led by the sentence: "Plan, do, check, react". It is said that lean principles do not give us a solution of the problem, instead they show us how to think about the same.

## 5. CONCLUSION

The goal and benefit of applying lean in healthcare is reducing waste, as well as reducing waiting time and unnecessary travel, while building quality, speed, and flexibility into the organization. The challenge of applying lean is training the employees to recognize and eliminate wastes in the value stream by observing the whole system, instead of individual tasks in it. Every step in the process is related to the other, so what might seem convenient for one participant may have negative effect on the other. Lean initiative does not focus on large scale investments, but it gives Health Care organizations an alternative methodology for achieving improvement without high investments. Health Care organizations have nine times more non-value adding activities than the ones that fulfill the customer needs. Accordingly, it is estimated that 80% of existing lean techniques can be applied in the Health Care system.

Positive outcomes of implementing lean techniques, such as reduced waiting time, stockpile reduce and eliminated wastes of conducting unnecessary processes are visible in the short-term. Mentioned improvements are the primary goal of lean management concept. If the lean techniques and methods are appropriately implemented, Health Care organization management will be able to analyze the whole process flow and identify value-adding activities which could be done more efficiently and non-value adding activities which need to be eliminated. Removing non-value adding activities and recognized wastes is important part of organization development, because it lowers the expenses and creates more free capacity. In the moment where more capacity is available, management is accountable for utilizing it for generating demanded value. Future, long-term success depends on the way of organizing this capacity.

Implementing lean concept in Health Care organizations will influence the continuous improvement which will lead to increased employee performance as the result of enhanced work satisfaction. Advanced employee performance will have major effect on patients' satisfaction in terms of the quality of received care and treatment. In the end all that reflects on improved financial performance of the organization.

If they wish to accomplish desired performances, Health Care organizations have to begin with the implementation of the lean concept as soon as possible. Especially, since, it is considered that they are approximately at the same level of development as the car industry was in the 80s, which means that the wide specter of techniques, methods and tested practices that can be applied are broadly available nowadays.

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# SENIOR MANAGEMENT SUPPORT FOR NEW PRODUCTS: EMPIRICAL FINDINGS FROM BULGARIA

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**Abstract:** *The purpose of this paper is to present the findings from an empirical study on the impact of company senior management support on the performance of the new products of Bulgarian companies. The paper considers the major studies on company senior management support and suggests a typology of these studies based on two criteria. A methodological framework for the research on company senior management support has also been substantiated. The empirical study results show that there is a relation between the degree of company senior management support and the degree of new product success as well as between the degree of company senior management support and the indicators measuring new products' performance. The theoretical and practical contribution of the paper is related to the justification of the methodological framework for the research on company senior management support as well as to the results concerning the relation between senior management support and the success of new products.*

**Keywords:** *Product innovations, Product success, Senior management role, Empirical results, Bulgaria.*

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## 1. INTRODUCTION

The high likelihood for new product failure along with the growing need for product innovation projects make the study of the circumstances influencing new product results relevant and significant. Research shows that company senior management support for new product projects is related to new products' market performance and that is why it is one of their success factors.

The aim of this paper is to find out whether company senior management support influences new product success. The object of research is the process of new product development in Bulgarian companies and the subject of research is company senior management support as a variable influencing new product success. To achieve the aim formulated above, the studies on company senior management support for new product projects were systematized, the methodological aspects of the empirical research on company senior management support were presented and the findings of the same research were presented as well.

## 2. LITERATURE REVIEW

Company senior management support is among success factors in the three large-scale meta-analytic studies carried out so far: those of Montoya-Weiss and Calantone, Henard and Szymanski, and Evanschitzky et al. (Montoya-Weiss & Calantone, 1994; Henard & Szymanski, 2001; Evanschitzky et al., 2012). In the first meta-analytic study, Montoya-Weiss and Calantone call this factor "senior management support and skills" and consider it one of the factors related to the process of new product development. In the other two meta-analytic studies, those of Henard and Szymanski, and Evanschitzky et al., company senior management support is once again among new product success factors in the group of the ones related to product innovation process.

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Senior management support is always regarded as one of the most important factors for new product success. Among the most significant studies in this area are the ones of Barczak et al., Cooper and Kleinschmidt, Cormican and O'Sullivan, Zirger and Maidique, etc. (Barczak, Griffin, and Kahn, 2009; Cooper and Kleinschmidt, 1996; Cormican and O'Sullivan, 2004; Zirger and Maidique, 1990). Apart from this, a number of empirical studies are focused mostly on senior management involvement in new product development such as those of Gomes et al., Green, Hegarty and Hoffman, Rodriguez et al., Swink (Gomes, Weerd-Nederhof, Pearson, and Fisser, 2001; Green, 1995; Hegarty and Hoffman, 1990; Rodríguez et al., 2008; Swink, 2000).

In the literature on new product development, the concepts of support and involvement of senior management are used interchangeably. The categories of senior management and senior managers are synonymous as well. Even though not all studies specify what they mean by senior management, we accept Hambrick's view according to which this term refers to a group of managers holding certain positions that give formal authority and who have decision-making responsibilities for the activities related to new product development (Hambrick, 2007).

Publications from the last decade (see e.g. Felekoglu and Moultrie, 2014) register an increased number of studies on the involvement of senior management in new product development. This increase seems to reflect the growing understanding of the importance of senior managers for product innovations. Senior managers can contribute to company growth with their valuable opinion of the evaluation and development of company competences. They also play an important role in the process of company strategic planning deciding on which company products to introduce on the market; the kinds and levels of investment; pricing policy in terms of new products (Netseva-Porcheva, 2011) as well as company agenda related to research and development.

Based on their focus, the studies on senior management support can be divided into three groups:

1. studies on the success factors for new products;
2. studies on the best practices in new product development;
3. specific studies.

The studies in the first group are empirical and deal with the impact of various factors on the results of new product development with senior management support being one of these factors. The studies in the second group present standard practices in new product development that have proved successful. In the studies in the third group, senior management involvement is the main or one of main issues dealt with.

What is more, the studies on this issue can further be classified as exploratory and relational. Exploratory ones aim at collecting prior information on the involvement of senior management in product innovation in order to understand and structure this problem better. Relational ones aim to test hypotheses about the relationship between senior management support and other variables.

The main *findings of the exploratory studies* on senior management support can be summarised in several directions.

First, earlier studies explicitly found out that the level of senior management support has a positive impact on the economic success of a project (see e.g. Cooper and Kleinschmidt, 1996).

Second, the research on the best practices is focused on specific activities conducted by senior managers in the leading product innovation organisations. For instance, Cormican and O'Sullivan found out a positive impact when senior management: is responsible for new products' market performance; actively encourages giving ideas for new products; is willing to take risks related to product innovations (Cormican and O'Sullivan, 2004). Nicholas et al. found out something similar establishing that small and medium-sized companies as well as big companies feel that senior management support is a best practice (Nicholas, Ledwith, and Perks, 2011).

Third, the various forms of senior management support are also a research problem. For instance, Gomes et al. established the perceptions of the different participants in new product projects in terms of senior management support related to the activities for new product development (Gomes et al., 2001). This support can be divided into three categories:

1. The first category includes the direct influence of senior management on new product projects by forming multifunctional teams of senior managers, forming executive committees, joint management, using direct communication channels, introducing positions in charge of the smooth conduction of certain processes (the so-called process champions).
2. The second category includes the indirect influence of senior management on new product projects at the level of particular processes by providing resources, participating in brainstorming sessions, participating in joint visits of clients, support for company innovations, training projects, introducing knowledge management systems, etc.
3. The third category includes the indirect influence of senior management on new product projects *at the level of the whole organisation* by formulating a mission and objectives, company strategy, and structured company decisions.

Fourth, a number of studies focus on senior management role for new product development. McDonald and Eastlack's work is among the first ones investigating senior management role in organisations which are the most or the least successful in new product development (McDonald and Eastlack, 1971). They find out that there are a host of managerial roles and responsibilities within new product development such as strategic planning, directing and conducting the activities related to new product development, encouraging company efforts, selecting and developing the personnel involved with new products, organising the activities related to new products, supervising and controlling these activities. The same authors examine the intensity of senior management support noting that support intensity does not explain the nature or quality of this support. McDonald and Eastlack conclude that the main barriers to successful product innovations are rooted in motivation and work organisation: creating an innovation atmosphere, encouraging risk-taking, improving in-company communication, eliminating organisational barriers to innovation.

Harmancioglu et al. also investigate organisational factors and establish four specific roles of senior managers: ideas generator, planner, orchestrator and doorkeeper (Harmancioglu et al., 2007). Lakemond and Berggren (Lakemond and Berggren, 2006) offer an in-depth analysis of a single new product project with strong senior management support and find out that inconsistent senior management support can be very detrimental to a project.

As for the major *findings from the relational studies* on senior management support, they can be divided into several groups as well.

First, in different relational studies senior management support is regarded as an independent, dependent, mediating or impacting variable. Swink considered senior management support an independent variable and tried to establish its impact on three different dimensions of the results of a new product project taking into account the impact of the technological innovativeness of the new product (Swink, 2000). He found out that there is a strong positive relation between senior management support and the time for product development, product design and financial results. However, this pattern was not observed with highly technological projects. The reasons for this can be three: first, inexperienced senior managers can misjudge a situation; second, they can be overoptimistic about the development of completely new products; and third, other factors can have a stronger effect on project results than senior management support.

Second, a small number of studies focus on the prerequisites for senior management support. For instance, Green's research examines not only the relation between management support and project results, but also the correlation between project characteristics and senior management support (Green, 1995). Green found out that senior management can be selective in its support for new products depending on the expected project contribution to company welfare, the expected size of project investment, project innovativeness and initial origin of the project.

Third, some studies find out that senior management support can influence the relations between other variables. For instance, senior management support has a positive impact on the relation between knowledge accumulation in a company and new product timeliness (Yang, 2008).

The above-cited findings about senior management support give reasons to make several **conclusions**:

First, company senior management support is a necessary element of product innovation, but it has to be given in the right way. Support is of special importance when it comes to product launch on the market. This is confirmed by the comparison of projects that have been abandoned and projects that have been completed and that have finished with the launch of the product. The significance of this factor is due to the fact that senior management is able to provide the necessary resources and do the right things in order to realise a project.

Second, the key role of senior management in product innovation is to set the stage and environment for product innovation; to facilitate the process behind scenes; and not to be the lead actor on this stage. Management's modelling of company environment aimed at innovation success is crucial. Senior management must take long-term commitment with regard to product development as a source of company growth. It must develop a vision and strategy for product innovation corresponding to company objectives and strategies. It must provide the necessary resources and guarantee that in times of crisis these resources will not be redirected to meet the more immediate company needs. It must also adhere to a structured process of preparing products for the market. And what is the most important: senior management must delegate enough authority to project groups and support group leaders by taking on the roles of mentor, facilitator and guarantor of their work.

Third, senior management's role is not to participate in the day-to-day project work and to be constantly involved in it, i.e. to manage them in detail. Constant involvement in a project is not productive because it weakens group authority and compromises the concept of having an authorised group working on a project as well as because thus senior management distracts itself and cannot fully fulfil the rest of its obligations, including key decision-making related to project progress.

### 3. METHODOLOGY

The research was conducted in the end of 2016. The methods used for data collection are the structured personal interview and the structured personal online survey.

The research question is whether company senior management support influences the results of new product development. Two hypotheses are proposed with regard to this question:

**Hypothesis One:** There is a relation between company senior management support and new product success.

**Hypothesis Two:** There is a relation between company senior management support and the indicators measuring new product success.

In terms of the empirical indicators measuring the independent variable of senior management support, it should be taken into account that in the studies cited in the literature review, the most frequently used approach for evaluation of the level of involvement of senior management are used Likert scales comprising several indicators each. The scales for evaluation of senior management involvement vary from more general statements like “senior management is committed to new products” and “the product was strongly supported by senior management” to more specific formulations of senior management activities and behaviours related to new product development.

Overall, there is no consistency in the operationalisation of senior management support. In some studies, senior management involvement is seen as a core construct (e.g. Rodríguez et al., 2008), as a sub-construct in other ones (e.g. Gomes et al., 2001), and as an empirical indicator in third ones (e.g. Swink, 2000). In some studies, there are several indicators for measuring senior management support, whereas in others a longer list of indicators is applied. In some studies, several indicators make up one factor, while in others the same indicators form a number of factors. Some studies explicitly define the key concepts they use (e.g. Akgün et al., 2007; Green, 1995; Rodríguez et al., 2008), whereas others do not. The clear definition of concepts makes it possible for the reader to understand the reasons why the study was carried out and to get oriented in the results. In the absence of precise definitions, it is difficult to understand what exactly is meant by senior management and its involvement, support or commitment. A problematic point in the formulation of the indicators is also the fact that it is not always clear which level they refer to – the level of the particular new product project or the level of the whole organisation. The ambiguity would be avoided if a formulation explicitly indicated the level of support it referred to, for example “Senior management provided the resources needed *for the project* for new product development”.

Initially, in order to determine senior management support in this study, the author used and adapted the following indicators applied in previous research (Rodríguez et al., 2008; Akgun et al., 2007):

1. Senior management clearly defines the objectives of the new product project.
2. Senior management participates in the whole process of product development.
3. Senior management provided the resources needed for the new product development project.
4. Senior management evaluates positively employee ideas and suggestions.
5. Senior management formally encouraged the team work of the marketing, and research and development departments.



6. Senior management informally encouraged the contacts between the employees from the marketing, and research and development departments.
7. Senior management is committed to the success of this project.
8. Overall, senior management supported the project.
9. Overall, senior management helped coping with the obstacles to the project and did not create obstacles.
10. At project meetings and when they attended them, senior managers encouraged and did not discourage project team.
11. When project team members asked senior management for help, they received it.

A qualitative study was conducted in order to specify the empirical indicators, to structure the research problem and to refine the working hypotheses as part of this empirical research. It consists of 20 individual in-depth interviews with managers in charge of new product development in their companies. As a result of these individual interviews, the fourth, fifth, sixth, eighth, ninth, tenth and eleventh indicators mentioned above were rejected. The characteristics of company senior management support that they described were not mentioned by managers – not in concrete terms, but in meaning. That is why these seven empirical indicators were excluded from the final version of the questionnaire.

We defend the position that there can be distinguished several different, even though related to one another, aspects of company senior management support. Accordingly, in the present study we took the approach of Rodriguez et al. and Akgun et al. for operationalisation of senior management support, but with a modification of the empirical indicators. We assume that it is most appropriate to use a composite variable calculated as the weighted average of the values of four empirical indicators. Each of the empirical indicators is a statement whose truth the respondent has to deny or confirm, i.e. the indicator has values 0 or 1. The composite variable takes values in the interval between 0 and 1. The four empirical indicators are formulated as follows:

1. Senior management clearly defines the objectives of a new product project.
2. Senior management participates in the whole process of product development.
3. Senior management provides the resources needed for the new product development project.
4. Senior management is committed to this project success.

The dependent variables used to measure new product success are two. The first one is “Indicators measuring new product performance”. It was operationalised with 13 empirical indicators as follows: consumer satisfaction from a new product; number of consumers of a new product; acceptance of the new product by company intermediaries/distribution system; new product sales; new product market share; new product profit; new product advantage to competitor products; time for new product development; costs of new product development; the new product influences positively other company products sales; share of the number of new products from the total number of company products; share of sales of all new products in the total sales of the company; share of the profit from all new products in the total profit of the company.

The second dependent variable is “Degree of new product success”. It was measured with a five-point scale including answers from complete failure to complete success.

The primary units in the empirical study are companies operating on the territory of Bulgaria and who are active in new product development. Units of observation are those managers in

the primary units who in terms of function allocation in a particular company are in charge of product innovation. In each primary unit there is only one unit of observation. The primary units are randomly selected. The collected sample has a volume of 304 units of observation in the same number of primary units.

#### 4. EMPIRICAL RESULTS AND DISCUSSION

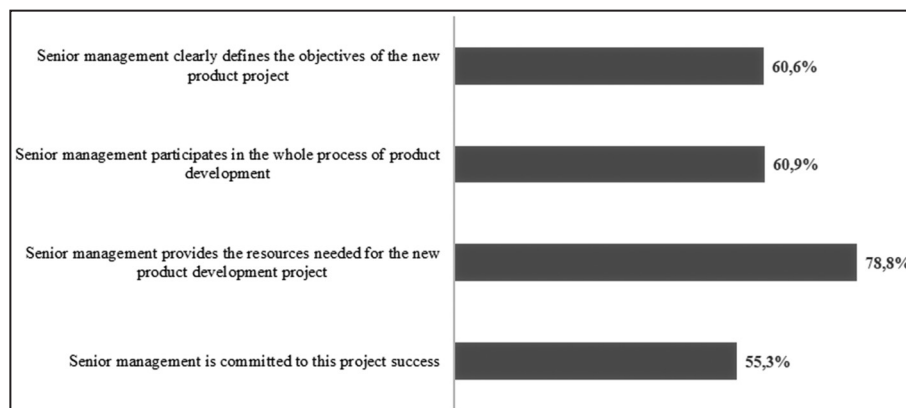
The relations between senior management support and the dependent variables were established by applying correlation analysis. The calculations were made using SPSS. The correlation coefficients between the independent variable and the two dependent variables are given in Table 1. The values in bold are the values of the statistically significant correlation coefficients between the independent variable and the two dependent variables.

**Table 1.** Correlation coefficients between senior management support and dependent variables

Variable	Indicators measuring new product performance			Degree of new product success		
	Correlation coefficient	Significance (2-tailed)	N	Correlation coefficient	Significance (2-tailed)	N
<i>Dependent variables</i>						
Indicators measuring new product performance	1,000		304	-0,020	0,732	304
Degree of new product success	-0,020	0,732	304	1,000		304
<i>Independent variable</i>						
Senior management support	0,168*	0,003	304	0,181*	0,002	304

\* With a level of significance 0,01.

Table 1 gives a reason to formulate the findings from the check of the working hypotheses. The result is that there is a relation between the degree of company senior management support and the degree of new product success as well as between the degree of company senior management support and the indicators measuring new product performance. This means that company senior management support is a success factor for new products which influences both dependent variables.



**Figure 1.** Share of the positive answers to the indicators making up the variable of senior management support

Figure 1 shows the share of the positive answers to the indicators making up the variable of senior management support. The frequency distribution shows that senior management support is mostly related to the provision of the resources needed for the new product development project (78,8%) as well as to, even though to a smaller extent, senior management participation in the development process (60,9%) and the clear definition of project objectives (60,6%).

## 5. CONCLUSION

The paper examines the impact of company senior management support on new products' performance. For this purpose, a review of the major studies on the problem of senior management support is made and a typology of these studies is suggested based on two criteria; the methodological aspects and the findings of an empirical study on senior management support of Bulgarian companies for new product development are presented as well.

The possibility for future research on the impact of company senior management support on new products' performance is related to the re-conduction of the empirical study with the use of the already developed research instrument. This will allow the tracking of changes in the presence of a relation between the degree of senior management support and new products' performance as well as in the strength of this relation. Furthermore, with the proposed questionnaire it is possible to examine the specific features of the sector manifestation of company senior management support.

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# THE ROLE OF CULTURAL DIMENSIONS OF COMMUNICATION AND DEVELOPING CULTURAL AWARENESS IN INTERNATIONAL BUSINESS

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**Abstract:** *The purpose of this paper<sup>2</sup> is to consider the importance of understanding cultural dimensions of communication and what role they play in developing cultural awareness among managers working in international companies with a whole variety of employees from different countries and with different cultural backgrounds. That is why international managers need to be trained to become aware of cultural and social differences and to be able to act in an appropriate way and cope with problems if it is necessary, especially in these disruptive and risk-averse times, caused by Covid-19 virus and a pandemic crisis. They also need to understand some specific non-verbal ways of communication that might cause misunderstandings or create unpleasant situations. Therefore, non-verbal communication as a special aspect of cultural dimensions of communication is analyzed and the most common problems that occur among people who come into contact at the international business level are pointed out with the aim of avoiding or minimizing them.*

**Keywords:** *Intercultural communication, Non-verbal communication, Human resource Global managers, Cultural misunderstanding and shock.*

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## 1. INTRODUCTION

The cultural dimensions of communication are an integral part of intercultural communication which arises from mutual contacts among people of different cultures in the modern globalized world. Hence the studies of this kind are relatively recent. The understanding of this concept is especially of a great importance nowadays when specific kinds of crisis, including that caused by Covid-19 virus, arise and threaten to jeopardize every aspect of people's lives. A lot of things can also go wrong in business very quickly and have a negative impact on economies and societies of many states. That is why effective human resource global managers require soft skills, such as the ability to communicate with overseas employees and to understand their different points of view and diverse attitude to work performance. They also need to be culturally sensitive and interculturally competent.

## 2. CULTURAL DIMENSIONS OF COMMUNICATION

The cultural dimensions of communication explain the relationships between people and their expectations and needs in the workplace. Hofstede (1991) formulated this theory after completing an extensive study of cultural differences that he conducted for the company IBM in the 1970s. Namely, there was need to determine the reasons for the great differences in the business of this company in many countries in the world, although the same procedures and standards for

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<sup>2</sup> Some segments of the paper were taken, adapted and translated into English from the doctoral dissertation "Sticanje interkulturalne komunikativne kompetencije u nastavi italijanskog jezika kao stranog u osnovnoj školi" (Mušura, 2019). ("Acquiring intercultural communicative competence in teaching and learning Italian as a foreign language at elementary school")



work and qualifications of employees existed everywhere. The author found that the causes were in the great cultural differences, both of the employees and, in a broader sense, of the culture of the country in which the plants operated. This practical experience helped him to formulate his basic settings, i.e. four basic cultural dimensions (Andrijević, 2016, p. 38-39 in Musura, 2019).

Hofstede's theory of cultural dimensions represents the backbone and theoretical framework on which other anthropologists and social psychologists, as well as the author himself, have upgraded their views and theoretical assumptions regarding the dimensions of cultural variability. This theory, based on empirical research, builds its principles on the premise whose value can be viewed through different dimensions.

In his original version, Hofstede (ibid., in Mor Barak, 2005 & Musura, 2019) presents four dimensions through which cultural values can be analyzed. Those are:

- distance of power, which refers to the strength of the social hierarchy, i.e. the relationship between government and social inequality;
- individualism towards collectivism, i.e. the relationship between the individual and the group;
- avoidance of uncertainty, i.e. controlling aggression and expressing emotions;
- masculinity towards femininity, i.e. a tendency towards self-confidence versus modesty.

Hofstede later added the fifth dimension, which is „long-term versus short-term orientation.” The author then in 2010 complemented his theory with the sixth dimension, which is „indulgence versus limitation.” Other anthropologists have also researched this concept. Thus, we mention Hall (Hall, 1976) who researched „cultures of low and high context” and different concepts of time. What these dimensions have in common is that they affect how people communicate.

### **3. NON-VERBAL COMMUNICATION**

The domain of cultural dimensions of communication also includes non-verbal communication as a specific process of communication by sending messages without words that can be transmitted by various instruments. Among the most common ones are gestures and facial expressions, distance between bodies as a form of communication, manner of dressing as a linguistic expression and status symbols. All these kinds of non-verbal language can cause misunderstandings in everyday communication.

Balboni (2012, p. 150) points out communication problems that are caused by cultural values, such as communication problems related to time, the concept of public and private, hierarchy, respect, status, the concept of family, honesty, loyalty, fair play and the metaphorical world. The same author (ibid, 2007, p. 58 in Musura, 2019) notes that “in intercultural contexts there is a higher risk of problems when using non-verbal language than verbal”, since “neurolinguistic factors and not only pragmalinguistic ones are also present”. People are not even aware of their own communicative use of the body and mostly think that gestures and interpersonal distances of the body are natural, not realizing that they „belong to the cultural grammar of language”. A person sees something first, i.e. he or she notices it and after that listens to it. People also see more than they hear. Thus, 80% of the information that reaches the cerebral cortex comes from the eyes, while only 10% of the information comes from the ear although „linguistic information is much more sophisticated than visual and allows communication of abstract concepts (ibid.)”.

Furthermore, when it comes to a conflict, the author emphasizes (ibid.) that “nonverbal signs prevail over verbal ones and have more weight than the spoken word”. If the word is accompanied by a gesture, e.g. with the blink of an eye or the movement of the hand, it can be understood quite the opposite of what has been said. When observing body language, some delicate points can be emphasized, such as smile, eyes, facial expressions, hands and fists, legs and feet, body odors, sounds and moods, which can also create certain problems in mutual communication, especially if we are not aware of the communicative use of our body and consider gestures and interpersonal distances to be natural, without realizing that they also send a certain message.

Balboni (ibid.) also points out that “speaking means using language, while communication includes other non-verbal components that vary from culture to culture and often have different meanings in different cultures”. These signs are decoded in our mind according to our own „mental software”.

Only people who are able to understand different kinds of non-verbal languages and communication can avoid cultural misunderstandings and shock when meeting people from different cultural backgrounds.

#### **4. PROBLEMS IN CONDUCTING BUSINESS ACROSS CULTURES**

As one of the biggest trends in the 21<sup>st</sup> century business landscapes is the need for more global business approach, the cultural components in conducting business are increasingly emphasized. It is very important to learn about other cultures and gain a certain degree of adaptation to a new culture because most difficulties that arise in mutual business contacts are due to intangible, cross-cultural misunderstandings. That is why business people should learn some typical practices and behavior of one’s business culture before working in that culture. For example, it is essentially important to know if the following aspects are usual in your future business client’s culture: using people’s first names, shaking hands, giving presents to clients, getting straight to the point in business meetings, having long business lunches, working very long hours, using face to face or online communication, dressing formally, asking personal questions and talking about free-time activities. Once people acquire the cultural knowledge, they will be able to understand things from different points of view and perspectives and do business successfully in international settings.

#### **5. THE ROLE OF HUMAN RESOURCE MANAGERS IN INTERNATIONAL BUSINESS AND MODERN MANAGEMENT**

Managers who work in international business teams should think globally and have good cultural awareness. It means that they should develop the ability to understand the culture of the people with whom they work and behave appropriately. They also need to be aware of the fact that cultural diversity provides a greater variety of perspectives and ideas, which may lead to more creative solutions and better work performance. They are expected to create diverse teams in order to empower individuals to perform at a higher-level and to increase productivity. Furthermore, leveraging workplace diversity should be increasingly seen as a vital strategic resource for competitive advantage and modern management has to enable positive business competition that differs in language, culture and distinctive system values.

Apart from the afore mentioned, successful international human resource managers need to learn some new strategies as to be able to cope with problems or difficulties of any kind and

solve them in a positive way. These strategies include their ability to respect all employees and to adapt to them, to learn some essential elements of their cultures and languages and develop good relations with all the members of the team. They should also gain more knowledge of different business policies and experiences. By adopting and applying this, modern human resource global managers will create an intercultural atmosphere at work and acquire “critical cultural awareness”, which is understood as “the ability to critically evaluate based on explicit criteria, perspectives, practices and products in their own and other cultures” (Byram, 1997, p. 53 in Musura, 2019, p. 57)

## 6. CONCLUSION

The paper considers the importance of knowing cultural dimensions of communication, as well as non-verbal communication in order to establish successful intercultural communication and conduct business on a global level. It means that people who enter into intercultural contacts can „engage with complexity and multiple identities and avoid stereotypes.” (Byram et al., 2002, p.10) They also need to possess “the ability to deal with cultural differences in a positive way” and “to interpret gestures, codes and other non-verbal ways of communication, as well as negotiation and conflict resolution skills” (Jokikokko, 2005, p.70 in Musura, 2019). These requisites are especially of a great importance both for human resource managers and their employees. They should become interculturally competent by learning how to navigate business environment in an interculturally sensitive way. This is considered to be an essential global career skill.

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# KNOWLEDGE BASED EMPLOYMENT PROCESS – DATA DRIVEN RECRUITMENT

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**Abstract:** *The purpose of this paper is to highlight the main benefits and challenges of using a data-driven recruiting system in enterprises. The trend of increasing digital presence in all fields requires new knowledge and skills of employees. Sustainable development of enterprise is increasingly based on human capital and investment in it. Precisely in these conditions of business, on the one hand, there is increasing pressure to attract and hire the highest quality employees more efficiently, which implies large investments in the recruitment processes and on the other hand to justify those investments. The high-quality data-driven recruitment system provides a way to measure the contribution of recruiting process to the success, to adequately manage existing recruitment programs, and to justify investments in their further development. A special part of this paper will be consecrated to the trends and challenges of using data-driven recruitment in the context of the global crisis of the coronavirus COVID - 19 pandemic.*

**Keywords:** *Recruitment, Metrics, Data, Recruitment funnel, Human resource management.*

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## 1. INTRODUCTION

We are operating in the age of complete digital transformation. The fourth industrial revolution, the big changes in robotics, artificial intelligence, Internet of Things (IoT), the auto industry, 3D printing, big data and nanotechnology, are certainly pushing the boundaries we are used to so far. In such conditions of disruptive changes, the key factor of company's sustainable development and competitiveness is no longer the value of its cash capital but the value of human capital - talented employees who are open, proactive and innovative.

Such changes in the business environment also require changes in human resource management, the processes of their planning, hiring, development and retention in the company. A particular challenge for enterprises and their human resource managers is the question of how to reach talented people and how to attract them. Recruitment of job candidates is becoming a critical activity of human resource management and requires increasing investment. Investments are primarily aimed at improving the recruitment activities of job applicants in order to shorten the time needed to close open positions. In order to make better decisions about the recruiting process and justify investments in them, it is necessary to explain and demonstrate the value of the recruiting process to improve the business of the company.

Human resource managers are increasingly under pressure to justify investments in the process of attracting candidates to company executives, as well as to make better decisions that will result in more effective activities regarding this process. In order to increase control over

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the both, recruitment activities and its outcomes, businesses and human resource professionals are increasingly relying on data-driven recruitment systems. Given that managers who rely on data, facts and research make better hiring decisions, using of analytical activities and certain recruitment metrics reduces the cost and time required to close open positions and leads to targeted improvements to the entire recruiting process. The purpose of this paper is to point out the importance as well as the key challenges in the field of data-driven recruitment, with particular reference to the trends in this field in the context of the global crisis caused by the coronavirus pandemic.

## **2. THEORETICAL BACKGROUND OF DATA – DRIVEN RECRUITMENT**

Since that recruitment is one of the generic activities of human resource management (DeCenzo, Robins, 2007) the theoretical basis of data-driven recruitment can be found in the data-driven human resource management framework. „In order to become strategic, human resource management has been trying to quantify its contribution to business by focusing on efficiency metrics namely hiring cost per employee, turnaround time and effectiveness metrics such as employee engagement or employee retention and the like. It is increasingly being realized by organizations that right candidates hired at the right time in the right position with right cost directly contributes to the success of business“, (Mohapatra, Sahu, 2017). Many human resource management studies have demonstrated the link between the quality of this practice and the quality of the business (Barlett, Ghoshal, 2002; Barney, 1991; Becker, Gerhart, 1996; Delaney, Huselid, 1996; Guest, 1997; Fey, Bjorkman, Pavlovskaya, 2000).

The theoretical basis of the development of data - driven recruitment can be found in empirical researches of recruitment from an organizational perspective. Researchers Taylor and Collins, in their work „Organizational recruitment: Enhancing the intersection of research and practice“ pointed out that „a growing number of studies have empirically examined the impact of recruitment activities, often in conjunction with other human resource practices, on measures of organizational performance“. In summary, six studies (Delaney and Huselid, 1996; Huselid, 1995; Huselid and Becker, 1997; Koch and McGrath, 1996; Terpstra and Rozell, 1993; Williams and Drehrer, 1992) have examined the relationship between recruitment and firm-level measures of performance. Each study provided support for the hypothesized positive effects of recruitment activities, although in two cases recruitment effects were combined with those of other practices as an overall index, rather than assessed separately. Thus, there appears to be fairly strong and consistent evidence regarding the role of recruitment as a correlate of firm performance, including one set of recruitment effectiveness measures“ (Taylor, Collins, 2000). The demand for better quality demonstration of the link between recruitment and organizational performance in empirical studies certainly represents a significant stronghold of the data-driven recruitment system development.

„The attention given to the topic of employee recruitment by researchers has increased considerably in recent years. In addition to an increase in the number of studies being published, there has been an increase in the variety of recruitment topics being examined. For example, many of the early researches focused on the use of realistic job previews (i.e., providing job applicants with accurate information about what a position in an organization involves), recruitment methods, and recruiter characteristics (e.g., their behavior). More recently, research has shifted from these three areas and has begun to explore such topics as the timing of recruitment actions, recruit site visits, and on-line recruiting“, (Breaugh, 2008). „However, most recruitment research has investigated a single activity or stage of the recruitment process (e.g., realistic job previews,



recruitment sources, recruitment interview, site visit) in isolation of other recruitment activities and stages. As a result, we know very little about the combined effects of recruitment information from multiple recruitment stages“ (Saks, Uggerslev, 2009). As noted by Collins and Stevens “we have little knowledge regarding how various recruitment practices interact with each other” (Collins, Stevens, 2002, p. 1121). The foregoing indicates the importance of further research and development of data-driven recruitment aimed in measuring and demonstrating integrative approach of recruiting practices. In his paper, „Employee recruitment: Current knowledge and important areas for future research“, James Breugh presented such an approach to recruitment which indicate that the recruitment process must start with establishing recruitment objectives, and end with comparing the recruitment outcomes to the objectives. Also, the paper insists on a strategic approach to data-driven recruitment since the goals, methods, sources of recruiting depend on the company strategy and should be consistent with it (Breugh, 2008).

Changes in the business environment, primarily changes caused by the development of information technologies, have led to a complete transformation of the recruitment process. The development of the Internet, artificial intelligence, gamification, etc., has drastically influenced the change in how organizations identify, attract and select job applicants. The business success is increasingly dependent on new knowledge, competences and skills, which become a rare resource and a source of competitive advantage for the company. „Traditional research on employee recruitment and selection has focused on an understanding of the process from the perspective of the employer. Modern research studies have examined the process of recruitment and selection from the applicant’s perspective since not only do companies select employees, but applicants also select the organizations in which they intend to apply and are willing to work. (Gupta, Mohan, 2019, p. 39-40). The requirement to look at recruitment metrics from a different perspective, the job candidate perspective, came from researches of employer brand who, by analyzing this phenomenon, contributed to the development of data-driven recruitment from just this angle. „Most recruitment measurement approaches currently seek to understand the linkage between marketing media (source) and desired outcomes (applications and quality hires), but seldom integrate this with data relating to brand reputation and experience. Internally, most employee surveys measure the linkage between the overall employment experience and engagement, but seldom measure the impact of more specific brand associations“, (Mosley, 2016 p.236). „The concept has gained a lot of importance in the recent past because of the benefits that an organization derives from a strong employer brand in the form of attraction and retention of talent“, (Tanwar, Prasad, 2017 p.392).

### 3. IMPORTANCE OF DATA – DRIVEN RECRUITMENT

„Recruitment has become a top priority for many organizations today as they struggle to cope with labor shortages and the so-called “war for talent.”, (Saks, Uggerslev, 2009). „A survey by Deloitte (2005) of 1,396 human resource practitioners from over 60 different countries, found that the ability to attract and retain new talent were perceived as being the two most critical people management issues facing their organizations today. A total of 74 percent of respondents reported a moderate or high shortage (or anticipated shortage) in salaried staff and 53 percent reported a moderate or high shortage (or anticipated shortage) in hourly staff,, (Christensen, Rog 2008 p.746-747). „Companies that will need to attract and recruit employees in the future will need to implement new strategies and tactics to address the immediate as well as long-term needs of reaching a targeted group of prospective employees. Employers must also “sell” the position to a prospective hire during the recruitment and interview process“, (Hamilton, 2009 p.34).



The foregoing forces companies to increasingly invest in processes and innovative recruitment methods. Key recruitment trends can be summed up in two directions: first, the application of sophisticated technology, social networking, artificial intelligence, gaming, which aims to automate the recruitment process, and second, recruitment marketing, which aims to create a company image as a desirable candidate, with quality reputation in the labor market. The push for more investment and key trends requires a shift from traditional recruitment to data-based recruiting.

„Data – driven recruitment is all about having a system for tracking, measuring, collating and analyzing candidate and employee data to use it in making better hiring decisions. Apart from helping in the recruitment, it also helps in providing unique opportunities to the existing talent in order to improve employee retention“ (Koshy, 2016). „The basic idea of recruitment metrics is establishing of a standard form of measurement. Recruitment metrics is a tool that are used to better recruitment decisions to receive the best return on investment. Using the metrics, the information will be gathered, analyzed and effective decision on hiring will be made. The recruitment metrics are quantifiable and can be compared established benchmark focusing on candidate quality. Recruitment metrics are the measurement standards that human resource professionals to gather, analyze, present valuable information during the hiring progress, but vary from organization to organization. These statistics can be used for better recruitment/hiring decision making to receive best return on investment. The characteristics of the used recruitment metrics are: the metrics should be actionable and predictive, consistent, provide a benchmark for internal performance, open to peer comparisons and help in best quality of hire, and return on investment. (Prasad, Mangipudi, Vaidya 2019)

Importance of data – driven recruitment is: supply critical information to the management group and provide input to on strategies business issues; improve the human resource standards to align its business goals; help in developing strategies to focus on what is important, and what is expected. Allow effective and efficient use of limited available resources with high business impact and continuous improvement of the recruitment process. The recruitment metrics are used to enhance the recruitment process, helping to align the correct objectives, vision and mission of an organization. Metrics also provide the credibility and consistency to the recruiter, which drives the organization to pursue aggressive recruitment strategies with accountability“. (Prasad, Mangipudi, Vaidya, 2019)

#### **4. RECRUITMENT FUNNEL AND ITS OPTIMIZATION THROUGH DATA – DRIVEN RECRUITMENT**

One way of explaining these significant recruiting analytics activities is to use a recruiting funnel. Recruitment funnel is a way of looking at the recruiting process, a useful display of all the stages that job seekers have to go through: Career Website Visitors, Applications, Interviews, Offers and Hires (Jobvite, Recruiting Benchmark Report 2019). Survey data was conducted by the online recruitment platform „Jobvite“, based on data from 10 million applications and 50 million job seekers, and the following priority metrics from each stage of the recruiting funnel: the number of unique visitors to companies career website, the number of applications received for a specific job opening, the number of interviews conducted for each requisition, the number of offers extended to candidates for a particular open position, the candidates who have accepted companies offer letter, analyzed year-over-year, are shown in Table 1. (Jobvite, Recruiting Benchmark Report 2019)

**Table 1: Recruiting Funnel Stages 2016-2018**

	2016	2017	2018	Benchmark criterion	Benchmark criterion meaning
Visitors to Applicants	8%	13%	18%	> 18%	having a career website that's fueling a great candidate experience
Applicants per Open Requisition	52	36	29	> 35%	doing a good job at getting high quality candidates
Applicants to Interviews	15.25%	12.31%	12%	> 12%	company need fewer candidates to get to the interview stage - a sign of more efficient processes and better use of data and automation to make the hiring process more efficient
Interviews to Offers	19.78%	28%	28%	> 12%	company usually spend time interviewing the right candidates
Offers to Hires	83%	90.64%	95%	> 12%	candidates are more likely to accept job offers because company gives out very competitive offers above market rate
Top-to-Bottom	0.19%	0.41%	0.56%	> 0.56%	a reflection of overall funnel efficiency
Average Time-to-Hire (Days)	39	38	38	< 38%	spending less time for recruiting, signal of increased efficiency

**Source:** Jobvite, Recruiting Benchmark Report 2019

In their work, „A Review of the Role of Marketing in Recruitment and Talent Acquisition“, Alashmawy and Yazdanifard, placed recruitment marketing on top of the recruitment funnel: the recruiting stages on top of the recruitment funnel „create the awareness and increases the recognition of the organization, help the prospective candidate to consider what the organization offers and induce the interest to apply for the job; after application candidates enter the traditional recruitment channel that processes the application, selects candidates for evaluation and finally takes the hiring decision. Recruitment marketing incorporates employer branding not only to acquire the best talent for an open job but also for future jobs“. (Alashmawy and Yazdanifard, 2019, p. 571) James Breauh, points out that these precise parts of the recruiting funnel are not sufficiently measured - „little attention has been given to pre-hire variables such as attracting the attention of the type of individuals targeted for recruitment. In particular, more attention needs to be given to job applicant perceptions of and reactions to specific recruitment actions (e.g., timely job offers) given that they likely mediate the relationships between an organization's recruitment actions and outcomes in many situations“, (Breauh, 2013. p.391). Starting from the above, it can be pointed out that data - driven recruitment should rely on two separate but related analytical groups of activities: quantitative and qualitative metrics.

The first group of analytical activities in data-driven recruitment relates to quantitative recruitment metrics (also known as Recruitment KPIs). They are focused on costs, capacities and time, show what happened, but do not explain why something happened. They serve as the first indicator of changes in recruitment, unproductive recruiting channels, poorly designed job ads, inadequate methods, uncompetitive offers, etc. They are used by comparison with benchmark values of other companies in the industry. Managers generally prefer quantitative metrics since they can be expressed in numbers and compared more easily. We distinguish pre-hire and post-hire measures. Some of the most commonly used metrics are: time to hire, time to fill, application abandonment rate, applicant conversion rate, applicant quality, offer acceptance, source pre-hire, new hire retention rate.

The second group of analytical activities in data-driven recruitment relates qualitative recruitment metrics. They are aimed at better understanding of the target group being recruited. They

require more time to collect data and they are significantly more demanding than Recruitment KPIs. They answer the question why something happened. Knowing the target group, their needs, habits and interests is key of designing a successful recruitment process. „Prospective employees are as particular about choosing the right organization, as about choosing the right job. Organizations are increasingly trying to assess and enhance their attractiveness to prospective applicants“ (Srivastava and Bhatnagar, 2010, p.2). Potential candidates are not homogeneous group, their needs and expectations vary greatly depending on seniority, job type, career stage and other characteristics. Therefore, segmenting the target group and creating different approaches for each is very important for success in recruitment. The most commonly used metrics of this type are interviewing, organizing focus groups and individual interviews. The data obtained through these metrics is used to measure candidate experience that relates to everything that potential candidates think, feel, or how react during the recruiting process.

„The candidate experience is one of the most discussed topics in recruiting funnel. A good candidate experience will make candidates the brand ambassadors of any company. There are the dangers associated with treating your candidates poorly. A poor candidate experience has a bottom-line impact of candidates getting disillusioned with the company and never seeking employment in the company again. Not only that, they may refer to others not to apply to that company. In contrast, a good candidate experience will lead to establishment of a strong employer brand image and widening of the talent pool. This will help the company in attracting top talent and getting its vacancies filled at lesser cost and time. Candidates are one of the most important stakeholders of any organization. They should be treated like an organization will treat its customers. There is need to stay in touch with the candidates, even if they are not selected or if they want to apply for another opening“ (Gupta, Mohan, 2019, p. 39-40).

Companies need to identify and focus on the candidate touchpoints in the recruitment funnel in order to improve candidate experience. More often, new employees are taken for the sample because they are easier to reach, the entire recruiting process is still fresh for them, they have gone through this process in other companies and they share experiences and valuable information about it: why they chose company, what attracted them, which part of the recruiting process left a good impression on them, and not exactly the best impression, where they were informed about the company and which of those sources they consider to be the most credible, based on their experience in the recruiting process how likely they would be to recommend the company to their friends etc. However, starting from the fact that new employees like being employed in a particular company, their answers may be biased and therefore it is necessary to strike a balance with the target group and outside the company, externally.

## **5. KEY DATA DRIVEN RECRUITMENT CHALLENGES CAUSED BY CORONAVIRUS**

The beginning of 2020 global economy has been rocked by coronavirus pandemic. According to UN forecasts, the economic and labor crisis created by the COVID-19 pandemic could increase global unemployment by almost 25 million people. Coronavirus will have a huge impact on job market and recruitment. The biggest trend in the recruiting caused by the coronavirus pandemic is obvious: the largest number of companies, instead of recruiting and hiring people, are dealing with staff reductions. The top five industries affected by coronavirus are: travel and tourism, hotels, bars and restaurants, entertainment, business conferences and trade shows, manufacturers. A large number of talented professionals with a set of rare skills and compe-

tencies have remained or will be out of work. This can be a good opportunity for company's recruiters to leverage their data-driven recruitment systems, especially in the employer brand field, in order to attract professionals because they are the ones who will get the business out of crisis with their ideas and expertise.

On the other hand, some industries like shipping and delivery companies, health care and logistics companies, grocery stores and delivery services, online learning companies, remote meeting and communication companies and childcare providers are facing a sudden need for a huge number of new employees. Those who continue to recruit in a time of coronavirus face with the great challenge to attract and hire a large number of candidates in a short period completely remotely. This won't be possible without quality system of data driven recruitment.

Many companies, even before the pandemic, had a problem with getting high quality employees and filling some open positions. In February 2020 there was a 47% reduction of applications on average across all industries compared with February 2019, according to WaveTrackR's report. This reduction is expected to grow even more after coronavirus pandemic. In the time of crisis people are reluctant to make big life changes, such as changing jobs. Similar to companies, candidates are laying low, waiting to see what will happen. They prefer to stay in the security of their current job in uncertain times. (Zojceska, 2020). Because of the foregoing, the purpose of quality data - driven recruitment system which is reflected in indicating which sources are the most effective in identifying and attracting talent, will gain more and more importance.

The global crisis caused by the coronavirus pandemic will force many companies to cut operating costs. In times of crisis, the first most common reduced costs are employment-related costs. Reducing the cost of employment must not jeopardize the quality of the people who will be hired in the coming period. A high-quality data-driven recruitment system can greatly enable efficiently and effectively managing this type of cost.

## 6. CONCLUSION

Finding new and more effective approaches of creating effective indicators for data-driven recruitment is happening on a daily basis in many organizations. The data-driven system provides metrics that help management to track and control results, spot problems and take corrective action. When we talk about data-driven recruitment, we need to keep in mind that this is a company's very complex intangible asset and has different motives for measurement.

The key motives for establishing and developing data-driven recruitment practices can be summarized as follows: improving recruiting activities (monitoring current results for the purpose of undertaking corrective actions, identifying strengths and weaknesses of process in order to make better decisions, encouraging changes in processes, baseline for determining which activities are most appropriate for the company from financial, time and human reasons, possibility of comparison with other companies in this field), proving the importance of recruiting for the company (justification for investing in activities, proving that recruiting is equal with other activities in human resources management, collecting data for the purposes of promoting these activities and future programs) and determining the impact of recruitment on the organizational performance (building a database which helps to determine the recruitment contribution to organizational performance, calculate the return on investment in a programs, predict the future benefits of various recruitment programs).

Because of the novel area of data-driven recruitment and the still very limited amount of academic research, it is likely that there still can be found many challenges that have not yet been identified. „The challenges that have been recognized are classified in five different types. The first type of challenge is the data related ones. Many have been concerned with the challenge of too much data and metrics. If organizations try to measure everything, know everything and control everything, the task in hand might be too extensive and as a result nothing gets measured properly. The second type of challenge is the recruitment analytics process related ones. Recruitment analytics is not only about collecting data, but also knowing how to use it. If too many metrics are used, the result might only lead to a significant number of reports that no one is reading. The third type of challenge is the people related challenges. Analytics might offer a good excuse to treat employees as pure resources and special attention should be paid to the “human side” of human resources. The fourth types of challenges are the managerial challenges. Organizational culture and/or management do not support the analytical culture or its development. The fifth and last type of challenges is the ethical and privacy related challenges. Organizations need to be able to protect the sensitive employee information. Collecting and using data from different internal and external sources might expose the organizations to discrimination lawsuits“ (Jensen-Eriksen, 2016. p,82).

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# INTEGRATING THE TRAINING IN STANDARDIZATION IN UNIVERSITY CURRICULA – EUROPEAN DIMENSIONS AND CHALLENGES

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**Abstract:** *Standardization and standards play a key role in today's competitive landscape. It is already broadly recognised the importance of the standards and standardization regarding the knowledge and best practices transfer, global supply chain networks building and management, the achievement of economic efficiency and sustainability as well as boosting the innovations.*

*Taking into consideration the importance and the urgent need outlined by the business and the industries for a workforce equipped with relevant knowledge and skills regarding standardization and standards, this paper is focused on the following questions: (i) what are the reasons the standards-related training are still not adequately represented in the academic disciplines; (ii) what is the University lecturers and students' levels of awareness about the international and European standardization systems and their readiness to improve their knowledge and competencies in the field of standardization; (iii) what are the main aspects to improve the training in terms of standards and standardization in university education.*

*The authors of this paper propose answers to these questions on the base of the results achieved through a comprehensive study conducted in five European countries in the framework of the international project "Standards Teaching in University Education" /STUNED/, funded by the Erasmus plus program of the European Commission.*

**Keywords:** *Training on standardization, Standards-related learning and teaching, Higher education, E-learning.*

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## 1. INTRODUCTION

Globally, there is a strong consensus regarding the fundamental contribution that higher educational institutions can give to standardization in terms of standards-related teaching provision, contribution and participation in the standards development processes as well as academic studies and research work on standardization (ISO, 2014). At the European level, a strategy for promotion of education and training in standardization was developed (European Commission, 2016). Moreover, the European Committee for Standardization /CEN/ and the European Committee for Electrotechnical Standardization /CENELEC/ in close collaboration established policy on Education about Standardization (CEN-CELENEC, 2011). The International Federation of Standard Users (IFAN, 2018) observes in their annual report that while the use of the standards "as a strategic tool to underpin innovation, strengthen the professional performance and competitive advantage of an organization" is becoming more and more important, many companies and other stakeholders take

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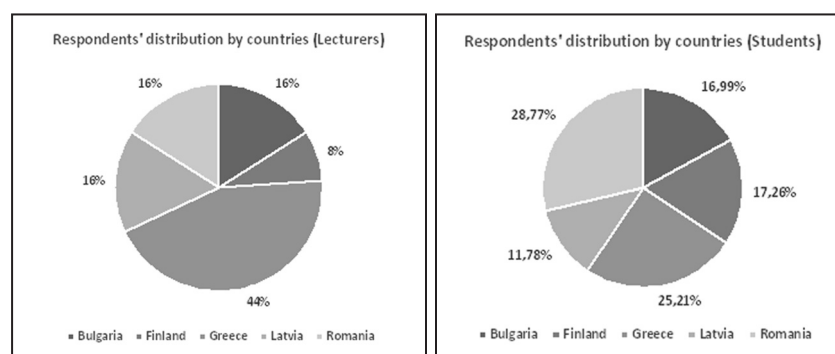
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insufficient advantage of them. In the report is outlined that these opportunities are sometimes not fully exploited due to a lack of awareness of the importance of standards, as well as insufficient ability to translate awareness into relevant actions. Currently, improving the understanding of the added value of standardization amongst the academia, business executives, government and relevant authorities is a priority of key importance. Next sections of the paper present the main results of a study conducted in 2020 as a part of an international initiative supported by the European Commission in the framework of the project STUNED aiming to support Universities to enrich their curricula by developing and integrating into them innovative educational modules in the area of standardization and application of selected set of international standards of the International Organization for Standardization /ISO/, some of which are adopted also as European standards.

## 2. THE OBJECTIVES AND THE METHODOLOGY OF THE SURVEY

The study covers five European countries: Bulgaria, Finland, Greece, Latvia, and Romania. The following strategy for selection of representatives of this main target groups for participation in the survey was adopted: (i) meetings with the management board and the lecturers from the concrete University were held in each partner country where the objectives and content of the project were explained; (ii) discussion with the managerial body and selection of the specialties and disciplines to be modernized; (iii) contact with the lecturers who teach the selected for modernization courses and inviting them to take part in the online survey as well as sending the link to the questionnaire via e-mail and all other institutionally and personally used channels for e-communications. The research methodology is based on a survey method. Two types of e-questionnaires have been developed, which consist of 18 multiple choice questions, and addressed to the university lecturers and students. The questionnaires were answered by a total of 25 lecturers and 365 students and had been designed to cover the following aspects of the sample: General personal data; Common perceptions and attitudes of the interviewed learners on using the capacity of ICT in the learning process; Assessment of the opportunities that universities offer for standardization training; Assessing the degree of awareness of the learners of the standards. Figure 1 represent the distribution of participants' lecturers and students in the survey by partner countries in the project.



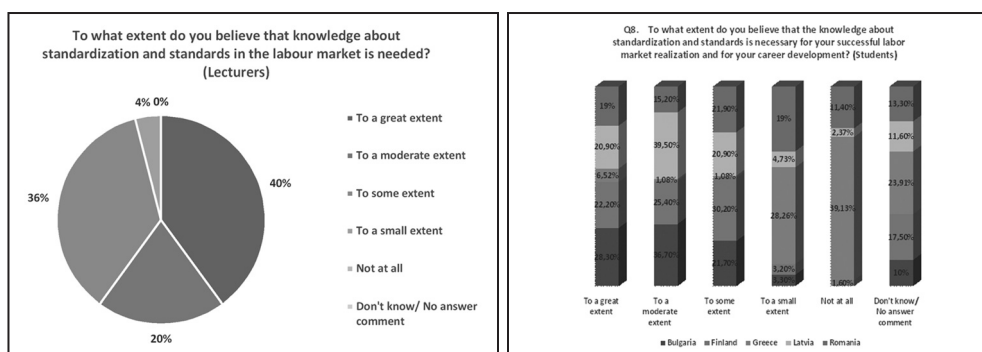
**Figure 1.** Distribution of lecturers and students in the survey by countries

## 3. RESEARCH RESULTS

The particular interest to the research team conducting the survey was the identification and evaluation of the University lecturers and students' levels of awareness about the international and European standardization systems and their readiness to improve their knowledge and competencies in the field of standardization, as well as the main aspects to improve the training in terms of standards and standardization in university education.

### 3.1. Assessment of the opportunities for standardization and standards-related training that universities currently offer

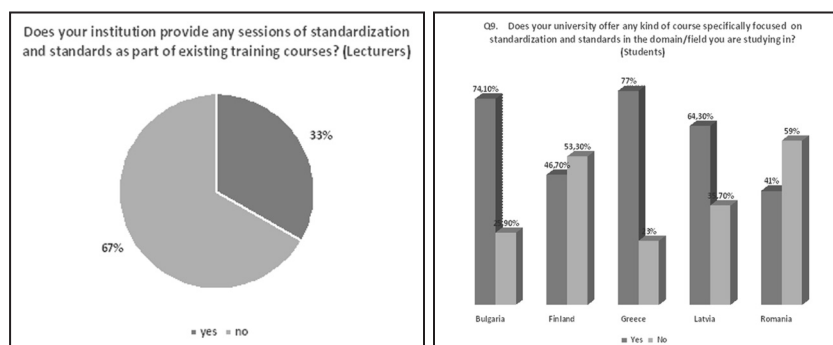
The first question in this group of questions aims to identify needs of education and training activities, addressed to standardization and standards. The responses collected with this question shows that the knowledge of standardization and standards necessary for successful realization on the labour market and for career development, is highly rated by the respondents-lecturers. The data are summarized in the Figure 2. A very big part of them (40%) consider that the knowledge of standardization and better awareness of domain-specific standards contribute to a great extent for successful realization on the labour market, as well as for career development. Respondents-students' opinions are diverse and most likely this is due to their not very good knowledge of this subject (Figure 2). 36.7% and 39.5% respectively of the respondents from Bulgaria and Latvia believe that this knowledge will be of moderate use for their professional realization, and for 30.2% and 21.9% respectively of the students from Finland and Romania knowledge of standards to a some extent support for successful realization in the labour market, while Greek students indicate „Not at all” (39.13%).



**Figure 2.** The importance of the knowledge of standardization for the labor market realization

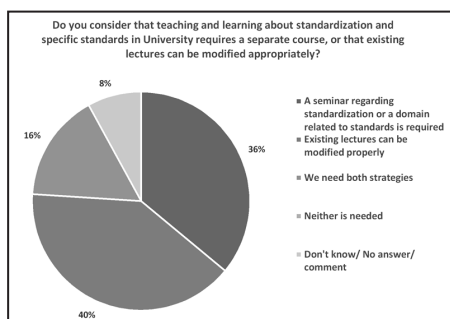
The following questions establish the current situation regarding provision of standards-related training as a part of University education. The diagram presented in Figure 3 illustrates the current state regarding the provision of standardization and standards-related training in the form of University courses specifically focused on the standardization and standards. Only 20% of the respondents-lecturers declare that in their Universities as a part of the curriculum offered some courses specifically focused on standardization and standards. According to students' opinion, the universities from Bulgaria, Greece and Latvia offer possibilities for students' participation in course specifically focused on standardization and standards or a training on standardization and standards as part of existing training courses, while the predominant groups of students from Finland and Romania answered "No" to the question "Does your university offer any kind of course specifically focused on standardization and standards in the field/area you are studying?".

Regarding the provision of training session(s) focused on standardization and standards as a part of other University courses included in the current curricula, 67% of the respondent-lecturers declare that their organization doesn't offer any to training sessions on standardization and standards. The predominant groups of the respondent-students from Bulgaria and Greece declare that they have the opportunity for training(s) on standardization and standards as part of existing training courses in the curriculum, unlike the majority of respondents from Latvia, Finland and Romania who state „No" as the answer.



**Figure 3.** Provision of standards-related training in universities - current state

Taking into account the feedback provided by the respondents in the survey becomes clear that there is a big gap between the education and training activities, addressed to standardization and standards, currently needed and those being delivered in the form of separate courses focused on standardization and standards as well as in the form of training sessions which are parts of other University courses. The respondents-lecturers were also asked to express their expert opinion regarding the further enhancing and enrichment of the educational offers provided by their Universities through the integration of training about the standardization and standards. The Figure 4 shows that according to the respondents the both proposed strategies for improvement of the University education (development of separate standards-related courses and modification of the existing courses involved in the University curricula via integrating standards related modules) are appropriate. 16% of the respondents declare that both strategies need to be supported. 40% of the lecturers express the opinion that the modification of the existing courses is the most appropriate strategy and nearly the same number of the respondents (36%) consider the development of separate standards related courses (seminars) as a more suitable solution.



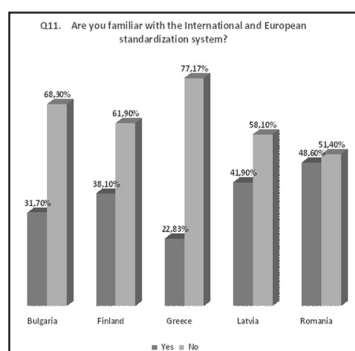
**Figure 4.** Strategies for improvement of University education through the integration of training about standardization and standards

The application of one strategy or another depends from the discipline specifics, the administrative and academic rules for modification of the existing curriculum as well as from the concrete educational context in a given University.

### 3.2. Assessing the degree of awareness of the learners of the standards

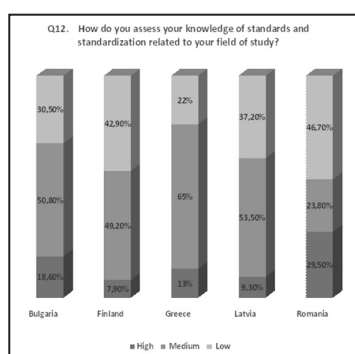
The last group of questions in the questionnaire for the students determines the level of knowledge of standards and standardization from the surveyed learners. The answers to this group of questions indicate awareness of the respondents and the lack of knowledge of the subject standardization. As the chart in the Figure 5 shows, predominate students' groups are not familiar with the international and the European standardization system, and most of the respondents

give a low score for their knowledge of standards and standardization related to their field of study (Figure 6). 51% of respondents indicate the „No” option in response to the question „Are you familiar with the International and European standardization system?”.



**Figure 5.** Assessing the degree of awareness of international and European standardization system

The diagram of Figure 6 shows a predominance of students, participating in the survey, with intermediate and low levels of knowledge of standards and standardization as a 50.8% of the Bulgarian students indicate the option „Medium”, as well as Finland, Greek and Latvian students (49.2%, 65% and 53.5% respectively), and Romanian students indicate the option „Low” (46.7%).



**Figure 6.** Assess of knowledge on standards and standardization related to student field of study

#### 4. FUTURE RESEARCH DIRECTIONS

On the base of the results from the analysis of all collected data and information and with the active involvement and collaboration with the representatives of the National Standardization Bodies of Bulgaria and Romania will be designed a training concept as a fundament of a training solution addressed to the university lecturers, which aims to improve, extend and enrich the lecturers' awareness and knowledge about the standardization and about some standards which are specific for their domains. The lecturers successfully completed the training will develop, adapt and contextualize standards-related training modules which will be integrated into as a part of their university courses' curricula. All developed standards training modules will be piloted with control groups of students. After the piloting stage, the developed contents will be stored into a database as open educational resources which will be accessible for all academic society. Thus, all interested lecturers/universities will be able to use the existing standards-related learning objects in order to modernize their study programmes through their integration into the existing curricula after appropriate adaptation, enhancement and contextualization. On



each step of the pathway, described above, is foreseen the impact and effect of the outcomes achieved to be analysed so the next stages to be updated accordingly and thus optimal efficiency and high quality of the university education on standardization and standards can be ensured.

## 5. CONCLUSION

This paper presents some of the results of a study conducted in five European countries. One of the aims of this study is to outline a momentary picture of the current opportunities that universities provide for acquiring knowledge in the field of standardization and also to provide an assessment of the degree of the students' awareness in the area of standards. Based on an analysis of the study results, the following conclusions could be drawn:

- Need of education and training activities, addressed to standardization and standards;
- The knowledge and competencies related to standardization and standards play an important role regarding the formation of qualitative fundamentals for future professional realization and successful career development;
- There is an urgent need of training focused on the improving the level of the lecturers' knowledge of standards and standardization in their field of activity which is evaluated by themselves as low to medium;
- Taking into account the feedback provided by the respondents in the survey becomes clear that there is a big gap between the education and training activities, addressed to standardization and standards, currently needed and those being delivered in the form of separate courses focused on standardization and standards, as well as in the form of training sessions which are parts of other University courses.

## ACKNOWLEDGMENT

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# THE DESIGN OF MIXED TEACHING MODE OF VOCATIONAL EDUCATION UNDER THE BACKGROUND OF INTERNET

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**Abstract:** *This article objectively analyzes the main problems of distance education in vocational education under the current Internet background, and gives solutions to these main problems. By setting teaching goals scientifically and reasonably, adopting a mixed teaching model, designing a perfect teaching process and formulating a scientific course evaluation method, Internet distance teaching will achieve better teaching effects to make up for the shortcomings of traditional teaching methods.*

**Keywords:** *Distance teaching, Instructional design, Classroom structure*

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## 1. INTRODUCTION

Teaching mode refers to the teaching activity method, process and structure constructed according to the teaching theory in the course of teaching activities. It is a way to effectively combine teaching elements and produce certain teaching effects. At present, the common teaching modes in the field of vocational education include dual education system, integration of theory and practice, modularity of knowledge, modern apprenticeship system, and course and competition integration system.

With the continuous development of computer and network technology, this technology is more and more widely used in teaching. The teaching mode composed of computers, networks and mobile terminals is also more and more applied to the field of vocational education.

However, the emergence of COVID-19 virus has changed the way people produce, live and learn. According to the website of the World Health Organization, as of 10:00 a.m. Eastern Time on May 2, 2020, there have been 3,267,184 cases of new coronary pneumonia diagnosed globally, and a total of 229,971 deaths. Faced with such a severe epidemic, the overall order of human society has been unprecedentedly challenged. In order to quickly control the spread of the virus, countries around the world have to close factories and schools, or even close the entire country.

In order to minimize the impact of the epidemic on teaching, many countries in the world have “moved” the classroom to the Internet, and teachers have taught students’ knowledge through the Internet. In this way, even if the students stay at home, they can continue to study as planned. Although this teaching method can span time and space and has many advantages, this teaching mode also has some defects, and the teaching effect is difficult to achieve the intended purpose. The existence of these problems severely restricts the quality of vocational

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education using the Internet to carry out distance teaching. Under such circumstances, how to set the teaching mode and achieve better teaching effect is an important issue faced by teaching management and practitioners.

## **2. THE MAIN PROBLEMS OF INTERNET DISTANCE TEACHING**

### **a. Environmental interference during teaching**

The traditional teaching environment is in the classroom. Therefore, teachers can always pay attention to the learning status of each student in the classroom. However, due to the different environments of teachers and students participating in Internet distance teaching, it is difficult for teachers to have a glance at the time of class, and it is impossible to find out the problems that students have in listening to the class. On the other hand, because the environment of individual students does not meet the requirements of learning, inappropriate images and sounds will also affect the teaching of teachers and the learning of other students.

### **b. The problem of low interaction efficiency in the teaching process**

In the process of distance teaching, teachers generally turn off the microphones of students temporarily in order to control “noise”. But in this way, students cannot ask questions in time when they have problems in the class. Even if they can use words to communicate, the efficiency of communication will be very low, far from the effect of smooth communication between teachers and students in the classroom.

### **c. Problems for students to practice**

Unlike general education, vocational education needs to highlight occupational attributes and integrate professional ability and literacy improvement. Due to the requirements of training goals, in the classroom of vocational education, many courses require students to practice by themselves, so that students can obtain the most direct emotional understanding, so that students can truly master the relevant operational skills. [1] For example, when explaining the processing technology of the CNC lathe, students need to practice the operation on the CNC lathe according to the content explained by the teacher. By processing the parts, the teaching goal of correctly controlling the lathe and producing qualified products can be achieved. But we know that students do not have the environment and conditions to use CNC lathes at home. Therefore, the vocational education that emphasizes the cultivation of hands-on practical ability is the most prominent problem of students in the process of Internet distance teaching. It turns out that the courses that really require students to be trained are turned into “talks on paper”.

### **d. The problem of students' inattention in class**

Students staying at home and taking classes through the Internet are lacking face-to-face supervision from teachers, which is a major challenge for many students' learning ability and learning consciousness. Through the survey of 796 vocational college teachers and students on Internet distance teaching, 35.12% of students said that the location of the class is very random, and some even lie in the bed to listen to the class. 50.55% of the students said that they would do something unrelated to the course during the class.

**e. The problem that the teaching effect cannot reach the goal**

The survey results show that up to 72% of teachers and 49.84% of students believe that distance learning via the Internet is not as effective as traditional face-to-face teaching. This is a very serious problem, which reflects the effectiveness of teaching. If students fail to acquire relevant knowledge and abilities in the classroom, teaching will lose its meaning and it will certainly have an adverse impact on students' future professional development.

In summary, the development of Internet distance teaching in the field of vocational education faces many problems at different levels, which requires teachers to seriously study the methods and strategies to solve these problems. Only by continuously improving the teaching ability of teachers can we solve these problems at different levels, such as methods, measures and attitudes, and guarantee the teaching quality to the greatest extent. [2]

**3. ANALYSIS OF THE MIXED TEACHING MODEL  
OF VOCATIONAL EDUCATION UNDER THE INTERNET**

Using the mixed teaching model can effectively solve many problems arising from the Internet distance teaching process and improve the teaching quality.

Mixed teaching mode refers to the combination of two or more teaching modes for different majors, different teaching contents and different teaching objects in teaching practice, which is used to make up for the deficiencies of a single teaching mode and make the teaching effect get Effectively improve the teaching model. This mixed teaching model must be fully considered with the characteristics of vocational education in teaching design.

**a. Set teaching goals**

To use the Internet distance teaching method, we must first scientifically set the teaching objectives. In addition to meeting the requirements of the talent training plan, this setting also needs to adapt to the characteristics of distance learning and consider the efficiency and effectiveness of student learning.

In general, when setting this teaching goal, the focus and difficulty of teaching should be placed first, and it should be set according to the knowledge and ability acquired by students through teaching. The set knowledge goal, ability goal, quality goals and sustainable development goals are clear, have scientific and reasonable levels and logic, have strong operability, and can be achieved through teaching. [3]

**b. Choose the right teaching model**

Among the many teaching modes, which one is the most suitable for Internet distance teaching? Which can achieve good teaching results in teaching? The answer may not be which kind of mode, it is quite possible which is a combination of several modes, we call it mixed teaching mode.

For example, the Internet Distance Teaching for a certain specialty can combine the ability based teaching mode with modular teaching mode, task driven mode, flipped classroom mode,

etc. In this way, it not only makes up for the deficiency of single teaching mode, but also makes teaching more lively, so as to attract more students' attention to the classroom, greatly improve the degree of students' active participation in classroom teaching, so as to greatly improve the teaching effect. [4]

### c. Well-designed teaching process

An excellent course comes from excellent course design. Such courses can fully demonstrate the value orientation of modern vocational education ability-based, effectively enhance students' professional core competence and professional literacy, deeply stimulate students' interest in learning, and enable students to actively study effectively. [5] But without carefully designed teaching, it will make people feel boring and tasteless, making people lose interest in learning. Especially for Internet distance teaching, without teachers' face-to-face supervision, a course that is not well-designed is often very likely to cause students to be "distracted". It is not surprising that students do something unrelated to the course when they feel uninterested too. Perfect teaching design can refer to the following process to design:

#### i. Divide the structure of one lesson

The structure of one lesson is very important, it is related to the success of one lesson. Considering that students in vocational schools have poor theoretical foundations, but they have extremely strong hands-on skills and have a strong desire to show themselves and improve themselves. On the basis of in-depth study of teaching goals, this article designs the course structure diagram. (See Figure 1)

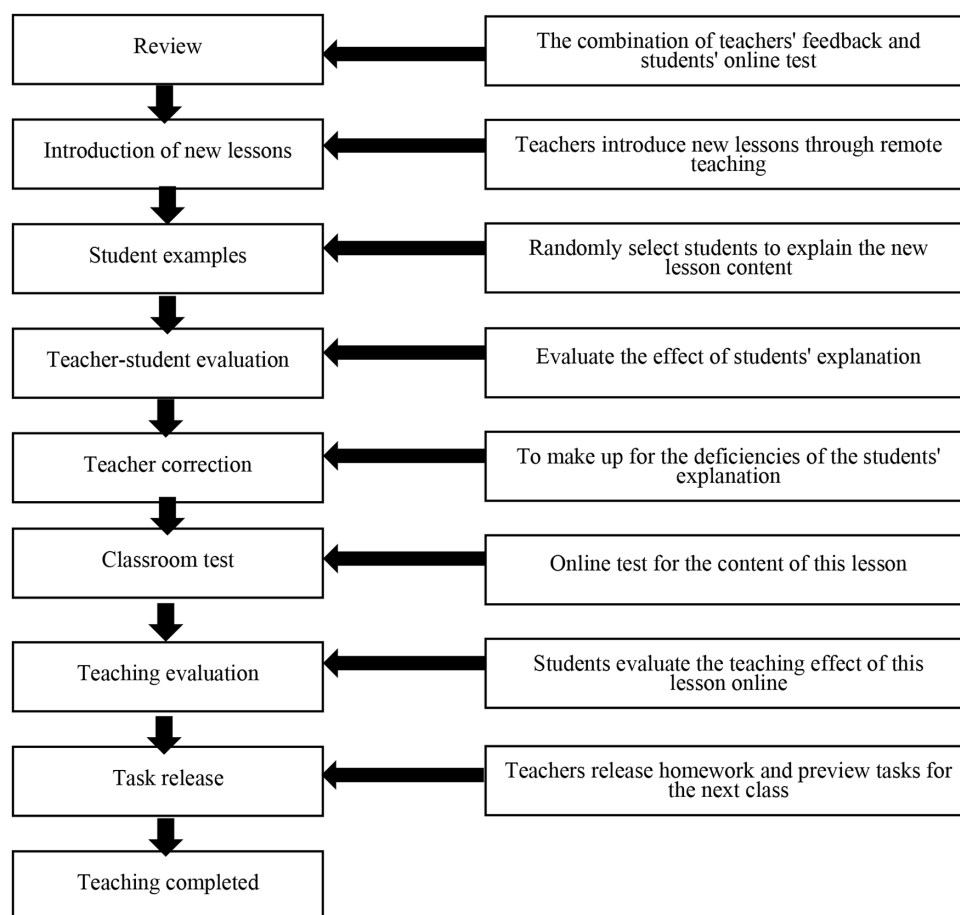
It can be clearly seen from Figure 1 that in this course design drawing, a variety of different teaching modes such as flip classroom and task-driven are integrated, thus forming a mixed teaching mode. The application of the mixed teaching model will be more conducive to seizing the students' excitement and enable students to actively participate in the teaching process. When their attention is completely attracted by the course, it also shows that the course design has been successful.

#### ii. Engage students to participate deeply in teaching

Aiming at the structure design of the course, the purpose is to enable students to have a platform to participate in the teaching process. Students can only receive good teaching results if they devote themselves wholeheartedly to teaching. So, how to involve students deeply in teaching?

In fact, in the example shown in Figure 1, each link can be designed with a very powerful interactive link to allow students to fully participate in the teaching. For example, in the "Task release" section, teachers can, according to the teaching requirements, not only allow students to fully preview the textbook for the next lesson, but also design several experiments related to the course content, allowing students to choose one according to their own situation. To do this, students can record by shooting videos or images when doing experiments, and play it in the next class, so as to share knowledge achievements, technical achievements, and ability achievements with other students. [6] This kind of classroom content is real and lively. Students will have a deep interest when they share or feel the experience shared by other students. Teachers can correct the results after the students share the results to ensure the correctness of the students' knowledge. For another example, after students share, they can use the remote education software to let all students vote on the results shared by this student. In this way, each student is both an interpreter of knowledge and an evaluator of learning effectiveness. In such an environment, students not only receive knowledge in one direction, because every student can

show their talents in this environment, thus transforming learning into a process for everyone to discuss, exchange knowledge and improve ability and quality. Through such curriculum design, students' initiative in learning will be greatly improved, and their knowledge and skills will be more solid, which can promote the further improvement of teaching effects. [7]



**Figure 1:** Course structure design drawing

*iii. Make full use of distance teaching software*

The distance teaching software can be divided into two categories: one is the teaching software based on network application, this kind of software provides the basic platform and powerful management function for the distance internet teaching, can realize such as establishing the live broadcast classroom, setting the live broadcast classroom type Student attendance management, learning resource management, online testing and evaluation, setting real-time communication area and many other practical functions. Such as Wechat, DingTalk, Learning Through, Blue Cloud Classes and so on. The second type is the simulation software based on the equipment and process flow which is widely used in enterprises. This kind of software can simulate the simulation work of the related equipment realistically on the computer, so that students can carry out the simulation operation through the computer, in order to achieve the familiar operation. For example, various CAI, CAM systems.

In the teaching process, teachers should carefully prepare the relevant simulation software and release it to students in advance according to the teaching requirements, so that they can practice the basic operations of the software in advance and improve the efficiency of classroom teaching. Of course, you can also use the form of MOOC to form a systematic and comprehensive



sive MOOC professional course to help students understand relevant knowledge. [8] However, at present, these teaching simulation software and MOOC course resources still have major deficiencies and defects in terms of type, function, and quantity, still need to make great efforts to improve, in order to truly meet the needs of distance education.

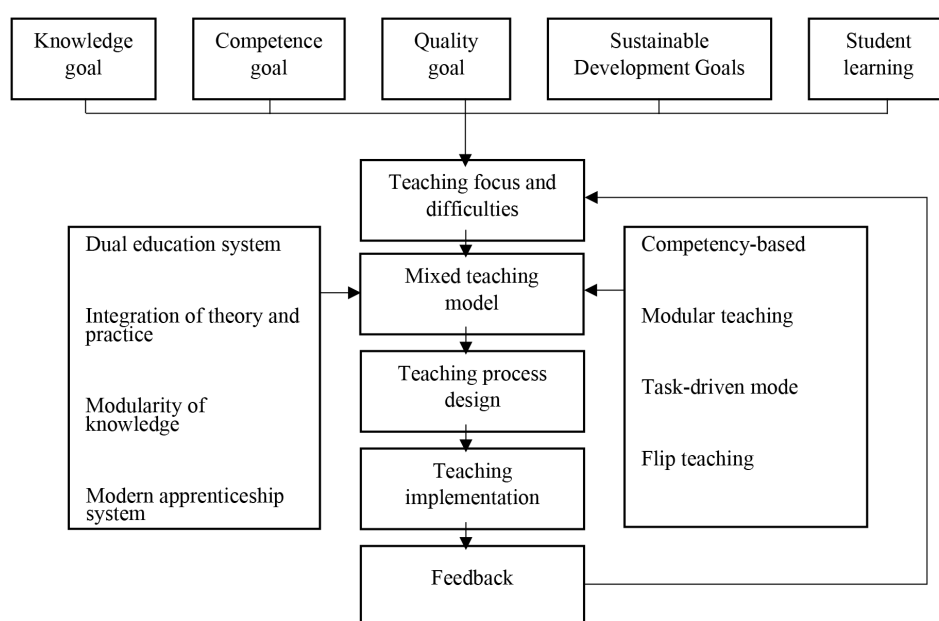
#### d. Formulate scientific curriculum assessment methods

The curriculum assessment and evaluation mechanism is the most effective driving force for teaching quality. The results of assessment and evaluation directly reflect the quality of teaching. Teaching has never been just referring to teachers or students, so the evaluation of teaching should also be aimed at two aspects: for students who are taught and teachers who are for teaching. In these two aspects of assessment and evaluation, special attention should be paid to student self-evaluation and student evaluation of teachers. The reason for this is that the evaluation results can be obtained more objectively, and it also reflects that students are the main body of teaching work.

For example, a long-distance Internet course can be based on students' check-in, review tests, participation in the teaching process, and new knowledge tests to obtain the results of this class. Teachers can also use the evaluation questionnaire issued after class to understand the teaching effect of this course, and adjust the implementation of future teaching work according to the feedback of students. [9]

### 3. PRACTICE PROCESS OF MIXED TEACHING MODEL OF VOCATIONAL EDUCATION UNDER THE BACKGROUND OF INTERNET

Vocational education leaving the training base and factory, using the Internet to carry out distance teaching, will cause many inconveniences for teachers and students, and form a big challenge in a special time. However, on the premise of factory shutdown and school suspension, we should give full play to the advantages of the Internet, make use of the advantages of computer-aided teaching, so that students can master professional knowledge and skills as much as possible, and lay a solid foundation for them to adapt to the academic requirements as soon as possible after returning to school.



**Figure 2:** Practice process of mixed teaching model of vocational education based on internet

Based on the above analysis, this paper summarizes the practice process of the mixed teaching mode of Vocational Education under the background of Internet. (see Figure 2)

#### 4. FUTURE RESEARCH DIRECTIONS

Firstly, because vocational education is more complicated than general education, the content to be explored includes research on educational methods under the premise of different majors, different levels, different courses, and different teaching environments, so that better teaching can be received effect.

Secondly, the best teaching process is a two-way interactive process, which embodies a good way to transform knowledge and skills from „teacher can” to „student can”. In the process of Internet distance teaching, more two-way interactive mechanisms should be incorporated, including the use of virtual reality technology to achieve virtual scene teaching, which will be more conducive to enhancing the effect of knowledge transfer and ensuring the effectiveness of teaching. [10]

Of course, the extensive application of Internet teaching in vocational education can make up for many deficiencies in traditional teaching, thereby enhancing the enthusiasm of students to actively participate in learning, helping them to better acquire knowledge and ability, and continuously improve the quality of education and teaching.

#### 5. CONCLUSION




In the Internet era, online teaching has become a useful complement to various teaching methods, enriching the form and content of teaching, so that students can receive education anytime, anywhere, master knowledge and improve their abilities. Especially in the special period of the current large-scale epidemic in the world, it also reflects the unique advantages of this teaching method. However, Internet teaching also has shortcomings. Students receiving Internet teaching must first have a correct learning attitude and self-discipline ability. At the same time, they also need teachers to study teaching methods carefully and adopt a mixed teaching model to maximize students' enthusiasm for learning, enrich and improve Interactive links improve the evaluation method to make students more willing to accept this teaching method, and can really improve their professional qualities through this teaching method.

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# RESEARCH ON INFLUENCING FACTORS OF RURAL ENDOGENOUS DEVELOPMENT ABILITY BASED ON TOBIT MODEL

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**Abstract:** *Cultivating and digging the endogenous power of rural development is the basis of sustainable rural development. The article sets explanatory variables from the perspective of social network structure theory, and constructs a Tobit multiple regression empirical model that affect rural endogenous ability. The study found that the amount of social structural holes, the strength of weak ties, the role of village committees, and the quality of village cadres have a significant positive effect on the improvement of rural endogenous capabilities. Accordingly, it is recommended that Henan region creates market opportunities for various types of elites to serve the rural revitalization ; fully explore and use weak ties to fight for more resources for the rural revitalization ; further strengthen the collective economy, strengthen the village collective administrative power from the perspective of legislation, and optimize the control of the collective power of the village ; the formation of a cultural psychological structure that is conducive to the endogenous development of the village .*

**Keywords:** *Endogenous ability, Relationship network, Structural hole.*

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## 1. INTRODUCTION

The 19<sup>th</sup> National Congress of the Communist Party of China proposed „implementing the strategy of rural revitalization”, „adhering to the priority to agricultural and rural development”, and striving to build a rural society into a society of „prosperous industry, ecological liability, rural civilization, effective governance, and affluent life”. However, for a long time, China’s implementation of the strategy of giving priority to industrial development has resulted in the massive loss of rural social factors and structural imbalances. Rural areas have shown trends such as hollow rural areas, aging farming, non-agricultural factors, part-time farmers, and sideline agriculture. Progress is faced with problems such as the lack of resources and environmental constraints, the shortage of young and middle-aged labor, and the high cost and high risks of agricultural production, which has caused serious challenges to the endogenous development and self-circulation of rural society.

Rural revitalization needs to follow the path and laws of rural economic transformation, and implement the four major driving forces of institutional innovation, technological progress, market reform, and productivity investment (Zhang,2018, p.1-6). The core path can be summarized as: six organic components of urbanization collaborative promotion strategy, rural land reform and rural governance reform strategy, rural education revitalization, industrial revital-

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ization and cultural revitalization strategy (Chen,2018, p.55-62). Some scholars believe that rural revitalization should explore endogenous paths that meet China's national conditions and farmers', requirements, and insist on developing from exogenous development to endogenous development Transformation (Zhang, 2018, p. 56-63,157-158;). In the American pastoral economy, agriculture depends on the rural economy far more than the rural economy depends on agriculture. European rural development has a similar pattern, gradually integrating leisure, ecological services, agricultural production and other functions (Hall C,2004, p.211-225).

Scholars have conducted extensive research on the subject, focus, driving force and implementation path of pastoral revitalization, but there is the absence of empirical research on the endogenous power system of rural revitalization. To this end, based on the theory of social network structure, this article uses the field survey data of rural areas in Henan Province and the previous research results to build an evaluation model of rural endogenous ability and multiple regression models that affect its endogenous ability. Network structures elements, to explore the mechanism of rural endogenous development capacity improvement.

## 2. METHODOLOGY

In this paper, the endogenous capacity index of the village is calculated based on the data onto the previous survey and research, and its value range is between [0,1]. Restrict dependent variable model. The characteristic of this model is that the model contains two parts. One is the selection equation model that represents the constraint condition; another is the equation model of a continuous variable that satisfies the constraint condition (Chen, 2017, p. 1-14). This model is a linear probability model proposed by economist Tobin when studying the demand for durable consumer goods. According to its general form, the regression model of this article is set as:

$$y_i^* = \alpha_0 + \sum_{i=1}^n \alpha_i x_i + \xi_i$$

$$y_i = y_i^* \quad \text{if } 0 < y_i^* \leq 1$$

$$y_i = 0 \quad \text{if } y_i^* < 0$$

$$y_i = 1 \quad \text{if } y_i^* > 1$$

Among them,  $y_i^*$  is the potential endogenous rural endogenous capacity index;  $y_i$  is the actual capacity index value of the  $i$  village;  $x_i$  is the vector of factors affecting the endogenous capacity of the village;  $\alpha_i$  is the regression parameter vector;  $\xi_i$  is an independent random disturbance term;  $i = 1, 2, \dots, N$ ;  $\xi_i \sim N(0, \delta^2)$  is random disturbance term.

## 3. RESULTS AND DISCUSSION

### 3.1. Analysis and research hypothesis from the perspective of social network structure theory

The theory of social network (relationship) structures to believe that society is a group of multiple social actors and their relationships. The network structure is composed of nodes and bonds. Nodes are the connection points of various relationships, resources, and the cost of developing and maintain ties. In this paper, from the perspective of social network theory, six hypotheses are put forward to verify the factors that affect the endogenous development ability of rural areas.

- Hypothesis 1: The greater the density of rural social networks, the stronger the endogenous ability of rural revitalization.
- Hypothesis 2: The greater the strength of weak bonds between the rural social network structure, the stronger the endogenous ability of rural revitalization.
- Hypothesis 3: The larger the scale of the network of actors, the stronger the endogenous ability of rural revitalization
- Hypothesis 4: The more structural holes in rural social networks, the stronger the endogenous development capacity of rural revitalization.
- Hypothesis 5: The psychological structure of rural culture has a significant impact on rural endogenous ability
- Hypothesis 6: Rural social network power control structure has a significant impact on the endogenous ability of rural revitalization

### 3.2. Variable selection and descriptive statistics

The rural social network power structure can be divided into administrative power, interest power and family identity power control. Among them, the lawful power control granted by the state is measured by the appeal to the village committee and the family economic strength of the main village cadres. The exercise in its administrative powers in a fair, fair and equitable manner, the authority on legal power will be strengthened, and it will have a huge appeal to the rural social network, which is the key attraction for the formation of rural development and endogenous cadres' development capabilities; the more universal development path in rural areas, the key variable in rural society to measure capable people is their family economic strength. If the village cadre's ability to create wealth is not concentrated, it is difficult to imagine his ability to lead the majority of villagers to develop together. Benefit power is measured by the types of collective resources that the village cooperative can control. Generally speaking, the more resources the village collective can control, the more capable it is to provide a material guarantee for the development of various causes of the village. The family identification power is determined by whether the village conducts family gatherings and whether each family has an ancestral hall. The family's gathering and ancestral hall can further strengthen the clan power and improve the family's identity, which will have a strong influence on the operation of rural social networks. Statistics show that the village committees of the sample villages have a good appeal to the villagers, the main village cadres have average family economic strength; the village collective can control fewer types of resources; 38.73% of the villages often have family gatherings, and 18.31% of the villages there is a clan ancestral hall.

**Table 1.** The meaning of the main variables and their descriptive statistics.

Variable selection and definition	Mean	Std.	Min.	Max.
Network density				
Farmer self-organization (quantity)	4.458	4.040	0	30
Cadres of committees (number)	10.101	7.8801	2	84
Weak bond strength				
Social donation (money)	36.828	167.979	0	2000
Government project acquisition (Scoring 1-5 on ease)	2.934	0.980	1	5
Structure hole				
Business organization (quantity)	2.962	3.772	0	35
Average life of the company (years)	5.342	6.108	0	50
Network scale				



Variable selection and definition	Mean	Std.	Min.	Max.
Rural population size (number)	2125.143	1557.951	150	10000
Self-organized scale (number of people)	48.094	95.272	0	1280
Executive power				
Village committee appeal (graded according to appeal 1-5)	3.6764	0.757	1	5
Cadre family economic strength (money)	3.1644	1.701	1	9
Interest control				
Collective control (calculated by the number of types of control resources)	1.430	0.815	0	4
Family power control				
Does the family often meet? (Yes = 1, No = 0)	0.387	0.488	0	1
Whether there is an ancestral temple (Yes = 1, No = 0)	0.183	0.387	0	1
Village culture				
Culture of filial piety (scored on a scale of 1-5)	4.298	0.831	1	5
Traditional customs (scored on a scale of 1-5)	3.822	0.832	1	5
Control variable				
Village cadre age				
30 years and below = 1, 31-40 years = 2, 41-50 years = 3, 51-60 years = 4, 61 years and above = 5	2.843	1.023	1	5
Village cadre gender (male = 1, female = 0)	0.772	0.420	0	1
Village cadre education				
9 years and below=1, 10-13 years=2,1 4 -15years=3, 16 years and above=4	2.174	0.942	1	4

**Note:** All indicators scored on a scale of 1-5 is all positive values, that is, the easier it is to think, the stronger the appeal, the higher the recognition, the higher the score; the type of collective production control includes collectively-owned farmland, Forest land, construction land, minerals, reservoirs, enterprises, real estate, machinery and equipment, and tourism resources.

### 3.3. Estimated results

This article uses Stata16.0 software to build a multiple Tobit regression model. In order to ensure the accuracy and stability of the model prediction, multiple collinearity tests were performed on each explanatory variable, each independent variable was linearly regressed with other variables, and then the variance expansion factor of each variable was calculated, of which the maximum value is 1.35, the minimum is 1.06, the mean is 1.14, and the Tolerance of all variables are greater than 0.6. It indicates that all variables have passed the multi collinearity test. In this paper, the forced comprehensive entry method is used to introduce the set explanatory variables into the equation for regression to construct model 1 (total model), and then stepwise regression method (stepwise) is used to obtain model 2 ; in order to resist the influence of specific values, all models is robust The standard error returns. The regression results (see Table 2):

**Table 2.** Estimated results of the impact of rural social network structure on rural endogenous capacity

	Model 1			Model 2		
	Coef.	Robust Std.Err	P> t	Coef.	Robust Std.Err	P> t
Network density						
Farmer self-organization	-0.00035	0.0005	0.4630			
Village cadres	-0.00008	0.0002	0.6630			
Weak bond strength						
Social donations	0.00002	0.0000	0.0160	0.00002	7.32E-06	0.002
Get government projects	0.00565	0.0026	0.0300	0.00622	0.00282	0.028
Structure hole						
Village Enterprise	0.00159	0.0008	0.0490	0.00169	0.00081	0.038
Business life	0.00104	0.0004	0.0050	0.00091	0.00040	0.022
Network scale						
rural population	0.00000	0.0000	0.4410			
Self-organizing scale	-0.00001	0.0000	0.5820			
Executive power						
Village committee appeal	0.00721	0.0033	0.0280	0.00807	0.003352	0.016
Cadre family financial resources	-0.00179	0.0013	con			
Interest power control						
Collectively controlled assets	-0.00645	0.0026	0.0140	-0.00577	0.00252	0.022
Family power control						
Does the family often meet	-0.00198	0.0043	0.6450			
Whether there is an ancestral temple	0.00569	0.0056	0.3080			
Village culture						
culture of filial piety	-0.00561	0.0039	0.1530			
traditional customs	0.00252	0.0023	0.2660			
Control variable						
Cadre age	0.00436	0.0019	0.0250	0.00344	0.00171	0.044
Cadre gender	-0.00070	0.0068	0.9180			
Cadre education	0.00941	0.0027	0.0010	0.00805	0.00257	0.002
Cons.	-0.01522	0.0236	0.5190	-0.03993	0.01861	0.033

### 3.4. The results of the influence of the strength of weak bonds between rural social networks

Whether in Model 1 or Model 2, the two variables that measure the strength of the weak bond are statistically significant at 5%, and have a positive effect on the endogenous improvement in rural revitalization. From the coefficient value, the marginal effect of winning government project support far greater than obtaining social donations, hypothesis 2 is verified. It shows that the new information carried by weak ties can provide rich resource support for rural revitalization.

### 3.5. Results of the impact on rural social network structure holes

Structural holes mean that there are potential opportunities for profit. The empirical results show that the two variables reflecting the structural hole has a significant positive effect on the endogenous ability of rural revitalization, and the impact on the enterprise's life span reach a statistically significant level of 1%, and the amount of enterprises in the village is significant at the statistical level of 5% from the coefficient value, the marginal effect of the enterprise's life span are greater than that of the number of enterprises. Hypothesis 4 is verified. This shows that fully digging the structural holes in the rural social network, creating potential profit opportuni-

ties for operators, attracting more entrepreneurial elites to fill the structural holes, and creating more economic entities in the countryside, is to promote the prosperity of rural industries and achieve rural fundamental measures to revitalize endogenous development.

### **3.6. The results of the impact of the density and scale of rural social network**

It can be seen from model 1 that the four variables that reflect the density and scale of the network structure have not passed the significance test, but from the perspective of the impact direction, the impact direction of the two variables of the network density is not consistent with hypothesis 1, which shows the number of key nodes and organizations in the social network is the minor aspect that affects development. The major factor is capabilities and qualities of key node personnel and organizations. The influence direction of the two variables of network sizes is consistent with hypothesis 3, which shows to a certain extent that a sufficient population size is the human capital basis of rural revitalization.

### **3.7. The impact of village culture and power control structure**

The two variables that measure the village culture have not passed the significance test. Among the variables of power structure, the role of village committees representing administrative power is significant at the 5% statistical level, which has a positive effect on the endogenous ability of rural revitalization, but the family economic strength of village cadres has not passed the significance test. Village collective assets that measure collective interests also pass the significance test of the 5% level, but have a negative effect. Namely, the more the types of collective assets are, they are not conducive to rural revitalization. The two variables of family identification have not passed the significance test, but the direction of influence is positive. This shows to a certain extent that carrying out family identification activities can improve the synergy of rural revitalization. When the development of rural undertakings is more in line with family interests, the control of family identification power will have a positive impact on the endogenous development of the village.

In addition, the age and cultural level of the cadres in the control variables have passed the 5% significance test, and both have a positive effect, namely, the older age and higher cultural level of the village cadres, which is more helpful for the ability of rural endogenous development. However, the gender of the cadres is failed the test.

## **4. CONCLUSION**

Based on the previous research results, the endogenous ability index of 426 rural areas in Henan Province was calculated. On this basis, the endogenous ability index is invoked as the explanatory variable to build a Tobit regression model that affects the rural endogenous ability. Through the model, the influence of rural social network structures density, weak bond strength, scale, structural hole and power structure of rural endogenous ability were analyzed.

The study found that the village-level collective economic capacity is the most important indicator to measure the endogenous capacity of the village, with a weight of 57.42%, followed by the villagers ,political participation capacity and credit protection capacity indicators, with weights of 16.24% and 14.33%, respectively, and social opportunities. The weight of capability and security assurance capability indicators is less than 10%. The average value of the endog-

enous ability index of the sample village is only 0.038, which reflect that endogenous ability of rural revitalization is generally insufficient for the stage of emergence.

Social donations and government project support obtained through weak ties have a positive effect on rural endogenous capabilities, so fully tapping and using weak ties to seek resource support is one of the viable paths for rural revitalization. There is a structural hole in the rural society that can be used. According to this, the more corporate investment attracted, the stronger endogenous ability of rural revitalization is. In the rural social network power control structure, strengthening the village collective administrative power control and giving full play to the role of the village committee has a significant positive effect on improving the endogenous development capacity of the village, but excessive control of interest power will have the opposite effect ; family although the influence of identity power is not significant, to a certain extent, enhancing family identity awareness will promote the endogenous development of the village. In addition, the population size, the number of self-organizations that reflect the density of rural social networks, and the filial piety culture and traditional customs that reflect the village culture is not the key factors that affect the rural endogenous ability, and the quality of the main village cadres has an impact on the rural endogenous ability have a positive impact.

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# POSSIBILITIES OF USING ARTIFICIAL RADIAL BASIS FUNCTION NEURAL NETWORKS FOR MODELING ECONOMIC PROCESSES

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**Abstract:** *The possibility of using artificial radial basis function neural networks for modeling of economic phenomena and processes is shown. The basic characteristics and parameters of an artificial radial basis function neural network are shown and the advantages of using this type of artificial neural networks for modeling economic phenomena and processes are emphasized. Using an artificial radial basis function neural network, together with official statistics for 2010-2017, the modeling of the influence caused by work efficiency indicators of the customs authorities of Ukraine on the indicators of economic security of Ukraine was carried out. The results obtained showed good analytical and prognostic properties of an artificial radial basis function neural network when modeling the impact of customs authorities' performance on the state's economic security indicators.*

**Keywords:** *Economic security of the state, Radial Basis Function Neural Networks, Customs system, Indicators of economic security of the state, Macroeconomic forecasting.*

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## 1. INTRODUCTION

In the context of the constantly changing global economic development trends and the daily occurrence of internal and external threats that can suddenly change the trajectory of each country's economic development (e.g., coronavirus pandemic, dramatic change in energy prices, etc.), not only the current state of the national economy is an important task for both science and practice, but also the prediction of its values for the near future. Such a prediction is not possible without taking into account the influence of various factors both on particular branches and on the general state of the economy of the state. Developing an appropriate scientific and methodological framework will make it possible to quite accurately predict the value of macroeconomic indicators, and consequently to implement appropriate management decisions to minimize the negative impact of certain global processes.

Most often, regression models are used to model economic phenomena and processes. However, under conditions of non-stationarity of processes, nonlinearity of relationships between indicators that are characteristic of most economic phenomena and processes, as well as in the absence of objective statistics using a stochastic approach, and in particular, regression analysis does not allow to obtain scientific results that would reflect objective economic reality. In addition, applications such as Statistica, MS Excel, which can be used for modeling, require the study of the statistical characteristics of both the studied economic indicators and the factors influencing them, which, in the case of limited statistics, can sometimes be a difficult practical task.

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## 2. THEORETICAL BACKGROUND

Recently, artificial neural networks (ANNs) have become widely used to model economic systems. In particular, perceptron-type networks, which provide good approximation capabilities of the model, are used for these purposes. Among the scientists whose studies deal with the problems of using these networks for modeling economic phenomena and processes, the works of Bodiansky E., Oliver Nelles, Rudenko O., Dyvak M. should be mentioned.

Among a large number of types of neural networks (Kohonen Maps, Carpenter & Grossberg Networks, and those of Hopfield), the Radial Basis Function Neural Networks (RBFNs) are a special class from the standpoint of modeling the development of different economic phenomena and processes, as well as the influence of various factors on them. As the results of the studies show, this type of artificial neural network is not only a powerful mean of approximating the nonlinear functions of many variables, but also allows us to predict the processes successfully. Such networks have a fairly simple architecture and high training speed.

RBF networks are known as networks with locally configured processing units, that is, networks where the output signal is „local” or „tuned” to some narrow-confined area of the input space. (Rudenko & Bodiansky, 2006)

Radial basis transfer function - this type of function accepts as the argument the distance between the input vector and some preset center of the activation function. The closer the input vector is to the center, the higher is the value of this function. (Yasnitsky, 2008) Gaussian function in this case can be used as a radial basis:

$$y = \exp - \frac{(S - R)^2}{2\sigma^2} \quad (1)$$

where  $S = \|X - C\|$  is the distance between the center  $C$  and the vector of the input signals  $X$ . The scalar parameter  $\sigma$  determines the decay rate of a function when the vector is distant from the center and is called the width of the window, the parameter  $R$  determines the shift of the activation function along the abscissa axis. Different metrics can be used as a distance between vectors (Kruglov & Borisov, 2001), although it is the Euclidean distance that is most commonly used:

$$S = \sqrt{\sum_{j=1}^N (x_j - c_j)^2} \quad (2)$$

where  $x_j$  is the  $j^{\text{th}}$  component of the vector fed to the input of the neuron, and  $c_j$  is the  $j^{\text{th}}$  component of the vector that determines the position of the center of the transfer function.

The RBF network consists of an input, a single hidden (radial basis) and a linear (output) layer. The input layer consists of sensors (synaptic contacts) that connect the network to the external environment. The neurons of the hidden layer act on the principle of centering on the elements of the training sample. The weighting matrix functions as the centers. There is an area called radius around each center. The radius (network sensitivity) is adjusted using the vector of smoothing coefficients  $(\sigma_1, \dots, \sigma_m)$ . The transformation function (Gaussian function):

$$f(x) = e^{-\frac{(x-c)^2}{2\sigma^2}},$$

which takes values in the range from 0 to 1, determines the output of the hidden layer. The source layer contains ordinary linear or sigmoid neurons. The weight setting determines the output of the network.

The properties of such an artificial neural network are completely determined by the radial basis functions used in the hidden layer neurons and form some basis for the input vectors  $x$ . The radial basis function  $\varphi(x) = \hat{O}(\|x - c\|, \sigma) = \hat{O}(r, \sigma)$  – is a multidimensional function that depends on the distance between the input vector  $x$  and its own center  $c$  and the width (scale) parameter  $\sigma$ . (Nelles, 2001) Thus each neuron of the hidden layer determines the distance between the input vector and its center and performs some nonlinear transformation  $\hat{O}(r, \sigma)$  over it.

In most practical cases, the node centers  $c_i$  and width parameters  $\sigma_i$  are fixed and only the synoptic weights  $w_i$  are adjusted. To solve more complex problems, all three sets of parameters  $c_i \in R^n$ ,  $\sigma_i$ ,  $w_i \in R^1$ ,  $i = 0, 1, 2, \dots, h$  are taken into account.

The main advantages of using RBFNs compared to other ANNs are the next (Bodiansky & Rudenko, 2004): there is only one hidden layer in the RBFN, which simplifies the network structure; high learning speed; training ability on a heterogeneous sample of data; possibility of modeling systems with deep instability; ability to build models of dynamics of non-stationary objects; prognostic properties; capability of modeling and predicting random processes.

It is the presence of these advantages that led to the choice of this type of ANN for the study of economic phenomena and processes.

### 3. METHODOLOGY OF RESEARCH

The RBFN behavior depends largely on the number and position of the radial basis functions of the hidden layer. Indeed, for any valid  $n$ -dimensional input vector  $x = (x_1, x_2, \dots, x_n)$ , where  $x \in X \subset R_n$  the network output will be determined as follows:

$$y_i = \sum_{k=1}^m w_{ik}^l f_k(\text{dist}(x, w_k^r), \sigma_k) \quad (3)$$

where,  $w_{ik}^l \in W^l$ ,  $i = \overline{1, p}$  – the weights of the linear layer, are the centers of radial-basis functions.

The artificial neural network with RBF is characterized by three types of parameters (Rudenko & Bodiansky, 2006; Bodiansky & Rudenko, 2004):

1. Linear weight parameters of the source layer  $w_{ij}$  (included in the network description linearly);
2. Centers  $c_i$  – nonlinear (included in the description of the neural network in nonlinear way) parameters of the hidden layer;
3. Deviations (radial of basic functions)  $\sigma_{ij}$  – nonlinear parameters of the hidden layer.

So, as we can see, the advantage of using such ANNs for modeling economic phenomena and processes is a significant simplification of the model structure, since radial basis functions are used, and the training task involves determining the weight coefficients and synoptic connections of the output layer of the network. In this case, the neural network has one hidden layer with nonlinear activation functions having configurable parameters. This ensures the simplicity

of the model structure on the one hand and the approximate and predictive properties, on the other hand, with small „noisy” data samples. That is why, as an experiment with the use of RBFN, we modeled the impact of the customs system of Ukraine performance indices on the indicators of economic security of the state.

Based on official statistical information (State Statistics Service of Ukraine, 2018; EUROSTAT, 2019), eight indicators for 2010–2017, which characterize the customs authorities of Ukraine work efficiency were selected as factors of influence (input data). Among them: the amount of transfer of customs payments to the state budget, the number of cargoes completed, the number of customs declarations issued, the number of vehicles issued, the number of preliminary declarations issued, the number of preliminary notices issued, cases of violation of customs rules, cases of smuggling. Eighteen most effective indicators of economic security of Ukraine in 2010–2017, which comprehensively characterize the economic status of the country in terms of production, social, financial, food, transport, energy, foreign economic security, grouped on the basis of performance, were selected (State Statistics Service of Ukraine, 2028; Institute for European Environmental Policy, 2013). The list of these indicators is provided by the Methodological recommendations for calculating the level of economic security of Ukraine, which were approved by the Order of the Ministry of Economic Development and Trade of Ukraine of October 29, 2013 No. 1277.

MATLAB was used to train the network and shape its structure, as it allows for the rapid processing of large amounts of statistics, and its tools provide a wealth of data analysis capabilities covering almost all areas of mathematics, including ANN.

Both the one-step Widerow-Hoff training algorithm (Nelles, 2001), and the multi-step learning algorithm are most commonly used for RBFN training. When training a neural network using a one-step algorithm, the network structure is formed in such a way that the number of neurons in the hidden (radial basis) layer is equal to the number of elements of the training sample, and the learning error is zero (Nelles, 2001). A significant disadvantage of the one-step training algorithm is that it forms a network with a number of radial-base-level neurons equal to the number of training sample elements. With this neural network training algorithm, it is not possible to obtain adequate simple models when dealing with large volumes of training samples. Therefore, in our study, we used a multi-step learning algorithm.

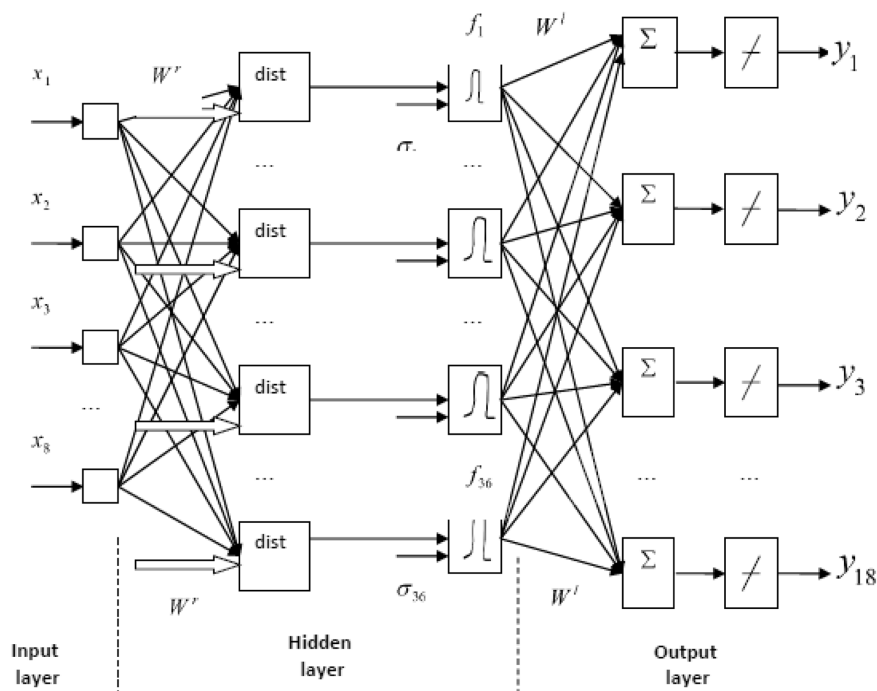
The multi-step network learning algorithm generates an RBFN model with optimal number of hidden level neurons. It creates a bi-level network. The first level consists of radial-base neurons, and calculates its weighted inputs using the Euclidean distance *dist* function as well as its specific inputs. The second layer consists of simple linear neurons ( $y = f(x) = x$ ) and calculates its weighted input and its specific inputs using the appropriate functions.

At the beginning of the algorithm, the radial basis level does not contain neurons. Neurons are added to the hidden layer until the sum of squares of the mean square errors of the network is less than the specified value or the maximum number of neurons is used. In the next step, the network forecast is calculated:

1. An input vector (in our case it is the realization of inputs in one or another month) with the largest value of the root mean square error is found;
2. A radial basis neuron with weights equal to this vector is added;
3. The linear scale weights are reorganized in such a way as to minimize the root mean square error.

Fig. 1 shows the initial structure of the RBFN, where  $x_1 - x_8$  – the indicators characterizing the efficiency of the customs system functioning, and  $y_1 - y_{18}$  – indicators of economic security of the state.

As the figure shows, the structure of RBFN 8:36:18 is formed when the root mean square error of training is set to equal to zero. The number of neurons in the hidden level is equal to the number of elements of the training sample. From the conducted research it is possible to conclude that the given structure of a network is too complicated.



**Figure 1.** The initial structure of RBFN (the root mean square error of training is zero)

**Source:** Own elaboration

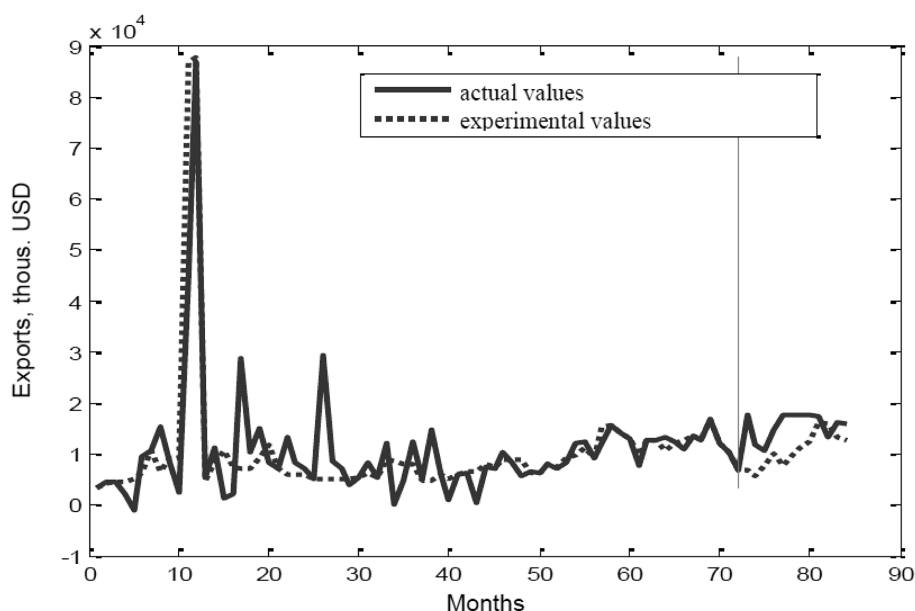
With a root mean square error of network training of 10% the number of neurons of the hidden level will be equal to 30; an error of 20% equals to 21 neurons; errors of 30%, 40%, and 50% result in 14, 6 and 2 neurons of the hidden level respectively. Although at 40% and 50% network training error, the RBFN structure is optimized to 6 and 2 hidden level neurons, however, as the results of the experiments, this structure does not provide sufficient prognostic properties. (European Commission, 2012, 2013)

The formation of the network structure is also influenced by the smoothing factor (the width parameter of the RBF window), which is usually chosen experimentally. The parameter value must be large to override the active areas of the basic functions. This provides the necessary smoothness of the approximating curves and precedes the situation of retraining the network. However, the influence parameter value should not be so large that the radial basis function shows all the input values equal.

The choice of the smoothing coefficient is completely empirical, and when incorrectly set its value complicates the RBFN structure and deteriorates its prognostic properties.

As a result of the conducted research, the optimal value of the impact parameter (RBF window width parameter) was set at 600000 (Institute for European Environmental Policy, 2013),

which made it possible to predict rather complicated dynamics of economic security indicators, depending on the factors characterizing the activity of the customs authorities of Ukraine. An example of such a model is shown in Fig. 2.



**Figure 2.** Forecasting the ES export indicator values

**Source:** Own elaboration

#### 4. FUTURE RESEARCH DIRECTIONS

On the whole, the obtained results of the conducted experiments give grounds to conclude that the given RBFN structure well describes the tendency of change of economic security indicators of the country for future periods. This, in turn, will allow future studies to accurately establish the relationship and interaction between performance indicators of the customs system and certain economic security indicators of the state.

#### 5. CONCLUSION

As a result of the research, the optimal RBFN structure is 8:14:18 (the allowed root mean square error of network training is 30%, the influence parameter is 600000).

To further check the adequacy of the obtained model structure, a computational experiment was conducted: an attempt was made to forecast the values of economic security indicators of Ukraine with the help of RBFN for 2018-2019 based on a training sample of data (performance indicators of the customs authorities of Ukraine and economic security indicators of Ukraine) for 2010–2017.

The results of forecasting the values of economic security indicators of Ukraine were compared with their actual values given in official statistical sources.

As the results of the experiment show, there is no significant error in the obtained results of forecasting the values of the economic security indicators of Ukraine. The neural network, in training, describes well the actual trend of individual economic security indicators of Ukraine.

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# IMPLEMENTATION OF BLOCKCHAIN TECHNOLOGY IN THE SMART CITY

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**Abstract:** *This document presents an attempt to determine guidelines for the implementation of the blockchain projects within smart city (SC) information systems (IS) to improve their security and sustainability through harnessing benefits of blockchain technology. Although available scientific sources are scarce a review of contemporary scientific literature and other available sources attempts to determine weaknesses of current IS within SC and to compare their vs benefits of the blockchain technology in order to show that blockchain technology can offer potential solution to weaknesses and improve SC IS and therefore the sustainability of the SC itself. However, this research only shows the need for such implementations and discuss what further research is required to provide a framework for the implementation of blockchain technology in smart cities.*

**Keywords:** *Blockchain, Smart city, Project management, Information systems, Sustainability.*

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## 1. INTRODUCTION

This paper elaborates downsides of IS within SC found within the scientific literature and the promise delivered by the blockchain technology to solve them. In the brief review of most common problems and limitations of ICT within SC and a brief review of strongpoints of blockchain technology, a synthesis is attempted. This synthesis shows that there is a possibility that blockchain technologies can improve IS security, privacy and network availability — furthermore the scientific. Accepting blockchain technologies and exploring ways to apply these technologies to addressing challenges in smart cities is a research direction and represents a new area that has not been sufficiently explored through the prism of scientific research because blockchain technologies were recently adopted with creation of Ethereum Enterprise Alliance in 2017 [1], [2]. The result of the research in this paper is to show the possibility for improvement of IS within SC with the application of blockchain technology and to search for a scientific founded framework for the implementation of blockchain technologies.

There are strong indications that the application of blockchain technologies improves existing systems based on automatic data processing while ensuring increased security, transparency and easier participation of a large number of actors, regardless of whether they are natural or legal persons (see literature review in chapter 2.). Although the term Information Systems in Smart Cities marks a very broad term, this research refers to software solutions in smart cities that are related to e-government and fields of application of blockchain technology: payments, infrastructure for payment and exchange, smart contracts, identification, confidential data, data storage, voting and fundraising.

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In scientific literature, blocking technology has not been sufficiently explored since its beginning is related to 2008 [3], while wider acceptance by large corporations only in 2017 [2], therefore there are not enough scientific studies of the application of this technology in practice. This technology is still in its early adoption phase, and the lack of use cases and standards make scientific research documents very scarce.

## **2. BLOCKCHAIN TECHNOLOGY IN THE SMART CITY**

A brief literature review is examining the problems encountered by IS in smart cities and examples of the application of blockchain technology to contribute to the sustainability of a smart city as well as any limiting circumstances related to the application.

One of the known definitions of the smart city (ITU) is: „A smart and sustainable city is an innovative city that has extensive use of information technology using them to develop the quality of life level, city administration, by taking into the account the needs of current and future generations in the same way as it takes into account economic, social and environmental aspects [4].

Dameri and Rosenthal, (2014) in the collection titled „Smart City - How to create a public and economic value in an urban area with high technology” give the idea that citizens expect to live in urban dwellings that are designed to provide a high quality of life which can only be achieved through investments in sustainable development. The complexity of the concept of a smart city is nonsense from the fact that the concept itself is connected simultaneously with the physical flow and the intellectual and social capital of the city. In this regard, planning the city is not just a design of urban environments to incorporate social, political and economic studies. The concept of smart cities by them is essentially supported by the development of ICT technologies [5].

ICT solutions are considered as a key factor in building smart cities because of their ability to support a large number of services for citizens. Because of this, it must be pointed out that in the smart cities a large number of versatile devices are coexisting, they are equipped with heterogeneous technologies, but they will nevertheless be joined in interaction using a large number of services [6].

The group of authors believes that the information systems of the city are crucial for the relation of intelligence (intelligence) and innovation. They believe that ICT is a key component for the development of knowledge-based organisations and intelligent cities. As ICT develops, the number of users and cases of use increase [7].

Due to the above, the following challenges will arise: service availability, location dependency problem, security problem and user identification, mobility problem - it is necessary to enable users to move between networks, the problem of scaling large numbers of users without reducing the quality of service, the problem of error tolerance. Due to these challenges, it is necessary to create information systems that can be more resistant to systemic errors and system failures [8].

The literature prevails that existing Internet architectures cannot respond to the before mentioned challenges [9], [10], [11].

The group of authors in its work as the biggest challenges also signifies privacy, analysis and data search, data integration, GIS-based visualisation, service quality and intelligent systems that use these data [12].

The privacy problem is created by the large amounts of personal information about the smart city's residents who are the subject of the analysis and can, therefore, be misused for making personal profiles. For example, a large amount of data on the social activities of individuals is collected every day. Although a lot of effort has been invested in solving this challenge, saving large amounts of personal data is a problem. Although the number of successful hacker attacks is very low, a constant battle for data retention is ongoing and a growing number of cybersecurity problems that smart cities have to deal with [13].

In addition to the problem of privacy, one of the problems that are certainly interesting for the topic of this research is the problem of quality and availability of the service. A group of authors thinks that to establish a smart city a large number of technologies must be integrated and hence the quality of service provided by different technologies represents a major challenge for the success of a smart city [14].

Progress in ICT solutions has been facilitated not only by the development of the private sector but also by public administration institutions and how they perform operational activities [15]. Progress in ICT has allowed local governments to transform the way they offer services to citizens [16], [17], [18].

Blockchain technology, which became known primarily thanks to bitcoin (Bitcoin), is a type of distributed system technology further referred to as Distributed Ledger Technology (DLT), which is defined as a „distributed, shared, encrypted database that serves as irreversible and non-recoverable (non-corrupt) information repository „[19]. When blockchain technology is used to create a platform, the product is a digital platform that stores and verifies the entire transaction history between its users anywhere on the network. From a technical point of view, blockchain is a „database consisting of chronologically arranged series of transactions known as blocks” about which each proposed transaction must be checked with the certainty and integrity of that particular block” [20].

Once the information is entered, it can never be deleted. [21]. Block technology is described in the literature as a database and as a network equipped with a built-in security system and internal integrity [22].

One of the applications of blockchain technology is the development of smart administration as part of the 3.0 phase of the blockchain technology development through the idea of providing services traditionally provided by public administrations in a more efficient, decentralised and cheaper way [23].

### **3. CONCLUSION AND FURTHER RESEARCH**

The review of the contemporary scientific literature shows that the main problems of IS within SC such as privacy, security, availability and heterogeneous architectures correspond with strong points of blockchain technology because blockchain based systems provide strong security together with total anonymity; their distributed nature also increase availability and finally their nature is interoperable.

Although the blockchain technology is relatively new, fundamental studies of the technology itself exist in each problem domain including security and literature on distributed systems (for example, multi-level authorization [24], energy efficient resource management in distributed

systems [25] [26], etc.). A careful look and acceptance of proven solutions would speed up the overcoming of the current challenges and limitations of blockchain technology [27].

In scientific literature, papers are dealing with the use of blockchain technology to increase the sustainability of smart cities, as shown in the literature review. The available scientific literature has not so far dealt with the challenges, limitations and effects of the implementation of blocked IS in smart cities. The available materials on this subject are not scientific. Secondary sources on this subject can be found in studies conducted by major consulting companies such as Deloitte [28] or in the forms of whitepaper presented upon blockchain project pitch events.

However, the authors did not find any working framework for the implementation of information systems projects (IS) based on these technologies in the scientific literature. According to the authors, it is necessary to mark the areas of application of this technology in smart cities and to continue to explore ways of applying to define the success factors and results indicators for the implementation of the IS projects based on block technology.

To achieve a higher degree of sustainability in smart cities, it is necessary to define subsystems whose business would be improved by the use of block technology. Analysing the problems and the previous effects of the application of blockchain technology will identify the smart cities sub-systems that realize the greatest benefit from the implementation of this type of projects with the high performance of the projects themselves. The data obtained using this scientific method would be further used to establish critical success factors and indicators of the results of project implementation of this type. Based on the identification of the field of successful application of information systems in smart cities and critical success factors as well as the result indicators, a working framework for the implementation of information systems projects based on technologies in smart cities can be created.

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# A SUSTAINABLE CITY IN THE CONTEXT OF URBAN DEVELOPMENT

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**Abstract:** *The concept of sustainable cities is based on a development paradigm that recognizes the rapid growth of urban population and makes an important contribution by forming a global urban plan. Sustainable city is organized in order to emphasize the importance of people and their needs. This paper will define what sustainable city is and show how certain innovative elements have been introduced in Copenhagen in order to achieve city sustainability. In that regard, an overview of innovative urban solutions in the context of environmental protection will be given. A comparative analysis of the achievement of the SDG 11 objective - Sustainable Cities and Sustainable Communities in Copenhagen will be carried out in relation to the other European Union capitals. The aim of this research is to determine whether Copenhagen is a sustainable city and how sustainable cities contribute to promoting the sustainable development goals. Finally, proposals will be made to achieve those objectives for other cities, based on the results achieved by the City of Copenhagen.*

**Keywords:** *Sustainable development, Sustainable city, Copenhagen, Environmental protection, Urbanism and urban revitalization.*

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## 1. SUSTAINABLE CITY

In the 1980s, initially sustainable urban development was linked to environmental protection and later to environmental sustainability in the United Kingdom. Littig and Griessler, 2005 stated that every sustainable city should develop a political-institutional, environmental, economic and social dimension following the guidelines of the United Nations and the Commission on Sustainable Development. Kemp and Saeed (2015) emphasize that such an approach includes the level and scope of political allocation, the dominant orientation of the state and other institutions, and their interactions. Höjer and Wang, (2015) state that sustainable urban development has become a precondition for sustainable development. Also, „smart” is a keyword that attracts huge interest from companies dealing with information and communication technologies (ICT) and ICT infrastructure. Marsal-Llacuna et al. (2015) state that smart city initiatives, using data and information technology, target more efficient services to citizens, monitor and optimize existing infrastructure, increase collaboration between different economic actors, and encourage innovative business models. According to Ferrara, (2015) smart cities include all aspects related to the environment and energy, more efficient urban transport systems and better waste disposal systems. Therefore, the concept of a smart city implies better use of resources and less polluting emissions (Ferrara, 2015: paragraph 2.1). Moreover, the United Nations adopts the New Urban Agenda (NUA) (2016), which sets out the principles for implementing the New Urban Agenda

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(NUA, 2016) and sets out the principle of „providing equal access to all physical and social infrastructure and basic services”. Soewarno et al. (2019) emphasize the importance of green innovation concerning green products and processes, including energy-saving, pollution management, waste recycling, product design and environmental management. In a study by Ahvenniemi et al. (2017) predict that, according to the United Nations, by 2050, 66% of the world's population will live in urban areas, resulting in major challenges in the context of air pollution, waste management and human health. However, it should be noted here that recently there has been some progress in understanding the concept of cities and that more and more cities are striving to achieve the goals of a smart city (smart city) rather than the goals of a sustainable city. According to Falch and Maestrini (2019), the concept of smart cities includes five key factors; digital technology, environmental sustainability, civic initiatives, mobility and work. On the other hand, for example, the Smart Cities Index identifies 19 indexes, while others identify six macro areas of smart city intervention: smart people, smart governance, smart life, smart mobility, smart environment, and smart economy (Giffinger et al., 2007). Cities can be found to play a key role in combating climate change. Application of new innovative technologies is considered a key factor in reducing greenhouse gas emissions and improving energy efficiency in cities.

## **2. INNOVATIVE ELEMENTS FOR ACHIEVING COPENHAGEN SUSTAINABILITY**

In 2009, the Copenhagen climate plan was adopted, which set the policy of achieving a 20% reduction in CO<sub>2</sub> emissions by 2015 and the city strategic goal of becoming the first CO<sub>2</sub>-neutral capital in the world by 2025 (Climate Plan CPH 2025, 2012). Floater et al. (2014) state that 2011 CO<sub>2</sub> emission was 1.9 million tonnes for the city of Copenhagen, with existing initiatives predicting that it will be reduced to 1.2 million tonnes by 2025. The majority of emission reductions (74%) are expected to come from energy production, transport sector (11%), energy consumption (7%), new initiatives (6%) and municipal operations (2%) (Floater et al., 2014, p. 86). Floater et al. (2014) emphasize that combined heat and power district heating networks exceeded 95% in Copenhagen, and certain generators rely considerably on fossil fuels. Copenhagen will generate higher, low-carbon electricity that can be exported in the grid, and will do so from its biomass cogeneration grid and wind farms outside Copenhagen. Ben Amer et al. (2019) have developed a model that shows how the greater city of Copenhagen in 2025 will reach zero emissions in the water and electricity sector, whereby Copenhagen can achieve its goal by phasing out fossil fuels. Ben Amer et al. (2019) state that CO<sub>2</sub> levels in Denmark, but also in Copenhagen, will decrease between 2020 and 2025. In the context of waste management, as an innovative element that achieves sustainability of the city, Gottlieb (2019) drafted Plan 24 (Resource and Waste Management Plan 2024), which aims to make 70% of household waste recycled in 2024, compared to 45% from 2018. In 2010, an analysis was made that showed that only 27% of waste was recycled of which 41% of biowaste is incinerated. The plan is to reduce 59,000 tons of CO<sub>2</sub> in 2024 with an emphasis on the utilization of biowaste in biogas (Resource and Waste Management Plan 2024, 2019). Falch and Maestrini (2019) analyse the solution of the Danish start-up company NordSense, which designed an innovative waste disposal solution in Copenhagen that includes various analytical tools for route planning and optimal placement as well as emptying of containers. Transport solutions that affect the sustainability of the city increase the proportion of residents who feel safe while cycling - from 67% in 2010, to 80% in 2015 and further to 90% in 2025 (Copenhagen, 2014). Those solutions were achieved with more and broader bicycle lanes, improved designed intersections and series of behavioural campaigns

(Copenhagen, 2014). In 2013, an intelligent bicycle sharing system was developed and integrated into a transport system with buses, trains and subways. The innovative solution has resulted in increased usage of public transportation and reduced use of cars.

### **3. INNOVATIVE URBAN SOLUTIONS IN THE CONTEXT OF ENVIRONMENTAL PROTECTION**

Cucca (2017) states that national and local governments have promoted several urban development strategies in order to increase the attractiveness of the city. Those strategies presented Copenhagen as one of the most environmentally friendly cities in Europe. The strategy improves the quality of the urban environment related to waterfront redevelopment, new ecological neighbourhoods, green (social) housing and urban neighbourhood renewal in line with stability standards (Cucca, 2017). In the period from 2014 to 2018, the average price of real estate in Copenhagen increased at an annual rate of 5.7%, i.e. the total real estate prices in the city increased by more than 25% (Statistics Denmark, 2020). At the same time in Copenhagen, almost 40,000 new residents moved in, which affected the increase of real estate prices. Alves (2019) states that the transformation of obsolete dwellings into modern and attractive housing has led to the transformation of tenures and costlier housing. That confirms the thesis that Copenhagen will become a city reserved only for rich people. Winter (2018) states that a sustainable lifestyle is strongly associated with two contradictions: exclusivity and privileged which makes it available only to certain classes. She concludes that in Copenhagen, a sustainable lifestyle is a unique privilege, as well as that the suburbs and their higher ecological footprints damage the goals and image of Copenhagen. Alves (2019) analyses Copenhagen strategies in the context of housing policy and states that access to non-profit housing should be open to all, regardless of their income.

### **4. COMPARATIVE ANALYSIS OF SDG 11 ACHIEVEMENTS**

Sustainable development Goal (SDG) 11 - Sustainable cities and communities include ensuring access to adequate, safe and affordable accommodation, expanding public transport, as well as improving inclusive and sustainable urbanization and sustainably manage communities. One of the most important points is to reduce the harmful impact of cities on the environment per capita and pay special attention to air quality and manage municipal and other waste. The SDG 11 data is stated in the report of the Sustainable Development Solutions Network published by the SDSN and Bertelsmann foundations in 2019.

Table 1 shows 10 individual indicators to measure the fulfilment of SDG 11 indicators which was set by the SDSN in 2019. Compared to other European Union capitals Copenhagen ranks 10<sup>th</sup> overall. Of the indicators set, Copenhagen fully met 3: satisfaction with public transport, ranking 11<sup>th</sup> place in the EU, satisfaction with cultural facilities (7<sup>th</sup> place), number of concerts and shows per 100,000 inhabitants (11<sup>th</sup> place). In Copenhagen, there are smaller challenges remaining in reducing the concentration of PM2.5 particles (microgram/m<sup>3</sup>) and increasing the number of charging stations for electric vehicles. The biggest challenge for Copenhagen is the reduction of NO<sub>2</sub> emissions, ranking it 24<sup>th</sup> place in the EU. The indicator of satisfaction with affordable housing ranks Copenhagen 24<sup>th</sup> in the EU, and the rate of congestion of housing cost overburden rate in urban areas is almost the highest in the European Union (26<sup>th</sup> place).

**Table 1.** The European Union (EU) Cities SDG 11 Index – Performance by indicator

City	Overall score- SDG 11	Concentration PM2.5 (microgr/m3)	Emission of nitrogenoxides (kg/km2)	Satisfaction affordable housing (%)	Housing cost overburden rate in urban areas (%)	Recharging stations (per 10.000 people)	Satisfaction public transport (%)	Satisfaction cultural facilities (%)	Sights and landmarks (per 100.000 people)	Museums (per 100.000 people)	Concerts and shows (per 100.000 people)
Stockholm	57,40	5,51	5,91	7	10,60	0,16	79	55	95	69	19
Helsinki	55,70	8,96	18,29	8	5,60	0,41	93	55	85	61	16
Copenhagen	57,50	11,27	16,00	8	22,40	0,73	75	54	148	78	34
Paris	60,80	17,50	5,24	4	6,80	0,24	79	44	468	216	239
Amsterdam	75,70	15,56	8,44	10	12,20	4,96	82	56	166	135	81
Luxembourg	47,30	16,30	23,97	13	14,60	1,10	80	42	36	16	4
Vienna	72,50	18,00	4,52	18	11,30	0,42	95	80	244	117	99
Ljubljana	54,80	20,26	5,54	27	7,20	0,43	75	45	53	29	11
Berlin	76,70	16,29	4,42	10	17,90	1,44	84	58	315	204	105
Dublin	60,30	10,55	12,49	12	6,30	0,90	75	42	182	89	71
Bruxelles	52,40	18,25	4,38	19	14,70	0,41	71	27	161	98	21
Bratislava	39,40	18,33	7,46	14	7,80	0,48	54	20	124	36	2
Prague	74,00	18,62	3,85	28	13,40	0,44	86	57	340	309	136
Madrid	60,50	9,95	5,99	37	11,30	0,16	72	23	376	112	137
Tallinn	57,50	8,22	9,26	17	5,90	0,79	71	46	87	86	11
Warsaw	49,00	26,30	6,57	24	9,00	0,14	76	30	118	60	19
Zagreb	53,30	21,84	7,69	50	5,90	0,11	76	31	56	39	13
Vilnius	48,90	22,99	3,86	33	5,60	0,11	56	39	83	44	9
Riga	45,50	16,80	6,78	23	7,00	0,03	67	29	69	57	10
Budapest	58,70	25,00	3,92	33	10,90	0,58	67	33	180	95	38
Sofia	45,70	21,86	4,49	41	17,70	0,08	74	13	50	21	11
Lisbon	49,70	11,15	6,52	14	7,90	0,89	54	15	163	88	54
Rome	46,70	17,02	3,49	19	11,70	0,25	30	19	795	191	94
Bucharest	45,00	22,89	2,45	42	9,60	0,04	48	19	105	47	24
Valletta	40,40	N/A	4,44	44	1,50	0,98	46	16	39	16	6
Nicosia	50,90	17,03	2,48	43	3,50	0,12	41	N/A	135	63	13
Athens	57,90	15,00	4,48	62	43,70	0,04	72	17	112	97	32

Source: <https://euro-cities.sdgindex.org>

## 5. CONCLUSION

Innovation has a positive impact on achieving the goals of sustainable development. Sustainable cities contribute to environmental protection as the natural ecosystem, together with social, economic and cultural elements are integrated into a single system. It is necessary to build sustainable cities and thus contribute to the implementation of sustainable development. The implementation of innovations in a sustainable and smart city achieves economic development and ensures a better quality of life for its inhabitants. The conducted research showed that Copenhagen is not the best city in meeting the set indicators of Sustainable Development Goal 11, but it is certainly on the way of becoming one. The City of Copenhagen recognized the importance of sustainable development in time and started raising citizens' awareness and developing the quality of life in urban areas early on. Copenhagen has made progress in certain areas, primarily traffic electrification and increasing the use of renewable energy sources. However, the results showed that the biggest problems are with the satisfaction of citizens with affordable housing, which should be solved by continuous urbanization by 2030. Based on the results of the City of Copenhagen, other cities could achieve the objectives of SDG 11 by implementing innovative elements in the areas of waste management, urban development, transport, energy, etc.

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# THE ROLE OF INFORMATION AND COGNITIVE DOMAINS IN EMERGENCIES

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**Abstract:** *This report discusses the role of information domain and cognitive technologies in emergency management in the context of the global pandemic problems, which is also caused by a lack of leader's capacity, knowledge transfer, lack of major investments in the security and health systems. Global emergency response plans should be based on the "artificial" reality of our planetary condition and used as a starting point for planning. Innovative companies are trying to take advantage of cognitive technologies to automate processes to solve a wide range of problems that require specific knowledge. The main aspects of knowledge are related to the so-called „P" categories (Perceive, Perception, Predict) of our critical environment and data input to such systems coming from sensors and smart elements. The new model for effective reactions in crisis refers to cognitive technologies, which, if available use an aesthetic language, generate unstructured texts, process information, used sensors for data in real-time, reading signals, access to "smart objects" and other algorithmic approaches for searching of solutions in extreme situations. The cognitive technologies used during contingency planning is oriented towards the further development of AI in order to improve the performance of machines in terms of intuition, sensitivity, emotions, and other factors that enhance the planning and decision-making tasks.*

**Keywords:** *Information domain, Cognitive computing, Emergency planning, Crisis communications, Knowledge transfer, Machine learning, Infodemics.*

During the epidemics and crises, information is the most valuable resource, it is more important than any symbolic form of isolation. Upon receiving accurate information on the speed and nature of the epidemic decisions become more relevant to realities. The speed and extent of the threat are directly dependent on the interpretation of information. The ruling political elite also showed in Europe's inability to cope adequately with complex problems caused by the viral epidemic, in the months of February and March (2020). After that, the measures taken to deal with the situation were the same, untimely, chaotic, and rather symbolic. In such situations, it is required to radically change the management model and temporary replacement of political elites, with people who have the training to handle extreme situations effectively to protect the lives of citizens. In critical moments, we need politics and decisions based on scientific data. In the pandemic like the present, we can talk about the construction of simulated reality and so-called by experts „infodemics". A „snowball effect" or one dominant theme continues for months and discredits reality as such. All the facts, news, comments in the public (online) space are related to the epidemic-that way a lot of facts are accumulated, related to only one problem, on the one hand, and on the other, the lack of professional analysis and interpretation of the situation leads to distorting the situation.

## 1. SIMULATED REALITY ABOUT THE PANDEMIC

Benjamin Bratton<sup>2</sup> told us that the sense of extraordinary and unusual is tangible and real. Instead of calling this moment an 'exception state', we should look at it more as a 'prior state'.

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<sup>2</sup> See also: Benjamin H. Bratton <https://strelkamag.com/en/article/18-lessons-from-quarantine-urbanism>

The consequences of poor planning or lack thereof are destroying social systems and isolating reflections become apparent. Vigilance should be oriented not to „exceptions” as correct, recognized norms of behavior, but above all, to the emergence of such dysfunctional norms once the horizon is clear.

Characteristics of reality in the first months of 2020:

- physical threats,
- database related to only one problem,
- cascading online effect,
- reality is replaced by simulated reality,
- game model, addiction to a common theme, unifying people's thinking,
- lack of effective ideas to tackle the problem / global teams for defining problems are deficit,
- key public hubs and places related to mass culture and the values already formed,
- in the past 20 years there is no comprehensive ideas to deal with such situations,
- by that time we are witnessing massive investments in sports, shows, entertainment industry,
- limited investment in security systems, crisis response and prevention.

### 1.1. Emergency principles

In this epidemic, current governments in Europe have shown complete incompetence. Basic principles of emergency management have been violated. There is an effect called „isolation hysteria”. Factors that have characteristics to complicate situation: globalization; urbanization; huge metropolitan areas; lack of teams to identify potential problems; poor preparation for emergency and crisis management; the role of civil protection is underestimated; intensive air traffic all over the world.

Eric Klingenberg<sup>3</sup>, professor of sociology and director of the Institute for Public Knowledge at New York University pointed out that the coronavirus pandemic marks the end of our romance with market society and hyper-individualism. We could turn toward authoritarianism. The dystopian scenario is real. However, we will go in the other direction. We are now seeing that market-based models for social organization fail, catastrophically, as self-seeking behavior makes this crisis so much more dangerous than it needed to be. Nevertheless, crisis moments also present opportunity<sup>4</sup>: more sophisticated and flexible use of technology, less polarization, a revived appreciation for the outdoors and enjoyment in other simple pleasures.

Ben-Israel<sup>5</sup>, who also heads Israel's Space Agency, said: the policy of lockdowns and closures was a case of “mass hysteria.” Simple social distancing would be sufficient. Professor Yuval Harari<sup>6</sup>, during the one interview point out that humankind is now facing a global crisis. Perhaps the biggest crisis of our generation. In such moment, we must act quickly and decisively.

<sup>3</sup> Coronavirus Will Change the World Permanently.  
<https://www.politico.com/news/magazine/2020/03/19/coronavirus-effect-economy-life-society-analysis-covid-135579>

<sup>4</sup> Ibid. Coronavirus Will Change the World Permanently.

<sup>5</sup> <https://www.timesofisrael.com/top-israeli-prof-claims-simple-stats-show-virus-plays-itself-out-after-70-days/>

<sup>6</sup> Prof. Yuval Noah Harari: The world after coronavirus  
<https://www.ft.com/content/19d90308-6858-11ea-a3c9-1fe6fedcca75>

We should also take into account the long-term consequences of our actions. Decisions that in normal times could take years of deliberation are passed in a matter of hours. In this time of crisis, we face two particularly important choices. The first is between totalitarian surveillance and citizen empowerment. The second is between nationalist isolation and global solidarity. According to Harari instead of building a surveillance regime, it is not too late to rebuild people's trust in science, in public authorities and in the media. We should definitely make use of new technologies too, but these technologies should empower citizens. He also concludes that both the epidemic itself and the resulting economic crisis are global problems. They can be solved effectively only by global co-operation. We need a global plan of action, and we need it fast.

Populism says prof. Bratton<sup>7</sup> despises experts and expertise, but right now people desire competence. At this moment, dry, prepared, trustworthy, available, adaptable, responsive technocratic foresight and effectiveness seem like the most idealistic politics imaginable. What is required is less a new narrative or a new art than acceptance of how the rapid intrusion of an indifferent reality can make symbolic resistance useless. The pre-existing conditions now exposed clarify the need for a geopolitics based not on self-undermining prisoner's dilemma tactics in the face of common risks, but on a deliberate plan for the coordination of the planet we occupy, make, and re-make over again. Otherwise, this moment really will be a permanent emergency.

Bratton<sup>8</sup> pointed out that the most successful steps have robust empirical and predictive model simulations of the situation and use these as a tool for action. City centers have become human-exclusion zones. We are uncomfortably adapting to psychogeography of isolation. Quarantine means a kind of suspended indeterminate status. As the RNA code of virus hacks our cells, it starts a domino effect of consequences, altering not only the movement of people, but affecting planetary cycles of energy, materialization, expenditure, and waste. This conclusion to be drawn is not that global interconnection is a bad idea, or a good idea, but that it is intrinsic and runs deeper than conventionally realized. Our thinking and our interventions must be based on a higher resolution understanding of cyclical interrelations and physical economies, from scales of viral infection to intercontinental circulation and back again.

## 1.2. Emergencies development

In the contemporary critical situation the governments take an actions with one-month delay / basic rule, if you are only a few hours late, everything you do is inadequate in this case / all measures are taken out of movement and in fact, as a result of which the results are more than tragic. For example, in March 2020, thousands of people have returned to Bulgaria from risk zones, they are potentially infected with the virus, or the virus was brought from outside with the help of government, they control borders, not people. In addition, authorities did not take steps to isolate and test people at airports in special hospitals; from this point of view, we cannot expect the situation's improvement.

Another opposite example is South Australia region with very few confirmed infections cases (438), and 96% are recovered. One of the hallmarks of their response has been strong border restrictions. Early border control was effective in restricting the number of cases and after that; they have the highest level of testing. The same approaches and models for the management of

<sup>7</sup> See Benjamin H. Bratton 18 Lessons of quarantine urbanism  
<https://strelkamag.com/en/article/18-lessons-from-quarantine-urbanism>

<sup>8</sup> Ibid

situation the expert notice in New Zealand, as a result, they have extremely low fatalities and in Vietnam, the fatalities rate close to zero.

Methods are important and timely response. If the actions in the first days are inadequate / as it was in the our country and other European countries - a delay of more than a month / all other decisions lead to more tragic results. High levels of the incompetence of the administration have a big impact to society, they are not ready to react in such situations, everything was perceived as a show.

Social distance is the distance between the carriers of the virus and a healthy person, and sometimes it is calculated over several tens of kilometers, and it is very naive to believe that 1-2 meters is enough. This means an accurate diagnosis of infection and treatment at the point of detection. At the moment, the situation is very risky and complex, affecting various areas - the economy, business, social sphere, movement of people, most things are related to logistics, this implies that the processes are controlled by people who have been trained in this type of management, not under the authority of medical workers who never learned such things.

A well-informed population and motivation alone are more important and more effective than controlling people through police measures, ignoring their participation in decision-making. Unfortunately, in the current pandemic situation, the authorities have no information about what happened, they have "0" information about the threats.

### **1.3. Communication in the risk and emergency situations**

Typical risks for the modern man are:

- Increasing population density, abnormal crowding in major cities and metropolitan areas.
- Population increase in high-risk areas resorts / Thailand / along the large rivers / Danube /, coasts of oceans, mountains.
- Strengthening the role of technological risks - new technologies - new unknown risks.
- Population Aging - Risks and vulnerability to new infections and epidemics, special services to assist the elderly. One third of the European population is over 65 years, 2.5 million pensioners in Bulgaria.
- Emergence of new high-resistance treatment risks. Humanity has faced a variety of epidemics such as cholera, plague, influenza, typhoid, malaria, smallpox, with tragic results and millions of casualties.

Crisis communications: can be defined in two ways and therefore the concept causes confusion among experts. Today, the term is used to describe an organization in crisis and the need to communicate in this situation with key groups and audiences. Usually a crisis is an event that occurs unexpectedly; the organization is unable to control it, causes a loss of trust in management, and threatens reputation. Crisis communications provide primary, factual information to people. They are intended to inform the public how to evacuate in case of danger. The crisis is still a situation where control is minimized and happens without the involvement of the organization. Communication in a problematic situation - it is like crisis communication, but here the organization has knowledge of the situation and the ability to choose the time to discover its plans to overcome the problem.

Emergency communications-oriented to act in a disaster environment when it is necessary to inform people about the risk and benefits to shareholders and the public. The communicator, in

this case, is not perceived as a participant in a crisis or disaster, except that he is perceived as a mediator trying to resolve the situation. Communications are also aimed at informing people about possible solutions, with limited time and the threat to nature's health. Decisions are made, often with inaccurate and unclear information. This type of communication provides the opinion and knowledge of experts, allowing people to take appropriate action and respond adequately to a rapid disaster recovery. The effects from current epidemics are not disaster for business from crisis management point of view.

Elements of successful communication are: accuracy of information; high speed; openness; reliability and trust. Tasks of a critical situation are:

- Be prepared in advance,
- Partner search and expertise,
- Developing consensus on global responses,
- Database preparation and information flow management.

#### 1.4. Communications in the emergencies

Five approaches<sup>9</sup> to disaster that can block communication:

1. Too many messages from different experts and agencies: The problem arises when many organizations, agencies, provide different answers about the disaster. In times of crisis, people want the best solution and what it now. That is, they need a common version, suggested by different experts, of what to do right now.
2. The information for emergency is late. When epidemic started, the WHO recommended that only the diseased should wear protective masks, then the requirements are for everyone. If we do not provide the information that people need, then another will provide it, in another form, and it may prove fatal.
3. Paternalistic attitudes: „Don't worry." Tell citizens what they need to know to make their own decisions.
4. Beware of the rumors - they arise in the absence of quality information about the hazard. Establish a system for monitoring the media and public response to public information. Do not spread rumors with press conferences / i.e. not to hold press conferences for every hearing that has occurred. If the rumor is on the internet, only respond there.
5. Collision and conflict between different agencies about what happened. People need clearly defined roles and responsibilities.

Important steps to Communicating Success

- Clear communication plan - this plan is as important as any other plan.
- Becoming the first source of information in a crisis - the first message has more weight; however, it is dangerous if the first message is incorrect and fact-based.
- Express empathy for people - feel their feelings. The audience wants to know to what extent the administration understands their fears and needs.
- Demonstration of competence and expertise. Research shows that most people tend to believe in individuals who hold a particular professional position.
- Staying honest and open to the public: The danger arises when agencies try to protect people in order to avoid bigger problems by hiding information from the public. In the age of the information society, it is difficult to hide the facts or limit the flow of information.

<sup>9</sup> See: Crisis and Emergency Risk Communication, Barbara Reynolds, 2005, Centers for Disease Control and Prevention, Atlanta, Georgia



Conditions to be met by the first crisis messages and announcements:

- expressing empathy,
- confirmation of the facts (who, what, where, when, why, how), but it is not necessary to answer all these questions,
- what we do not know about the situation,
- explain to people when they will receive the first answer,
- what kind of assistance the citizens expect: commitments (we will provide you with information again in an hour); not to promise things beyond our control,
- where people can get more information (providing an open telephone line, a website for questions).

Communication in the first hours after the crisis includes the following items:

- presenting a brief, concise and focused message to the public about what has happened,
- not go into too much details - providing only relevant information about the crisis / not explaining what the organization, the participants, etc. are,
- actions should be expressed in positive terms, not negative - examples: positive „*keep calm*”, negative “*don’t panic*”,
- repetition of the message: the correct information is accurate, no matter how many times it is repeated (advertisement); repetition leads to greater trust and resilience in relationships,
- main actions should be transmitted with no more than three keywords, if possible to use rhyming,
- use of personal pronouns „*we promise ...*” *we understand the needs of ...*”

What to avoid when informing people:

- technical jargon and euphemisms - create a sense of uncertainty and lack of honesty,
- condescending and condemning phrases: „*you must be an idiot to try to escape the epidemic*”,
- attack: *attack the problem, not people or organizations*,
- promises / guarantees - only what can be secured,
- the magnitude of the problem can be discussed in the initial phase of the crisis, in the context of the health and safety of people and society. Loss of property is second, third is what the financial cost is,
- humor - sometimes helps reduce stress, but in most cases does not work. For some people, humor works well, and others causes a stroke.

## 2. COGNITIVE SYSTEMS IN 2020

Current trends are expressed not only in building resilience in crisis, but also in the massive use of advances in cognitive technologies. The benefits of cognitive technology are well described in the professional literature, and such models are one-step ahead of conventional artificial intelligence systems.

David Kaney<sup>10</sup> is the general manager of the IBM Watson project, suggesting that AI can be smart as far as people teach them. Cognitive computers use a combination of artificial intelligence, neural networks, machine learning, natural language command execution, mood analysis and context sensitivity, their purpose to solve everyday problems in a human-like manner.

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<sup>10</sup> Toward Data Science. How are Enterprises benefitting from Cognitive Technology? <https://bit.ly/2w9ufhL>

EBM views cognitive computers as advanced systems that are trained so that they can interact with humans in a natural way. This type of computer is a different concept from the one based on the development of artificial intelligence.

Unlike AI, which only cares for a specific problem, cognitive systems learn by examining patterns of behavior and offering people relevant actions based on their own understanding of the situation. In the case of artificial intelligence, the system assumes complete control of the processes and takes action to complete the task or to avoid one or the other of the scenarios using pre-introduced algorithms. With cognitive technologies doing the opposite, they only act as human assistants, rather than performing the task themselves. They provide people with more opportunities for a more complete and accurate analysis of the data without worrying, for example, about the wrong decisions made during machine learning processes.

Cognitive computing system<sup>11</sup> have the primary purpose of assisting human decision-making, as well as improving its precision and quality, enabling people to get to grips with the essence of important, critical processes. A cognitive computer system has three key elements:

- a – natural language for request processing and process analysis,
- b – algorithms integrated into machine learning and
- c – real-time computing processes.

Cognitive computing will completely change the field of digital technology, according of Gartner<sup>12</sup> institute and lead to the emergence of a new type of technology solution in the next few years.

Benefits of introducing such technology:

- accurate data analysis; high efficiency in selecting, classifying, and searching for hidden links in the analysis of information,
- analysis of emerging business trends and effective process management,
- limit the risk in changing circumstances and environment,
- improving human interaction: automating processes, providing relevant, contextual and valuable information,
- improving the human experience, better customer satisfaction in engaging with business.

Problems:

1. Security: the ability to process huge amounts of data, analyze situations and processes is a challenge to ensure data security and encryption.
2. Business acceptance and approval: requires long-term vision, attitude to adopt the new model for management.
3. Change management: people by definition resist any new change. However, the technology itself will lead to greater synchronization between people in the business process.

Instead of trying to build a limited form of artificially intelligent enterprises, they try to take advantage of cognitive technologies to automate processes to solve a wide range of problems that require some element of knowledge. The main aspects of knowledge are related to the so-called

<sup>11</sup> What is Cognitive Computing? How are Enterprises benefitting from Cognitive Technology?  
<https://towardsdatascience.com/what-is-cognitive-computing-how-are-enterprises-benefitfrom-cognitive-technology-6441d0c9067b>

<sup>12</sup> Top 10 strategic technology trends for 2020  
<https://interestingengineering.com/top-10-strategic-technology-trends-for-2020>

„P” categories of perception / awareness / understanding of our environment as inputs to such systems come from sensors. The model is relevant to cognitive technologies, which include, in this case, both image and object recognition and classification (facial recognition), use of natural language, generation of unstructured texts, information processing, sensors implanted in robotic objects, reading signals coming along the line of IoT and other forms of perceptual calculations.

A new area of research is to focus attention on the ability to perceive the environment, develop advanced forms of neural networks, and in particular develop deep learning. Prediction is the introduction of models by which one can determine what is to come and learn from different types of interaction. Forecasting focuses on the use of cognitive technologies based on machine learning, enhanced learning, big data, statistical approaches to processing large amounts of information, identifying anomalies, and suggesting next steps for action. In addition, forecasting focuses on a wide range of cognitive technologies, including analytical models of Big Data analysis and the use of human decision-making methods. The cognitive technologies used in planning are oriented towards the development of AI in order to improve the performance of machines in terms of intuition, sensitivity, emotions and other factors that enhance the planning and decision-making tasks.

## **2.1. The future of cognitive technologies**

Expert Max Tegmark<sup>13</sup> shares that artificial intelligence is integrated into artificial intelligence, which is not purely biological. We do not yet fully understand what biological intelligence is and trying to build an artificial one is a challenge. On a more abstract level, AI is a machine behavior and similar functions that mimic human intelligence and behavior. On the other hand, this type of technology refers to processes related to learning, problem solving, understanding and interaction with the real environment, as well as conducting conversations and linguistic communication. The ultimate goal is to build a common artificial intelligence that is able to solve any problem, understand situations and execute processes specific to man.

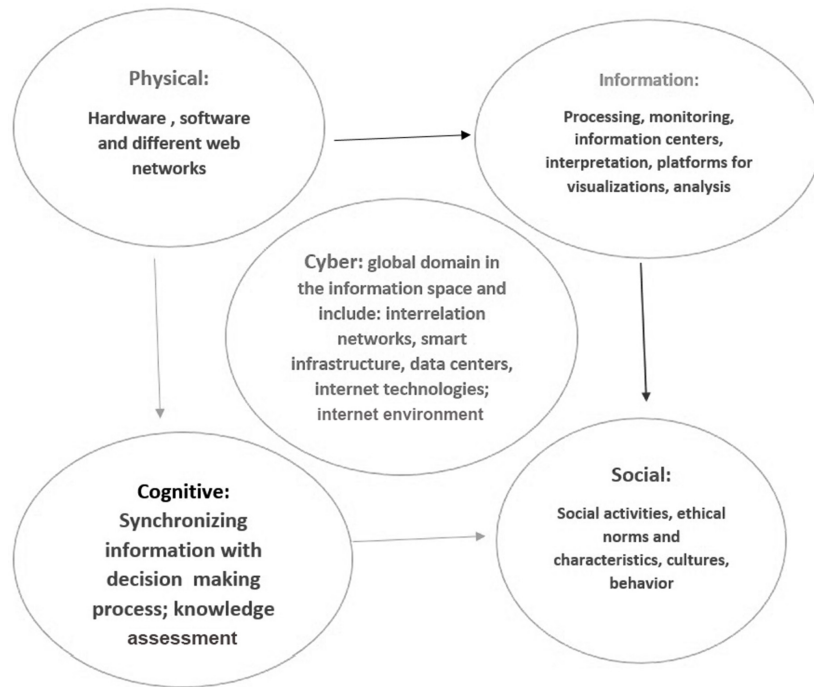
Creating Artificial General Intelligence (AGI) is the endeavor of most academic institutes and laboratories. In practice, many experts who talk about market-oriented AI do not consider AGI, nor the answer to the basic question about intelligence inherent in biological units. The current understanding of AI is too limited - such technologies are oriented towards solving specific, business problems.

In 2020. New trends in technology are emerging, such as hyper-automation and autonomous objects, which present challenges for information security and crisis teams. This suggests that crisis and risk leaders need to focus their attention in three key areas: systems protection, with AI built in; use of AI to enhance prevention capabilities; forming attitudes that attackers will make greater use of AI models to break through infosystems. In addition to the trends outlined above, it is expected that new trends will be developed related to the design of post-digital architecture, built on different logic, compared to traditional computer systems. This implies the creation of new programming languages and algorithmic strategies. The focus is now on atoms, not bits. Quantum and neuro-morphic calculations will accelerate these trends, but in a different

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<sup>13</sup> Source: Why Cognitive Technology May Be A Better Term Than Artificial Intelligence  
<https://www.forbes.com/sites/cognitiveworld/2019/12/22/why-cognitive-technology-may-be-a-better-term-than-artificial-intelligence/#5465469a197c>

direction. We are currently witnessing a new era in innovation driven by non-standard, computer architectures, genetics, materials sciences, and artificial intelligence. This necessitates a transformation of the organizational structure, orienting itself from vertical hierarchies to horizontal networks. Such trends will also impact cyber crisis management models towards more effective analysis of trends, threats, identification of cyber system breaches, and rapid response to their automatic remediation.



**Figure 1.** Cyber space – basic domains

## 2.2. New cognitive technologies<sup>14</sup> in risk and emergency situations.

Instead of trying to build a limited form of artificial intelligence-innovative businesses are trying to take advantage of cognitive technologies in order to automate the processes of solving wide range of problems that require some elements of knowledge. The main aspects of knowledge are related to the so-called „P” categories; (Perceive, Perception, Predict); Perceive - understanding our environment as the input signals for such systems come from sensors; Perception - related cognitive technologies include image and object recognition and classification (including facial recognition), natural language processing and generation, unstructured text and information processing, robotic sensor and IoT signal processing. Prediction-focused cognitive technologies utilize a range of machine learning, reinforcement learning, big data, and statistical approaches to process large volumes of information, identify patterns or anomalies, and suggest next steps and outcomes.

A new area of study is focusing attention on abilities for the perception of the environment, the development of advanced forms of neural networks, and in particular the development of deep learning. Forecasting focuses on the use of cognitive technologies based on machine learning, enhanced learning, big data, statistical approaches for processing large volumes of information, identifying anomalies, and suggesting next steps for actions. Prediction focuses on cognitive broad-spectrum

<sup>14</sup> See. Why Cognitive Technology May Be A Better Term Than Artificial Intelligence.  
<https://www.forbes.com/sites/cognitiveworld/2019/12/22/why-cognitive-technology-may-be-a-better-term-than-artificial-intelligence/#29bc7b9d197c>

technologies, including analytical models, Big Data analysis, and the use of decision-making methods typical of humans. In recent years, cognitive approaches have been actively applied, mainly related to the development of cognitive capabilities for cyber security and financial management decisions. The cognitive technologies used in planning are oriented towards the development of AI in order to improve the performance of machines in terms of intuition, sensitivity, emotions and other factors that enhance the planning and decision-making tasks especially in emergency situation.

Research shows the following major trends:

- the first security challenge today and in the future is related to limiting response time and solving incident problems and
- cognitive decisions are expected to increase significantly in the next 2-3 years.

The company Intel<sup>15</sup> in 2020 declares the future of technologies by defining them as heterogeneous computational calculations, in this case combining traditional digital chips with non-digital architecture, such as quantum and neuro-morphic systems. In such systems, data processing speeds are 1,000 times faster and 10,000 times more efficient than traditional chip capabilities. IBM is creating a network of advanced quantum technology, bringing together research labs, startups and accelerating companies to innovate. The work of post-digital architecture is built on a different logic, unlike traditional computers. The focus is now on atoms, not bits. Digital technology has revolutionized areas such as genetic engineering and materials science. Artificial intelligence and cloud systems have changed industries such as manufacturing and agricultural technology. Quantum and neuro-morphic calculations will accelerate these trends, but in a different direction.

We are currently witnessing a new era in innovation, powered by new computer architectures, genetics, materials sciences, and artificial intelligence. This force a transformation of the design of organizations, moving from vertical hierarchies to horizontal networks, it is especially important for crisis management process. Over the next decade, new computer architectures will move toward synthetic biology and materials science that will redefine areas such as healthcare, energy, and manufacturing.

Today we have new development in the field of machine learning (ML) and our proposal is to integrate such platforms in the systems of crisis and risk management. ML is a method by which algorithms adapt their activity depending on the data entered into the system, rather than being pre-programmed to perform certain tasks. Researchers working in this direction in 2020 are taking new approaches and in particular are developing AutoML, and the machine learning process is progressively automated, relying more on computer time than engaging people for training, with great loss of time.

Google scientists<sup>16</sup> have published an article on the arXiv server describing the essence of this new concept. The program they use is called AutoML-Zero. It can generate 100 unique algorithms, then orient themselves to solve simple tasks such as pattern recognition. When comparing this method with the approaches for manual training of machines, the results are better, as a code that does not meet the set parameters is removed from the system. In the future, analysts hope to create

<sup>15</sup> The Digital Revolution Is Ending. Here's What You Need To Do Now. Satell, Greg.  
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<sup>16</sup> Google scientists develop software that could enable AI to evolve with no human Input  
<https://www.iflscience.com/technology/google-scientists-develop-software-that-could-enable-ai-to-evolve-with-no-human-input/>



more sophisticated and complex AI systems. Their goal is to demonstrate how automated methods are used to discover new algorithms as part of the ML process; the model is combined with basic mathematical operations such as basic building blocks for improving the learning process.

### 3. CONCLUSION

The challenge for today's crisis and risk managers is to build flexible, intelligent infrastructures geared to new cognitive technologies and neuro-morphic systems in order to respond quickly to crises occurring in the public, cyberspace, and the information domain. Crisis and emergency response times are calculated in minutes, for example in global viral epidemics, within hours. In critical situations in the absence of knowledge and competencies, and if the leaders do not act within the specified timeframe, any further decisions will prove inadequate.

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# SUSTAINABILITY FACTORS IN INTERNATIONAL PROJECT TEAMS

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**Abstract:** *Today almost all organizations, according with their business specificities, support their business activity within the Information Systems. In this sense, the most common business processes of organizations are supported by generic software products, also called Enterprise Resource Planning. In this paper are referred a set of good practices for the implementation/configuration of generic software products, in international projects. The methodology adopted focuses on the literature review in the thematic of Sustainability factors in International Project Teams, as well as on the presentation of good practices based on the lessons learnt from proven methodology. The contributions of this work focus on considerations in the area of project implementation procedures, and requirements of the business processes, the system configuration, as well as training. The paper's conclusions emphasize the importance of applying good support management in international project teams, including concerns of sustainable development objectives in the economic, technical, social, human/individual and environmental aspects.*

**Keywords:** *Sustainability, ERP, Implementation, Configuration, Requirements, Knowledge transfer-ence, International project.*

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## 1. INTRODUCTION

The main motivation of this work is the incorporation of the principles and commitments of the Karlskrona Manifesto of sustainability (Becker, et al., 2015) in the optimization of good practices instituted in the field of implementation and configuration of software products, in the context of international projects. These products are developed for an understandable application domain and then configured to meet the specific needs of each customer/organization.

In this sense, the paper has the purpose to present a description of a set of experiences acquired in an international context in the level of team building, necessary documentation and implementation processes. It is, also, intended to incorporate concerns in the tropes of sustainability underlying the theme under study. The paper is structured in five sections: introduction, state of the art, good practices, future research directions and conclusion.

## 2. STATE OF THE ART

Generic software products support business processes of the organization and are characterized by high modularity and configurability. These products are developed for a comprehensive application domain, after which they must be adapted/ configured/parameterized to the specific needs of each customer (Silveira, 2006).

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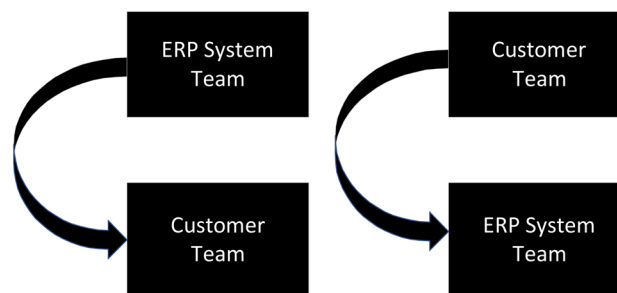
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The research conducted by (Ahmad & Cuenca, 2013) on the implementation of ERP in small and medium-sized enterprises, highlighted the interrelation of ten main critical factors of success, which were classified as basic, critical and dependent. Analyzing these interrelationships indicates that as the implementation process progresses, the number of factors involved in the implementation and its interaction also increases. Also, (Thew & Sutcliffe, 2018), refer to „socio-political” issues, such as people’s emotions, values and feelings, which influences the requirements gathering process. These authors define values, such as personal attitudes or long-term beliefs that can influence the functional and non-functional requirements of stakeholders; motivations, such as psychological constructions related to personality traits, that can be seen as long-term goals of the stakeholders; emotions, such as tips for stakeholder reactions due to value/motivation conflicts.

Projects for the implementation of generic software products are considered knowledge transfer initiatives (Daneva & Wieringa, 2008), as the team’s knowledge and experience are transferred to existing customers resources, and vice-versa (Figure 1). (Figure 1). The authors (Dittrich, Vaucouleur, & Giff, 2009) also mention the importance of cooperation and knowledge sharing with regard to the customization of ERP systems. For (Jones, Cline, & Ryan, 2006) knowledge sharing is critical during the implementation of ERP systems, identifying actions to facilitate this sharing: collaboration-oriented teams avoiding isolation, bonus-grant programs for teams and more imposing motivated teams.



**Figure 1.** Knowledge transfer between teams

**Source:** (Duarte, Silveira, & Reis, 2020)

In software engineering, sustainability can be defined as the „ability to support” and „preserve the function of a system for a long period of time” (Lago, 2019). This definition points mainly to technical sustainability over time. However, sustainability involves other dimensions, such as: economic, social, human and environmental dimensions. Sustainability is multidimensional, so it is required to include the economic, social, environmental, technical and human dimensions to understand the nature of sustainability in any situation (Becker, et al., 2015). It is observed that there is a lack of adequate instruments to design and confiscate sustainable software systems that allow sustainability objectives.

To fill this gap, it is necessary to include sustainability concerns (Becker, et al., 2015), (Reis, Silveira, Carvalho, & Mata, 2020), (Reis & Silveira, 2020), (Venters, et al., 2018), in configuration/implementation projects. This lacuna is a motivation for the development of the present study. It corroborates the perspective of (Lago, 2019) so that sustainability is a software quality property at any stage of the software development process.

As stated, (Becker, et al., 2015) in the principles and commitments of the Karlskrona Manifesto, sustainability requires action at various levels: some interventions have more influence on one

system than others. Whenever we take action for sustainability, it should be considered that actions at other levels can offer more effective forms of intervention.

In this sense, human needs must be present in the sustainability policy of organizations (Reis & Silveira, 2020) and in the organizational culture, in face of the Sustainable Development Goals (SDGs), namely in SDG 8 - Gender Equality (UNDP, 2015), to promote equality between men and women and the reconciliation between professional activity and personal life (Silveira, Duarte, & Reis, 2020).

### 3. GOOD PRACTICE

The success of these projects, (Khang & Moe, 2008), determines the socioeconomic progress in the recipient countries but, also, the effectiveness of the contribution of the donor countries and agencies. Understanding the critical factors that influence project success enhances the ability of donors and implementing agencies to ensure desired outcomes. In addition, it helps them forecast the future status of the project, diagnose the problem areas, and prioritize their attention and scarce resources to ensure successful completion of the projects.

In this study, a set of good practices that are considered relevant in the context of the implementation and configuration of ERP products and that interrelate in Table 1, where they are identified.

**Table 1.** Good practice

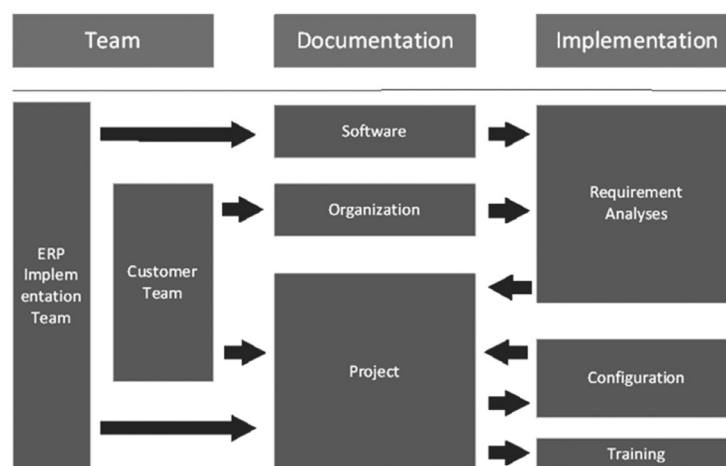
Good Practice	Advantages
Team with elements of different specialties, project manager with cross-cutting knowledge and strong leadership.	It examines/presents several points of view and each participant provides a distinct opinion/vision of the system. Improvement in product quality.
Participation in the process of elements with practice in conducting tests.	Identifying/predicting any problems early on.
Involvement of customers, users and other stakeholders in the process.	Better identification of real needs, motivational component and sense of belonging.
Conducting workshops to identify and negotiate requirements.	Sharing of information and knowledge. It generates consensus for different points of view.
Document meeting decisions.	Avoids a second analysis and discussion. Supports evaluation and validation.
Use a tool like “Idea Organizer”.	Helps document meeting decisions.
Use of various non-technical capabilities.	Improvement in the relationship and communication with stakeholders.
Definition of a normalized structure (templates) for documents.	Simplifies reading and understanding.
Consultant who has the assumption to devote time to explain the features and processes embedded in the software product.	It promotes the sharing of knowledge from consultants to clients.

**Source:** (Duarte, Silveira, & Reis, 2020)

A careful selection of project team members (Mohan, Kumaraswamy & Anvuur, 2008), supported by demonstrated capacity and commitment to collaborative approaches based on relationships, is considered fundamental, and one of the main drivers of the projects.

Thus, and having as desideratum the implementation of a project of a generic ERP system, should be adopted a set of good practices in order to enhance the results. These good practices can be divided into three categories that are considered as main, and are exemplified in Figure 2: team; documentation and implementation.

In terms of **teaming up for implementation/configuration of ERP** systems in international projects, this should: be multidisciplinary and have the necessary knowledge within the project; master the English language; be prepared to be away from their normal environment (including traveling to foreign countries); check whether it is necessary to involve a local partner: you must master the English language beyond the native language; have knowledge of the cultural and organizational reality; have knowledge of the legal aspects; always be on the side of the ERP Implementation Team and communicate, all conversations from the client to the implementation team.



**Figure 2.** Categories of good practice

**Source:** (Duarte, Silveira, & Reis, 2020)

In regard to the establishment of communication with the **Customer Team**, the following best practices are proposed: having knowledge of the English language (sometimes pronouncing it makes communication difficult); master existing processes (sometimes knowledge is superficial on the part of key users); be prepared for change (sometimes only key users are aware of this); be available, practically in full, throughout the project implementation period. From the perspective of [1] implementation processes should be carried out without affecting day-to-day operations across the enterprise. This can only be achieved by understanding the key elements that make up the organization's infrastructure, an effective plan for implementation, and procedures for measuring and evaluating the project throughout the implementation process.

**Documentation** can be provided by the ERP System Implementation Team (in detail in the figure 3) and by the customer.

The **customer** must send the documentation in English (preferably); prepare and provide the information, including internal and external documents used (sometimes this information is only prepared when requested and takes a long time).

With regard to project implementation we can divide it into the following points: the **Requirements Analysis** should take into account the following aspects: must be done in an office/ in partnership with the project manager, key users and end users (when necessary); the processes supported by the ERP System may be submitted; or the presentation of the processes supported by the client may be submitted; all decisions taken should be documented. **Setup** has implied the following aspects: be done in an office/ in partnership with the project manager (and key users when necessary); be used the general template; use the requirements documentation as a guide to the process and make presentations to key users for each configured process. The **Training**

shall take into account the following aspects: it should be done in an office / in partnership with key users and end users; carried out, as a complement, at the end-user's workstation; provide the end-user with their Mini User Guide; the user is given a period of time to carry out the tests.

Documentation provided by the ERP System Implementation Team, must:

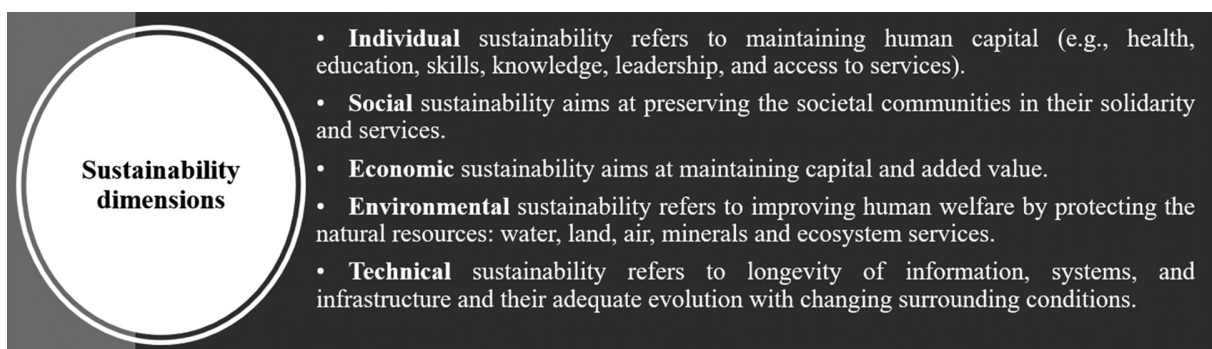
1. provide documentation of installation/configuration of server and client stations;
2. provide process diagrams (sometimes there are several scenarios);
3. have general configuration templates;
4. provide documentation in Mini User Guides (MUG) format: they are the substitutes for how-to documents and FAQs;
5. be made daily record of the work performed, explaining the main decisions taken, always with the agreement of the client;
6. be used an Integrated Project Management software in order to record and document all interactions performed, in order to allow the whole team to have access in an integrated and dynamic way to all project information;
7. provide the so-called "User Manual" (preferably online).

**Figure 3.** Documentation provided by the ERP Team

It is recommended that setup/training only ends when the following aspects are checked by the end user at the workstation: the ERP system should be tested/used; printing documents; sending emails; import/export of data; interaction with other specific devices. It is, therefore, considered that the good practices, described, constitute added value into the context of international projects.

#### 4. SUSTAINABILITY AND TELEWORKING

In the previous point, we analyzed the good practices of implementation in international projects, in a presential aspect and without taking objectively into account the dimensions of sustainability. Then in this section analyzes sustainability from different perspectives, such as: economic, social, technical, individual and environmental (Becker, et al., 2015).



**Figure 4.** Sustainability dimensions

The details of the five dimensions are shown in figure 4. Analyzing teleworking in international teams in view of the various dimensions of sustainability becomes a challenge in the current situation of the pandemic.

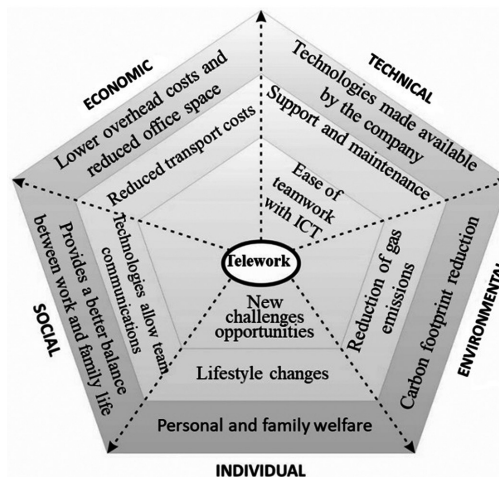
The term telework or teleworking is an umbrella for the use of information and communication technology to perform work 'at a distance', as well as after-hours work activity by commuters



(Mokhtarian, Collantes, & Gertz, 2004). Telecommuters, or paid employees who work from home instead of commuting daily, are a subset of teleworkers and are the focus of current attention (Moos, Andrey, & Johnson, 2006). The social sustainability implications of using information and communication technologies can be difficult to deduce and measure.

On the other hand, the digital transformation is changing many sectors of activity and possibly making the world more sustainable, allowing to preserve the environment and achieving new opportunities. So, figure 5 analyzes teleworking in the five dimensions of sustainability.

These dimensions are interrelated and provide an instrument to disaggregate and analyze relevant issues, taking into account that sustainability is fundamental to our society.



**Figure 5.** Analysis of sustainability dimensions - teleworking

The central factors of telework are represented in individual, social and environmental sustainability. The role of technologies is illustrated in the technical dimension. Analyzing Figure 5, the economic dimension shows an advantage that many organizations see with telecommuting that is lowered overhead costs and reduced office space. This can be a significant advantage to an organization looking to reduce expenses.

## 5. FUTURE RESEARCH DIRECTIONS

As perspectives of future work, it is considered in the view of the current state of the global pandemic; telework can be a differentiating factor in the context of project team management, especially in international teams. The results of (Martens & Carvalho, 2017) investigation highlighted that four factors are crucial, and those factors are the following: business model in sustainable innovation, stakeholder management, economic and competitive advantages, saving environmental policies and resources. Thus, it is intended to study references that optimize the current practices established considering the five dimensions of sustainability.

## 6. CONCLUSION

Concerns in the field of sustainability in the various aspects are the subject of study in the context of this paper. It was intended to reflect on the importance and added value of the inclusion of sustainability dimensions, in the scope of the study presented, as well as on the constraints of teleworking in relation to the current effects of the pandemic and underlying the performance

of professional functions. Success can only be assessed when the dimensions of the evaluation are adequately defined. In other words, a project is generally considered a success if its implementation complies with the usual constraints of time, cost, and customer terms of reference or „quality” (Diallo & Thuillier, 2003).

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# INTELLECTUAL CAPITAL PERFORMANCE REPORTING MODELS

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**Abstract:** *For a knowledge-based economy, the basic drivers of economic growth and development are the knowledge, innovation and specific skills of individuals whose „incorporation” into a product/service makes them attractive to customers in the market according to the needs of the 21st century. Thus, in the era of the knowledge economy, individuals with their knowledge, specific abilities and skills represent the basis for creating and maintaining a competitive advantage in the market. However, the traditional financial reporting model cannot fully meet the information requirements of users of 21st century financial statements due to the limited absorption of data concerning the company’s ownership of intangible resources such as knowledge, specific skills of employees and other intellectual resources. In order to fully, reliable and truthful business reporting Many companies choose to voluntarily report on non-financial performance through various reports such as the Business Report and the Notes to the Financial Statements. The aim of this paper is to present modern models of reporting on intellectual capital and to point out possible directions of their further development in the future. Also, in this paper, special emphasis is placed on segments of business assets whose balance sheet (non) coverage leads to significant differences between the book and market values of companies.*

**Keywords:** *Reporting, Intellectual capital, Intangible asset.*

## 1. INTRODUCTION

In the early 1990’s the XX century began to leading debates in scientific circles about intellectual capital and other intangible resources in terms of their measurement and recognition. The modern era of the „knowledge economy” has influenced the growth of importance and innovation as the basic drivers of economic development and business success of the company. Thus, they exist as basic and crucial resources of companies for gaining and maintaining competitive advantages in the market of the same knowledge of workers, who have special skills and abilities as well as innovations that arise from all this. As the whole concept of the business system changes, with the transition from capital-intensive to the organization of intensive existence, it is necessary to take appropriate steps to change the classic way of financial reporting. The structure of active balance sheets used an increased share of intangible (intellectual) resources at the expense of reduced tangible assets needed. The information provided by the traditional way of financial reporting was not able to give a complete and real picture of the data, and the successful company took advantage of the lack of appropriate methods for measuring and reporting intangible resources was the share in the total assets of the latter. Due to the immaterial nature of intellectual resources and the impossibility of monetary expression of certain elements of the same, due to which they were unimportant invisible, there was a separation between the market and book values of many companies in the world. For this reason, we would say that both internal and external users of financial statement information are needed to create new company reports on a voluntary basis. However, in order to adapt the traditional reporting

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system, it was necessary to develop new ones approaches and methodology for measuring the intangible assets of an enterprise. Through the work of the academic community and solving specific problems in business practice, different approaches and methodologies for measuring the balance sheet invisible intellectual capital of companies have been developed. The basic division of all methods is into methods that are based on the financial and those that are based on the non-financial approach. Depending on the information needs of information users as well as the nature of the activity, organizational structure, size of the company and the structure of intellectual resources, the choice of method for determining intellectual capital will depend, and later the model of its reporting.

## **2. METHODS OF MEASUREMENT OF INTELLECTUAL CAPITAL**

The results of the European research conducted within the project Meritum Project (2002), showed that there is no reliable system for measuring intellectual resources in the company. Intellectual capital research has concluded that the potential of intellectual capital will not be realized if management continues to force an opinion on intellectual capital within existing frameworks (Chaharbaghi & Cripps 2006) based on accounting, management control, and intangibility management (Guthrie et al. 2003). Hidden i.e. balance sheet invisible intangible resources to external users limit the assessment of the potential strengths of companies and, accordingly, obscure the insight into the true state of business assets and the success of the company itself. According to Bontis (1999), the basic problem of reporting on intellectual capital lies in its measurement, due to its intangibility and the impossibility of monetary expression of all its elements.

Given the nature of intellectual capital from the 1990s to the present, a number of methods and approaches have been developed for the assessment, measurement and evaluation of intellectual resources, which are divided into four groups (Sveiby, 2010):

- Direct Intellectual Capital methods (DIC methods). The essence of these methods is reflected in the identification of all elements of intangible resources and their individual monetary expression, if possible. If the nature of some elements is such that they cannot be expressed individually in monetary terms, then an aggregate coefficient is derived for such elements of intangible resources. The better-known methods from this group are: The Technological Broker method according to Brooking's (1996) and Sullivan's (2000) method - Valuation of intellectual assets.
- Market Capitalization methods (MC methods). These methods calculate the difference between the market capitalization of a company and its book value of equity and if the difference is a positive value it represents the value of intellectual capital. The best known and most widely used method in practice is Market to Book Value. This method attributes the positive difference between the market value of the company and the book value of the company's own assets to the balance sheet invisible part of intellectual capital.
- Return On Assets methods (ROA methods). Return on assets is based on the ratio of profit before tax for a certain period of time to the average price of the total capital of the company. After that, the obtained ROA is compared with the average of the industry to which it belongs, and if it is higher, it is considered a contribution of intellectual capital due to their existence in the company. Finally, the value of intellectual capital is estimated by comparing the amount of profit gained thanks to intellectual capital with the average price of the total capital of the company.



- **Scorecard Methods (SC methods).** These are methods of measuring and reporting on intellectual performance, which identify different groups of intellectual resources and suggest indicators for their measurement. They are similar to direct methods of intellectual capital, with the difference that they do not perform financial valuation, and in addition do not give some aggregate, composite index of intellectual capital, but a set of different (partial) indicators by categories (elements) of intellectual capital according to its categorization (Krstić, 2014). Scorecard measurement methods also represent methods of reporting on intellectual capital performance, the most famous of which are Balanced Scorecard by Professor Robert Kaplan and consultant David Norton, Intellectual Capital Monitor of the world-famous Sveiby and Skandia Navigator created by Edvinsson and Mallone.

### 3. INTELLECTUAL CAPITAL PERFORMANCE REPORTING MODELS

Intellectual capital reporting is becoming a promising tool for resource-intensive organizations, managing, communicating and providing information relevant to investment decision-making and helping to productively use increasingly important intangible resources, such as human capital, research and development, software and relationships with consumers (Hassaneen, 2010). The formation of the Intellectual Capital Report is important for both internal and external users. From the aspect of managers as internal users of information, an opportunity is created for more efficient management of intellectual resources of the company and greater productivity, profitability and their more economical use is achieved. External users such as investors and lenders, with the help of information from various Intellectual Capital Reports, gain a clear insight into the „hidden” strengths of companies and their degree of flexibility and innovation as a significant factor in survival and development in the knowledge economy era. In the conditions of the „new economy”, the traditional system of economy is changing due to the fact that the primacy in relation to traditional factors of production (land, labor, capital, means of labor) take knowledge and innovation as the basic drivers of economic and social development. In line with the change in the structure of the company’s business assets, it is clear that there must have been some changes in the traditional system of financial reporting. Traditional financial statements are turned to the past, i.e. monetarily express the state and success of the company on the basis of realized business events without informing users of information about the capacities that the company can use in the future. With this in mind, there is a real need for a new paradigm of external reporting, which will expand this traditional „look into the past” and report on the creation of company value (Krstić, 2004). This would certainly provide a better assessment of investors and creditors in terms of strengths and business opportunities of the company and facilitate the analysis of tangible and intangible performance by financial experts and managers. “This new reporting paradigm will complement, or perhaps replace, the existing financial reporting system.” (Upton, 2003). Namely, we are talking about the so-called business reporting in the US and integrated reporting in the EU. By the way, the basic principles of such reporting are „improving disclosure, presentation of expected information, presentation of internally generated intangible assets, increasing the possibility of monitored changes and improving audit” (Bonić, 2004).

The growing gap between the market and book value of companies is explained by the incomplete coverage of intellectual resources that companies possess. More specifically, traditional financial accounting does not recognize internally generated intellectual resources but only those that are externally obtained and that have their own monetary expression. In order to close



the gap between the aforementioned values, it is necessary that modern business and financial reports include the following items of intellectual capital, which according to Dumay (2011) are called reporting attributes:

**Table 1.** Reporting attributes

Internal capital	External capital	Human capital
Patents Copyright Trademarks Infrastructure assets Management philosophy Corporate culture Process management Information systems	Brands Consumers Consumer loyalty Company name Distribution channels Business cooperation Licensing and franchising arrangements Favorable contract	Know-how Education Professional qualifications Work-related knowledge Job-related competencies Entrepreneurial spirit

**Source:** Dumay J., 2011.

The very need to report on the intellectual resources of enterprises through financial and non-financial performance developed with the conception of the first models for measuring the performance of the use of intellectual resources. These measurement models also represent models of reporting on intellectual resources, of which the most famous to date are the Balanced Scorecard, the Monitor of Intellectual Capital, and the Scandia Navigator.

#### **4. BALANCED SCORECARD AND INTELLECTUAL CAPITAL REPORTING**

In the era of knowledge economy where knowledge and other intellectual resources are constitutive elements of business processes, there is a need to measure and report on the performance of intellectual resources and the amount of intellectual capital of the company. Some significant elements of intellectual resources, due to their nature, cannot be expressed financially, so their descriptive expression through various modern methods of measuring and reporting on them is advocated. One such concept is the Balanced Scorecard (BS). BS according to Norton and Kaplan (2001) financial performance measures are not sufficient to provide complete information on the state of intellectual resources, so it is necessary to expand the financial reporting system with additional measures of intellectual performance which include financial and non-financial performance. The adoption of this reporting system supports the implementation of the adopted company strategy, as the operational strategy translates into a set of specific measures. According to BS, it is possible to measure the efficiency of a company through four perspectives (Kaplan, Norton, 2001):

- financial: measures for the financial situation of the organization,
- internal business processes: measures for the efficiency of processes executed in the organization,
- customer: measures for the level of satisfaction of the customers' needs and increasing the market share,
- learning and growth (or development): measures for the capacity to develop new products and acquire new skills in the future.

Based on the above perspectives, it is easy to see that the intellectual performance of the company is largely contained through reporting on the perspective of learning and development of employees. This dimension contains the performance of human capital (skills, practical knowledge, formal education, additional noise, etc.), then information capital (systems and databases), as well

as other structural - organizational capital (culture, leadership, teamwork, etc.) (Krstić, 2014). To a lesser extent, but also projected intellectual performance is projected both through the consumer dimension (as part of relational capital), and through the dimension of internal business processes as part of structural intellectual capital. Based on the information provided by the BS, it is a kind of Report on the intellectual performance of companies that is very often applied in practice.

## 5. MONITOR OF INTELLECTUAL CAPITAL REPORTING

The author of this model is Karl Erik Sveiby, who suggested that companies monitor intellectual resources through a report that includes three categories: growth/ renewal, efficiency/ effectiveness, stability. The most well-known example of monitoring intellectual resources according to this model is the implementation of this model of reporting through the Swedish consulting and software company „Celemi”. The paper will present the key performances that are fully monitored in the company through this special report, which attracted the most attention from interested creditors, investors and managers when assessing the effectiveness of intellectual property management in the company.

**Table 2.** The Intangible Assets Monitor “Celemi”

Intellectual Capital		
External Structure	Internal Structure	Competence
<b>Indicators of Growth/Renewal</b> Growth of market share Revenue growth Consumer satisfaction index Product quality	<b>Indicators of Growth/Renewal</b> Investments in information technology Time dedicated to internal activities Research and Development Attitudes of employees towards managers, culture, consumers	<b>Indicators of Growth/Renewal</b> Fluctuation of competencies Growth of professional experience Average qualification (level of education) Overall competence of experts expressed by the number of years of experience
<b>Indicators of Efficiency</b> Profit per consumer Sales by expert	<b>Indicators of Efficiency</b> Participation of support (administration) staff in total number Sales by administrator	<b>Indicators of Efficiency</b> Changes in value added by professional Changes in the participation of experts in the total number employees
<b>Indicators of Stability</b> Frequency of repeated order placed Participation repeated orders in total Participation in the sale of the 5 largest customers	<b>Indicators of Stability</b> Average age of the collective Age structure Number of employees with less than 2 years of experience in company Turnover of administrative staff Average number of years by administrative staff spent in a particular company	<b>Indicators of Stability</b> Fluctuation of experts The average number of years that experts spend in a particular company

Source: Sveiby K.E., 2010.

## 6. SKANDIA NAVIGATOR MODEL OF INTELLECTUAL CAPITAL REPORTING

Intellectual Capital Director Leif Edvinsson at the world-renowned company Scandia developed a dynamic model of intellectual capital reporting in addition to the annual financial statement back in 1994. This reporting model is known worldwide as Scandia Navigator. It reflects four key dimensions of its business (Edvinsson, & Malone, 1997):

- Employee focus,
- Customer focus,
- Process focus,
- Renewal and development focus.

The following table shows the most commonly used indicators categorized by focus:

**Table 3.** Model Skandia Navigator and performance of intellectual capital

Intellectual Capital			
Employee focus	Customer focus	Process focus	Renewal and development focus
Total number of employees, Participation of women in collective, Average age, Time of training expressed in days, Human index capital, Participation of highly educated, Participation of employees with 3 or more years of experience	Number of customers, Consumer satisfaction index, Number of individual insurance policies sold, Number of contracts, client abandonment rate	Share of information technology costs in administrative costs, The number of concluded insurance contracts per employee	Participation of new clients, Number of ideas

Source: Krstić, 2014

The Scandia Navigator reporting model has served as a good example from the practice of other companies that it has in this way “encouraged” in compiling intellectual capital reports on a voluntary basis. Many companies in the world that have impressive intellectual assets have managed to use this model to map the most important financial and non-financial measures of intellectual resources and complete the picture of their financial position and earning capacity of the company.

## 7. CONCLUSION

Economic growth and development based on knowledge and innovation in all spheres of society has caused changes in the way companies operate in terms of investing in knowledge and other intellectual resources. Changes in the structure of business assets of the company and a significant share of intangible assets in total assets of the balance sheet required certain changes in the traditional system of financial reporting. The emerging novelty is the need for an additional financial report that will pay special attention to the disclosure of unbalanced intellectual capital of companies, as a result of which gaps between the market and book values of listed companies are appearing more and more often. Due to the lack of legal obligation to report on intellectual resources and the existence of information needs of both external and internal users, certain models of measuring and reporting on intellectual resources have emerged that serve as an effective tool for assessing companies’ strengths and flexibility to the new system, in the so-called new economy. Their essence is reflected in the presentation of on-balance sheet intangible resources and the reduction of oscillations between market and book values of companies.

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# EXTERNAL CHURCH FINANCING BY FUNDING

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**Abstract:** *The present paper provides an overview of the situation of church bodies when dealing with subsidies. The starting position and topicality of this topic has been the subject of intense debate in the media and in the political sphere, also for church sector for some time. A look at the figures shows that numerous funding programmes from EU, federal and/or state programmes could well be eligible for church bodies, but that the funds provided are rarely or never called up. The problems lie in the complexity of the funding programmes and the respective guidelines and extend right into the organisational structures of the spartan church administration. A glance at the federal government's funding database shows the importance of the topic. Tight budgets due to declining church tax revenues, lack of personnel capacities, demographic conditions are inhibiting factors in funding management on the part of church administrations.*

**Keywords:** *Subsidies, Church management, Monetary donation, Church tax.*

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## 1 INTRODUCTION

The loss of members confronting both the Roman Catholic Church and the Protestant Church in Germany (EKD) is worrying. Moreover, as previous studies have shown, this trend will continue to intensify. Therefore, innovative approaches are needed on the part of the churches to overcome the financial challenges posed by falling church tax revenues. Promising in this context are strategies and instruments from the field of fundraising. What is meant here, however, is not only the acquisition of donations for manageable church projects, but also for investment measures in the strategic acquisition of building subsidies. The budget position of churches has an important responsibility for these, especially as one of the largest real estate holdings in the Federal Republic of Germany; this can be a supporting pillar of financing for the churches. This sub-sector of the economy offers a variety of approaches to provide innovative ways of financing.

The present paper consists of two thematic areas. First, a presentation is made around an overview of contents relevant to funding. The main part of this elaboration focuses on the insights gained from examples of successfully funded church projects and the application of further areas of application for church areas.

## 2 CURRENT DEVELOPMENTS IN THE FINANCIAL ENVIRONMENT

This paper deals with the issue of external financing for church bodies through subsidies. It examines the potential, possibilities and practical examples of success of the Evangelical Lutheran Church in Germany. Further examples, of other church organisations such as the Catholic Church, are not mentioned, but in the end these findings are transferable to other religious communities. The churches can act as providers of funds, e.g. for funding associations, or other church communities as recipients of funds, e.g. for community development or building renova-

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tion. This paper focuses on the churches as recipients of subsidies. For many of those involved, calling up and applying for funding is a bureaucratic burden. A lack of knowledge about funding regulations and the lack of transparency in funding possibilities make it difficult to actively obtain funding, although these funds represent an opportunity for church congregations and their community work in social areas.

#### **a. Initial situation and topicality of the topic**

Subsidies are part of government grants and are intended to trigger certain public purposes and political or economic objectives. They can be designated for companies, state agencies, e.g. local authorities, other organisations such as parishes or church administration centres, or private individuals. However, they are only granted under certain conditions and upon application.

There is also a high number of different investment efforts and provided funds in the church sector. In practice, however, these opportunities are often not used (Schäuble, 2016). This problem is a result of high bureaucratic hurdles and a lack of human resources due to a lack of planning capacities and feasible projects. Capacity for planning procedures should therefore be included in budget planning. As a first insight it can be stated that the lack of planning capacities, in the church area chances are missed.

Further reports from the daily media of the past months and years show that a number of support programmes and unused sums are mentioned.

Particularly in the municipal sector, the area of nationwide broadband expansion, the national climate protection initiative and the most significant area for sustainable housing for students and trainees are mentioned here. The project is intended to respond to the explosive demand for suitable housing and to expand the supply, especially in university locations. Other federal investment programmes, e.g. in the social sectors, are facing similar problems.

The topicality of the topic is ensured by further reporting (Compare Landesrechnungshof NRW: Jahresbericht 2011) which reports on the unused funding from local authorities. The Minister of Building and Local Government of the example chosen in this report confirmed that a total of EUR 500 million is available for the „Gute Schule 2020” support programme for school modernisation, but that not even a quarter had been applied for by August 2017. The situation is similar with the Municipal Investment Promotion Act II, in which the municipalities, in this case in Schleswig-Holstein, are being provided with further millions of euros. The amount of funds requested is in the marginal range. Here, too, the insufficient call for funds is justified by a lack of capacity in the municipalities, which has been exacerbated in recent years by the shifting of planning processes to external companies. The coordination and control effort, especially in allocation processes, is enormous. In addition, the subsidies spent in the construction and hand-craft sectors trigger a demand overhang, which is reflected in higher prices and full capacity utilisation of the companies.

The challenges lie on both the donor and the recipient side. The application for subsidies presents potential applicants with problems that are inevitably associated with overregulation and considerable bureaucratic effort. When talking about subsidies, the associated administrative effort is often immediately a central issue. Likewise, the cost-benefit ratio is a critical comment without first examining or justifying it. A negative attitude towards subsidies is present.

## **b. Aim of this topic and this paper**

The core questions of this elaboration deal with how not the frequently considered municipal institutions but rather church institutions are currently dealing with the topic of subsidies (current situation) and what opportunities exist to find an effective chance from this topic in order to counteract the challenges posed by the financial impairments using the example of church tax but also by the demographic changes due to the decrease in church members.

It is also important to know where and what subsidies are available for church institutions and who, despite being eligible, has a real chance of receiving a subsidy. Is it possibly necessary to integrate a „central funding management” into the administrative structure?

## **3 EXTERNAL CHURCH FINANCING WITH SUBSIDIES**

### **a. Classification and meaning of subsidies**

#### ***i. Types of funding***

Grants can be awarded in several ways. A distinction is made by the VV No. 2 to § 23 BHO, which is also of practical relevance. A distinction is made between project funding and institutional funding.

#### ***ii. Project Funding***

According to the above definition, project grants are grants to cover expenditure incurred by the beneficiary on individual identified projects. From a differentiated point of view, project funding is a precisely defined, objectively delimited, limited in time and not having any effect on the assets. The factual and temporal limitation of the funding are elementary conditions (Compare. KGSt, Fördercontrolling, 2017, p 15.) Projects may also be eligible for funding on a multi-annual basis and may be extended over the initial period. If this is the case or if there is an additional financial requirement, follow-up funding is required and must also be approved in a follow-up application (Compare Dittrich, 2017, § 23 Erl. 7.1 Nr. 2). Project funding focuses on the project with a linked objective. Therefore, the time span, i.e. the beginning and end, as well as the clearly defined funding focus must be defined in advance.

The General Auxiliary Terms and Conditions for Project Funding (ANBest-P) contain provisions which are equipped with the necessary explanations.

A financing plan (No. 1.2 ANBest-P) or a preliminary cost estimate (No. 1.2 ANBest-P costs) are a basic requirement for approval. The ANBest-P costs apply to project funding for commercial enterprises on a cost basis and include all costs directly incurred by the project. For municipalities or local authorities, the ANbest G or ANbest KK, which are based on an expenditure basis, apply for the most part. With regard to applicability, the respective state-church agreement between church corporations and the respective federal state is decisive. The collateral clauses help the applicant to present the legal requirements.

The list of provisions, however, shows the complexity of the funding guidelines. Project funding is flexible in the choice of subject areas and different target groups, such as companies, public

institutions or private individuals. However, the time limits of the projects are challenging. The aim of project funding is to initiate developments and changes that are in the interest of the funding body, and ultimately the legislator and voters, and to stabilise the results in the long term. However, the project characteristics stand in the way of this.

### ***iii. Institutional Funding***

In the VV to § 23 BHO, institutional funding is understood as a grant to cover all or an unspecified part of the expenses of the recipient. It, therefore, does not refer to individual projects, but to the institution or grant recipient as such. In the narrower sense, this includes fixed social institutions such as authorities, courts, universities or schools. In addition, associations, clubs, initiatives or other organisations as well as church institutions which shape local community life in a special way can also be seen as institutions. These often safeguard special needs or take over public tasks that would otherwise possibly be performed by the public administration (KGSt, Fördercontrolling, 2017, p. 14). The tasks of institutionally funded grant recipients are generally designed for the longer term. Accordingly, the granting of institutional funding over a longer period of time will also result in a longer period of time, even if approval was only granted for the financial year in which the application was submitted.

The basis for approval is laid down in the General Auxiliary Conditions for Grants for Institutional Funding (ANBest-I). Similarly, a binding budget and economic plan, including a conceptual design, is required.

Without institutional funding, many institutions would cease to fulfil their tasks. The focus here is on the general benefit to society or the task of providing services of general interest, which the organisations take over from the state to a certain extent. However, it is precisely this institutional support that provides an opportunity for financially ailing corporations to continue to implement projects. Successful examples are presented in the following chapters.

## **b. Types of Financing**

The subsidies are granted in different ways as financing. The type depends on the interest of the funding provider and the purpose of the grant.

### ***i. Grants***

Grants are most effective for the beneficiary as they are spent as non-refundable grants and therefore represent a real gain for the budget. At the same time, however, they are linked to conditions for fulfilling the purpose of the grant. Any deviation from or failure to fulfil the purpose of the grant will result in repayment plus interest. These grants usually represent only a part of the financing; the complementary funds are to be raised by the applicant from their own resources or from other financing partners. A grant can be awarded in three ways.

### ***ii. Fixed-Rated Financing***

The fixed amount financing is an unchangeable amount, which can also be identical for other beneficiaries. The own contribution is variable. A further subsidy through donations, for exam-

ple, is not detrimental to the amount of the grant. A frequent example are events where a subsidy is granted per person (KGSt, Fördercontrolling, 2017, p. 17)

### **iii. Deficit Funding**

The deficit financing quantifies the grant according to the financing delta from existing own funds and total investment requirements. This is particularly suitable for subsidised projects that cannot be implemented due to a lack of complementary funds. The defined funding purpose can only be achieved with a certain fixed amount (Wruck, 2012, p. 34.). The shortfall financing promises to be interesting for financially weak church bodies, because these can often only raise a small amount of their own funds or none at all.

### **c. Funding participants as funding bodies**

All state institutions as public administration bodies are eligible to issue grants. According to German law, the public administration bodies are legal entities under public law, such as the Federal Government, the Länder and local authorities as well as other public corporations and institutions (Götz, 1966, p. 29). The term „public administration” has so far been generally open. The principle of separation of powers under Article 20 supports the definition of the term here. In the negative definition, this is the official activity (executive) carried out within the framework of the separation of powers, which is neither legislation nor jurisdiction (Gabler Wirtschaftslexikon, topic: Verwaltung). The Basic Law defines the system and the rules (Art. 87 – 89 GG (Bund); Art. 30 GG (Länder); Art. 28 Abs. 2 GG (Kommunen). Federal and state subsidies are developed in-house and are also approved by the responsible authorities after the application has been submitted. However, subsidies can also be awarded by private or semi-public bodies, such as the project management agency (Projekträger Jülich, 2020) Jülich named.

The European Union is also involved as a sponsor in various programmes. To describe these in detail is beyond the scope of this paper. In the section of the successful examples, explanations are given for the respective applied programmes.

### **d. Participants in the funding as funding recipients**

The respective funding programme determines who may be eligible to apply. In principle, all natural and legal persons can be eligible as recipients. The main obligation of the recipient is to use the funding in a defined manner. In addition, there is a secondary obligation to prove that the funds are used for the intended purpose (Henke, 1979, p. 239-241). The use of complementary funds by the beneficiaries means that the risk is not only on the side of the donors. This means that the purpose of the subsidy can be expected to be achieved and the subsidies used economically (Wruck, 2012, p. 53).

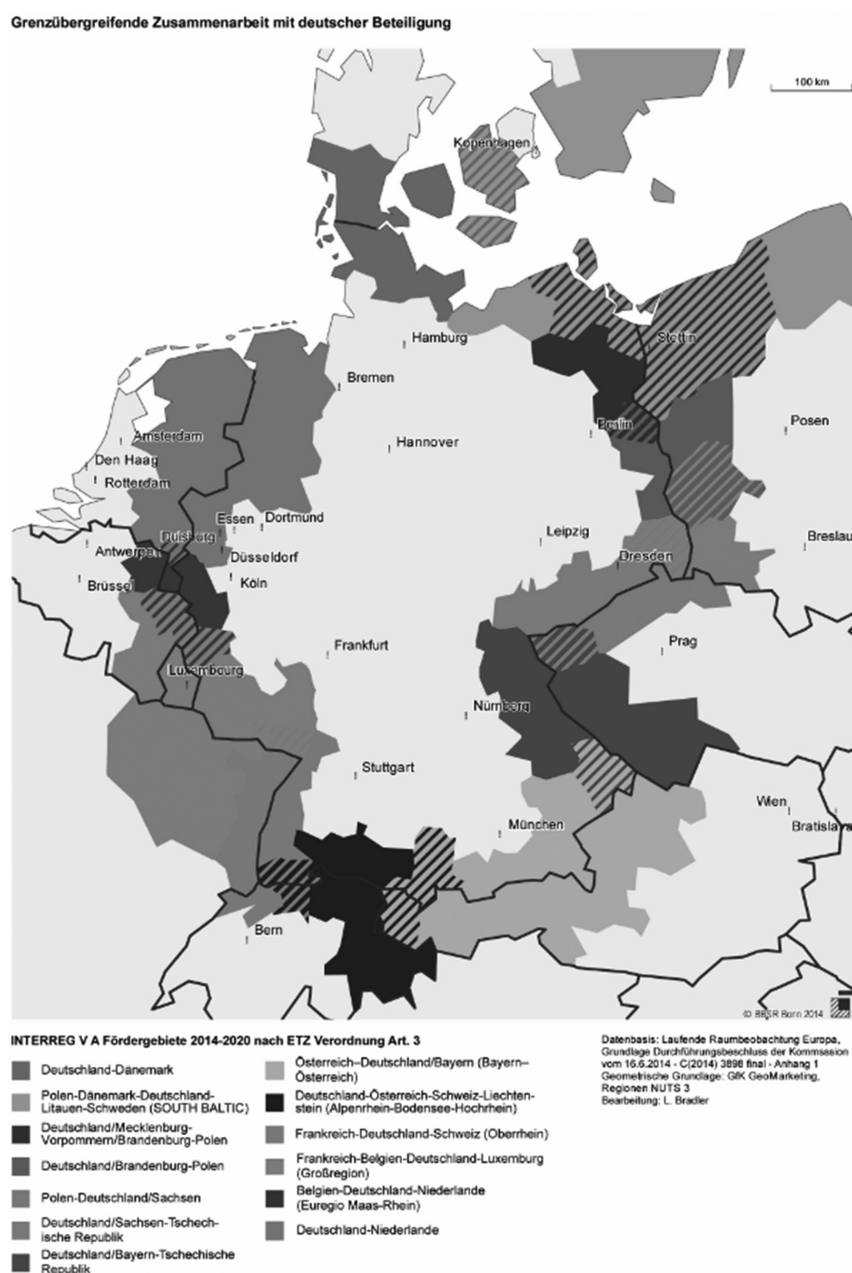
### **e. Importance of support programmes**

The importance of funding programmes is estimated by various sources in different funding programmes in Germany at 1,500 to 2,000, which target different individuals, companies, institutions or regions (Betz, 2015, p. 13.). The funding databases take into account the European Union, the federal government and the federal states as funding providers (three levels). Other

funding programmes, e.g. from municipalities or other state institutions, cannot be queried there and are difficult to quantify (Wruck, 2012, p. 17).

## f. Fields of application for church institutions

It is not very purposeful to list in this elaboration all imaginable possible fields of application for church institutions. On the one hand, this is due to the different circumstances and regional peculiarities. For example, support programmes of the Joint Task for the Improvement of Agricultural Structure and Coastal Protection certainly offer numerous possibilities which are also possible for church institutions, provided that they correspond to the territorial requirements, in this case, coastal regions. Therefore, this programme, which is interesting for rural regions because of its focus, is irrelevant for non-coastal regions.



**Figure 1.** Cross-border cooperation with German participation

Source: [www.interreg.de](http://www.interreg.de) (accessed on June 15, 2020)



This example becomes even clearer with the help of support programmes of the InterReg zones. Here, funding programmes are clustered in respective funding regions, which is intended to promote cross-border cooperation and is therefore not generally possible. The following diagram shows these zones of cooperation and, above all, the zones of the non-assisted regions within the framework of InterReg on (Bundesinstitut für Bau-, Stadt- und Raumforschung, Interreg).

Other funding programmes require equal participation of the respective federal state in the amount of funding. Depending on their constitution and the legal agreement between the respective states and churches, state participation may be partially excluded. For this reason, the eligible applicant must also reckon with too much variation in funding support depending on the federal state - despite otherwise equal conditions.

So far, these examples show that a general overview with a generally valid presentation does not appear to be appropriate and is therefore dispensable at this point. For the purpose of this paper, successful examples of church corporations that have received funding are therefore described and analysed with regard to the funding programmes.

#### 4 CONCLUSION

In this paper, some examples, albeit with a regional reference in Northern Germany, have been given. This could be extended at will to other regions of the Federal Republic of Germany and partly to the European area.

It is noticeable that up to now mainly fundraising and donations or grants from individuals for church corporations constituted the core of the financing. Due to a dynamic in the willingness to donate in the amount and according to the objective of the donations, this is not a safe bank for complex financing projects.

The previous support by the regional church levels has not been sufficiently impulsive. Support from external consultants has already proved to be effective in some areas, but it is also true that local connections and networks are valuable guarantees for the realisation of complex projects with all the criteria of the funding authorities.

The fact that the church has many purposes of the funding landscape is obvious. With sensible and goal-oriented considerations, extensions are useful here, which will too often correspond to the core of the funding criteria. Thus, it is goal-oriented for all those involved: for the Church, there cannot be lost sight of financial support in times of tight budgets and financial and demographic developments. For the public in the focus of services of general interest, it is more than just a valuable, vicarious agent of politics and civil interests for funding providers. Due to its leading voluntary commitment and social involvement in all areas and the still very high church membership, the church is a welcome and serious funding actor.

Looking ahead, it remains to be seen that individual church administrations with an innovative approach are taking this expertise into office or buying it and going down these paths, but so far, too few have done so. In the future, it is to be expected that this might become more, which could certainly highlight a competition among the applicants for funding and the realised projects might then in future also gain higher class.



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# CONSTITUTIONALITY OF BASIC INCOME IN GERMANY

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**Abstract:** *At present, the precarious jobs do not assure the subsistence level, and the future forecasts “the end of work”. In addition, because of the defects and limits of the welfare systems, a rethinking of the social protection system is necessary: universal basic income seems to be the most popular option. However, basic income may represent a break with the traditional market rules: the model is inverted and the citizen gains “freedom from work”, and not “through work”. This paradigm shift may represent a challenge for today’s model of social state based on the work ethic. Although the basic income is usually based on the idea of social reform, the perception of this study is that its implementation should be guided by a policy of small advances, which ultimately make possible a partial reform of the Social Security system, not its dismantling. This work shows that the German labour market, the Constitution, and the social state are not currently prepared for or in need of a universal Basic Income.*

**Keywords:** *United Nations, Inequality, Precariousness.*

## 1. CALL FOR THE INTRODUCTION OF A BASIC INCOME AGAINST INEQUALITY

A recent report by the UN Food and Agriculture Organisation reveals the increase in global hunger.<sup>2</sup> What is also alarming is that not European welfare states have escaped the tendency towards growing inequality between rich and poor.<sup>3</sup> Moreover, the COVID-19 pandemic is now proving to be an economic disaster for a lot of people. As a consequence, the UN is calling to provide citizens with a universal basic income, to help against inequality.<sup>4</sup>

In this context a debate has begun as to whether citizens have the right to a minimum existence level that guarantees subsistence,<sup>5</sup> which was traditionally possible by means of employment. Thus, during the 20<sup>th</sup> century, with social protection based on an industrial based employment model, a good balance was achieved. It is a well-known fact that the welfare state of the day sought to reduce certain risks of contingencies (such as illness, work-related accidents, disability, unemployment) with contributory protection schemes. The fact that these risks could be statistically estimated made it possible to construct a social security system that worked reasonably well for the majority of people.<sup>6</sup>

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<sup>2</sup> Hunger in the world continues to rise, affecting a little over 820 million people in 2019. *Vid.* Report by the UN Food and Agriculture Organisation on the *State of food security and nutrition in the world 2019*, <http://www.fao.org> (20.9.2020).

<sup>3</sup> In 2017 there were 112,8 million people at risk of poverty. EUROSTAT Database, <http://ec.europa.eu/Eurostat>, (29.9.2020).

<sup>4</sup> Senior UN Official Calls for universal basic Income to tackle growing inequality: “The spread of COVID-19 has fundamentally shaken economies, and people are beginning to question existing economic models: this pandemic has really thrown up the existing levels of both injustice and inequality worldwide. So bolder ideas are needed, including some, that previously, were pushed aside.” <https://news.un.org/en/story/2020/05/1063312> (6.5.2020).

<sup>5</sup> Carmona Cuenca, Encarna (2010). El Derecho a un mínimo vital, los Estatutos de Autonomía y las rentas mínimas de inserción. In Terol, Becerra, Manuel José. *El Estado Social y sus exigencias Constitucionales*, Valencia, Tirant lo Blanch.

<sup>6</sup> Standing, Guy (2018). *La Renta básica. Un derecho para todos y para siempre*, Barcelona, Pasado & Pre-

Today, the social reality has changed and assuming that “full employment” has never truly existed, why are we now so concerned that there are calls for the introduction of a basic income? Owing to the changes in the late 20<sup>th</sup> and early 21<sup>st</sup> centuries, the income distribution system collapsed and employment is no longer a guarantee of a sufficient salary. So, the expression “work dignifies” has become obsolete for much of the population, especially the young.

The following pages will attempt to pinpoint and redefine a model of basic income that could be integrated within the model of social state established by the German Constitution.

## 2. DEFINITION AND CHARACTERISTICS OF THE BASIC INCOME

This is an instrument that guarantees basic incomes, which has been given many different names over the years. The following formulae are currently employed to refer to the same concept: subsistence level income, basic income, universal basic income, unconditional basic income, guaranteed income, basic citizen's income and guaranteed universal subsidy.<sup>7</sup> This work has opted for the term basic income, on account of its simplicity.

Before beginning to study the model of basic income compatible with the existing German social state, it is appropriate to define a basic income. Although many variations exist, a basic income can be defined as a modest pecuniary quantity payable without any conditions to all individuals on a regular basis,<sup>8</sup> irrespective of their family or economic circumstances.

Some authors stress that the basic income is paid with the primary objective of increasing the individual's “freedom”.<sup>9</sup> Thus the basic income would make it possible for autonomous and responsible people, freed of the obligation to work, to fulfil themselves,<sup>10</sup> or increase their income by freely choosing to work.<sup>11</sup> At the same time, the stigmatisation of unemployment is eliminated, salaries for badly-paid jobs increase, government bureaucracy is reduced, and there is greater innovation in society.<sup>12</sup>

A particular feature of the basic income is its *universality*. That means that basic income would be paid to each habitual resident of a specific region or country.<sup>13</sup> In other words, beneficiaries would have to be members of a particular community, according to the principle of territoriality.

Without a doubt, this should be an *individual* income. It would thus be paid to each individual, regardless of marital, family or domestic status. Unlike many other contemporary allowances, it

sente, p. 77.

<sup>7</sup> Van Parijs, Philippe & Vanderborght, Yannick (2017). *Ingreso Básico. Una propuesta radical para una sociedad libre y una economía sensata*, Mexico City, Libros Grano de Sal, S.A. pp. 22-23; Standing, G. *La renta...*, *op.cit.* p. 26; Rallo, Juan Ramón (2015). *Contra la renta básica. Por qué la redistribución de la renta restringe nuestras libertades y nos empobrece a todos*, Barcelona, Deusto Editions Book Center PAPF S.L.U. pp. 415-424.

<sup>8</sup> Standing, G. *La renta...*, *op.cit.* p. 13.

<sup>9</sup> Van Parijs, P. & Vanderborght, Y. *Ingreso...*, *op.cit.* p. 17.

<sup>10</sup> Holzner, Thomas (2015). Bedingungsloses Grundeinkommen im Lichte des deutschen Staats- und Verfassungsrechts. *Zeitschrift für Politik*, 7, p. 186; Götz, Werner. (In Press) Hartz IV löst nur leid aus. *Tagesszeitung*, <http://www.taz.de> (27.11.2006).

<sup>11</sup> The results would vary depending on the design model of the basic income. Holzner, T. Bedingungsloses..., *op.cit.* p. 186

<sup>12</sup> Götz, W. Hartz IV..., *op.cit.* p. 80 and ff.

<sup>13</sup> Van Parijs, P. & Vanderborght, Y. *Ingreso...*, *op.cit.* pp. 32-38

would not be one income per family. If the basic income were paid to the family as a whole, one of the members could control and distribute it at will, subjecting the others to their control.<sup>14</sup> The basic income would thus break with the presumption of automatic distribution of income within the household. It would be paid equally to each adult, whatever their circumstances. Most advocates of the income argue that a lesser amount should be paid to children.<sup>15</sup>

Assignment of the basic income should be *regular*, for example, on a monthly basis. Unlike most public benefits, the basic income would be guaranteed and pre-established on a long-term basis. This predictability is a fundamental element of security and subsistence.<sup>16</sup>

The income would be payable in *cash*. Citizens have to be trusted to manage their domestic economy. It has been demonstrated that efficient economic distribution requires far less bureaucracy than the distribution of food, clothing and housing. An obvious example of basic income provided in kind is for employed in prisons,<sup>17</sup> which is not a desirable model.

All its advocates agree that the benefit should be paid in *the absence of any kind of condition*. Consequently, being unconditional, the basic income would be paid to every individual resident in a specific territory. The amount of work and cost involved in confirming fulfilment or not of conditions established by government agencies is common knowledge. In the first place, there would be no checking of resources and income. Secondly, the basic income would be paid without restrictions or control of how and when the allowance is spent. Thirdly and lastly, there would be no conditions related to conduct or acceptance of specific jobs.<sup>18</sup> In simple terms, and to differentiate it from other welfare benefits, in order to receive the basic income it is not necessary to demonstrate a state of need, or to have contributed to a state insurance scheme, or to be unemployed. This characteristic is what differentiates the basic income from other state programmes like integration minimum incomes.<sup>19</sup>

### 3. THE UNCONSTITUTIONALITY OF THE IMPLANTATION OF A UNIVERSAL BASIC INCOME IN GERMANY

Although the concept of the Basic Income has enjoyed considerable support in many sectors of society in recent years, there are still a number of objections. In the particular case of a basic income, the following arguments are usual:<sup>20</sup> its financing would not be viable, it is a utopia, it will encourage parasitism, conditional subsidies intended for those in a state of need are preferable, it would lead to the dismantling of the welfare state, it would break with the policy of full employment, increase the number of people out of work, it would lower salaries, it would be inflationary and would stimulate immigration.

<sup>14</sup> Rallo, J.R. *Contra...*, *op.cit.* pp. 22-23.

<sup>15</sup> Standing, G. *La renta...*, *op.cit.* p. 15; Van Parijs, P. & Vanderborght, Y. *Ingreso...*, *op.cit.* p. 29.

<sup>16</sup> Standing, G. *La renta...*, *op.cit.* p. 16.

<sup>17</sup> Van Parijs, P. & Vanderborght, Y. *Ingreso...*, *op.cit.* p. 27-29.

<sup>18</sup> Standing, G. *La renta...*, *op.cit.* pp. 15-16.

<sup>19</sup> Rallo, J.R. *Contra...*, *op.cit.* p. 23.

<sup>20</sup> Bertomeu, María Julia & Raventós, Daniel (2006). El Derecho de existencia y la renta básica de ciudadanía: una justificación republicana. In Pisarello, Gerardo & De Cabo de la Vega, Antonio (Ed.), *La renta básica como nuevo derecho ciudadano*, Madrid, Estructuras y procesos serie derecho colección, Editorial Trotta S.A, pp. 22-27; Standing, G. *La renta...*, *op.cit.* pp. 93-105.

Nobody questions the fact that the allowance should guarantee the minimum subsistence level of the individual recipient. However, what is meant by minimum level? According to German Constitutional Court case law the quantity payable should be guided by the principle of human dignity (art. 1 Basic Law of Bonn, GG) and the social state (art. 18 GG and art. 20 GG).<sup>21</sup> As a result, the state should provide the minimum conditions necessary to ensure that all members of society enjoy a dignified existence.<sup>22</sup> This should prevent people from living in insufficient economic circumstances. In this context it guarantees what is sufficient for a minimum material existence,<sup>23</sup> so will only provide physical necessities;<sup>24</sup> clothing, food, accommodation, heating and health care.<sup>25</sup> However, as the Constitution does not specify the obligatory level of the allowance, the German Constitutional Court prescribes the indicative reference of social welfare aid (*Sozialhilfe*), which equates to an integration minimum income. Therefore, the legal system follows the reference of the social assistance<sup>26</sup> established by<sup>27</sup> the legislator in accordance with the principle of human dignity.<sup>28</sup> In this sense, the legislator should take into account the social consensus of the moment which expects a minimum subsistence level that allows for socio-cultural participation.<sup>29</sup>

So, the basic income, which follows the reference of social aid (*Sozialhilfe*), will be governed by the *principle of the state of need*,<sup>30</sup> which is covered by the minimum amount of the social aid. Other additional special needs would be investigated and covered in each individual case according to the principle of individualization.<sup>31</sup> However, as with the basic income there are neither conditions nor proof of individual need, on occasions its amount falls below what is required by the Constitution.<sup>32</sup> Ultimately, one can say that the amount of the basic income would not guarantee the minimum subsistence level provided for in the Constitution; given that as it is an unconditional and universal benefit, the *principle of individualization* is disregarded.

A basic income that ensured a minimum subsistence level could have two effects. On the one hand, the possibility of freely choosing a job without any kind of economic pressure.<sup>33</sup> In this case, the image of the individual in the Constitution (*Menschenbild*)<sup>34</sup> would be respected. On

<sup>21</sup> Holzner, T. Bedingungsloses..., *op.cit.* p. 186.

<sup>22</sup> BVerfGE, 121 (133); 44, 353 (375); 48, 346 (361); 82, 60 (80, 85); 84, 133 ff.; 89, 346 (353); 125, 175 (222); 132, 134 (159 margin n°. 62 ff); Herdegen, Matthias, (2010). Art. 1 margin n°. 121. In Maunz, Theodor/Dürig, Günter, *Grundgesetz*, Munich, C.h.beck. Sartorius, Ulrich, (2000). Das Existenzminimum im Recht, Baden-Baden, Springer.

<sup>23</sup> BVerwGE, 1, 159 (161 and ff.); 48, 237 (238 and ff.); 62, 261 (265 and ff.). Wallerath, Maximilian (2008). Zur Dogmatik eines Rechts auf Sicherung des Existenzminimums. *Juristenzeitung*, 63, pp. 157-168.

<sup>24</sup> BVerfGE 125, 175 (223); BVerwGE 35, 178 (180).

<sup>25</sup> BVerfGE 120, 125 (155 and ff.); 132, 134 (159 margin n°. 64); BVerwGE 14, 294 (296 and ff.); 87, 212 (214).

<sup>26</sup> BVerfGE 99, 246 (259).

<sup>27</sup> Martínez Soria, José (2005). Das Recht auf Sicherung des Existenzminimums. *Juristenzeitung*, 13, pp. 644 and ff.

<sup>28</sup> BVerfGE 22, 180 (204); 125, 175 (224 and ff.); BSGE 97, 265 margin n°.51; 100, 221 margin n°.31.

<sup>29</sup> BVerfGE 125, 175 (223); 132, 134 (159 margin n°.64, 66 and ff.); BVerwGE 14, 294 (296 and ff.); 25, 307 (317 and ff.); 107, 234 (234 (236); Herdegen, Matthias, Art. 1 margin..., en Maunz, T./Dürig, G, *op.cit.*; Starck, Christian (2010), Art. 1 I margin no. 24. In Mangoldt, Hermann/Klein, Friedrich/ Starck, Christian, *Grundgesetz*, Munich, C.H.Beck.

<sup>30</sup> BVerwGE 108, 47 (53).

<sup>31</sup> BVerfGE 132, 134 (159 margin n°. 62).

<sup>32</sup> Holzner, T. Bedingungsloses..., *op.cit.* p. 188.

<sup>33</sup> Götz, W. Hartz I..., *op.cit.*

<sup>34</sup> Holzner, T. Bedingungsloses..., *op.cit.* p. 190.



the other hand, with no obligation or pressure to work, there would be a risk of the individual completely abandoning the labour market.<sup>35</sup> This would occur, above all, in cases in which the amount of the basic income exceeded income from work. As a result, the state would be responsible for discouraging people from working and creating dependence on welfare benefits.<sup>36</sup> Meaning the individual would move from dependence upon a job to dependence upon social security benefits.

The dignity of the individual (art. 1.1 GG) does not contemplate the obligation to work, but rather a person's inviolable right to a minimum subsistence level.<sup>37</sup> But, in this context, it should be borne in mind that associating art. 1.1 GG with other fundamental rights creates a specific image of a person (*Menschenbild*): that of the responsible and sovereign individual that develops their personality, and thereby achieves fulfilment.<sup>38</sup> An essential element of this life of autonomy, responsibility and self-fulfilment is the possibility of working. The understanding is that a job<sup>39</sup> provides independence via an economic foundation and social recognition.<sup>40</sup> This is made clear by the special protection of the right to work in art. 12 I GG.<sup>41</sup>

In this context, it should not be forgotten that the integrating function of work along with the subsidiarity of state benefits are not only essential for the individual, but also for society. Thus, the system of social protection is mainly based on the citizen's own sense of responsibility and production capacity, which will generate income to pay benefits. To this end, the social state requires each individual to cooperate in accordance with their possibilities and make a contribution to society.<sup>42</sup> In this way, freedom is combined with responsibility. However, solidarity has to be subsidiary<sup>43</sup> and should help beneficiaries to escape from poverty by dint of their own efforts in order to reduce social costs as far as possible. But, the unconditionality of the basic income encourages the individual to retire at society's expense. This not only eliminates the integrating function of the social state,<sup>44</sup> but endangers its financing.<sup>45</sup>

This dissociation from work<sup>46</sup> neither coincides with the notion of the person's right to dignity (art. 1.1 GG), nor represents the Constitution's image of humanity (*Menschenbild*), which is that of an individual related to and integrated within society through work.<sup>47</sup> In other words, the Constitution does not reflect the image of the isolated and independent individual promoted

<sup>35</sup> HORST, Siebert, (In Press). Gegen die bedingungslosen Grundeinkommen. *Frankfurter Allgemeine Zeitung*. <http://www.FAZ.de> (27.6.2007)

<sup>36</sup> Martínez Soria, J. Das Recht..., *op.cit.* pp. 644 and ff.

<sup>37</sup> Götz, W. Hartz IV..., *op.cit.* pp. 59 and ff.

<sup>38</sup> BVerfGE 4, 7 (15); 41, 29 (50); 45, 187 (227); 108, 282 (300); 115, 118 (158); 221, 69 (92).

<sup>39</sup> According to Kant "the individual does not have a right to do nothing". Kant, Emmanuel (1797). *Die Metaphysik der Sitten*, Rechtslehre (margin n°. 6), p. 447.

<sup>40</sup> BVerfGE 50, 290 (362); 81, 242 (254); BVerwGE 67, 1 (5). For more Schneider, Hans-Peter (1985). Artikel 12 GG - Freiheit des Berufs und Grundrecht der Arbeit. *Veröffentlichungen der Vereinigung der deutschen Staatsrechtslehrer*, 43, pp. 7-15.

<sup>41</sup> Holzner, T. Bedingungsloses..., *op.cit.* p. 190.

<sup>42</sup> For this reason, for example, the Bavarian Constitution regulates in art. 166 III an obligation to work.

<sup>43</sup> BVerwGE 23, 149 (153); 47, 103 (106 and ff.); 67, 163 (168).

<sup>44</sup> Stapf-Finé, Heinz, (2007). Ein Grundeinkommen sprengt unser Sozialsystem. Bedarfsorientierte Grundsicherung ausbauen - und so (Alterns-) Armut vermeiden. *Soziale Sicherheit*, p. 257.

<sup>45</sup> Holzner, T. Bedingungsloses..., *op.cit.*, p. 192.

<sup>46</sup> BVerwGE, 67, 1 (5f).

<sup>47</sup> BVerfGE 4, 7 (15 and ff.); 33, 303 (334); 45, 187 (227); 109, 133 (151); 221, 69 (92).



by this income.<sup>48</sup> The basic income would render this socialisation superfluous for part of the population.<sup>49</sup>

Finally, this work concludes that the German Constitution does not require this instrument, and also that the amount of the basic income falls below the constitutional guarantees that ensure existence, given that it does not guarantee the minimum individual subsistence level demanded by the Constitution. Specifically, without the condition of proof of need, all benefit equally, special individual needs are not covered. In this context, it is worth noting that social benefits should be understood according to the slogan “help for self-help” (*Hilfe zur Selbsthilfe*). In other words, they are intended to help the individual to find a new job, so social aid has a subsidiary nature.<sup>50</sup> The basic income turns upside down this principle of exception, where the allowance is the rule and work is voluntary. For this very reason, it is appropriate to conclude with the unconstitutionality of this model of basic income.<sup>51</sup> From the constitutional point of view it is possible to extend and develop the social security and tax system. However, there are serious doubts as to the constitutionality of a basic income of this type.<sup>52</sup>

#### 4. CONCLUSION

This work has shown that German society, the labour market, the Constitution, and the German social state are not currently prepared for or in need of a universal Basic Income. Bearing in mind that the basic income has the potential to emancipate the individual from paid employment,<sup>53</sup> it represents a break with the traditional market rules: the model is inverted and the citizen gains “freedom from work”, and not “through work”. This paradigm shift may represent a challenge for today’s model of social state based on the work ethic. Furthermore, one should take into account that the introduction of a universal basic income for all could reopen class, cultural and ethnic conflicts, which would benefit populist parties.<sup>54</sup> This measure would split society into two classes: those who work and those who receive income. This profound difference could potentially create a social divide.<sup>55</sup> It would also act as disincentive to work, further destabilising the social state.

From the point of view of Constitutional law, it has been demonstrated that a universal basic income, in not applying a *principle of individuality* when needs are assessed, does not guarantee the minimum subsistence level established in the Basic Law of Bonn. Therefore, there are seri-

<sup>48</sup> Süchting, Gerald (2013). Die Rechtswidrigkeit des Bedingungslosen Grundeinkommens, in Kleszczewski, Diethelm & Müller-Mezger, Steffi & Neuhaus, Frank (Ed.), *Von der Idee des Gemeinbesitzes zum Projekt eines unbedingten Grundeinkommens*, Münster, Mentis Verlag, pp. 111-132; Deutsche Bundestag BT-262/16, Rechtliche Voraussetzungen für die Einführung eines bedingungslosen Grundeinkommens in Deutschland, p. 7.

<sup>49</sup> Holzner, T. Bedingungsloses..., *op.cit.* p. 191.

<sup>50</sup> BVerwGE 23, 149 (153); 27, 58 (63); 67, 1 (5 and ff); 68, 91 (94); 98, 203 (204).

<sup>51</sup> Holzner, T. Bedingungsloses..., *op.cit.* p. 191.

<sup>52</sup> On the unlawfulness of a Basic Income, *vid.* Süchting, G. Die Rechtswidrigkeit ...*op.cit.* pp. 111-132.

<sup>53</sup> Casassas, David & De Wispelaere, Jurgen (2011). Renta básica y emancipación social: principios, diseños y coaliciones. In Casassas, David & Raventós, Daniel (Ed.), *La renta básica en la era de las grandes desigualdades*, Barcelona, Editorial Montesinos, pp. 105 and ff.

<sup>54</sup> Segura Alastrué, Mario (2018). Los robots en el derecho financiero y tributario. *La Ley Actualidad*, p. 181; the author wisely warns that “adopting a measure like the universal basic income has many variables, and all should be considered before a decision is taken”. Standing, G. *La renta...*, *op.cit.* p. 65; Lopez, Casanovas, Guillem. (In Press) Cuidado con la renta básica”, *El País* at <http://www.elpais.com> (2.9.2018).

<sup>55</sup> Segura Alastrué, M. Los robots..., *op.cit.* pp. 184.

ous doubts as to the constitutionality of an unconditional universal basic income.<sup>56</sup> However, it is constitutionally viable to develop a social and tax system directed towards individual needs. In other words, this study shows that within the system there are other safer alternatives to an unconditional basic income that do not threaten social cohesion. Ultimately, the flaws, shortcomings and limitations of existing social assistance systems make it necessary to reassess the social protection system. However, this is not a reason to introduce a universal basic income for all, as has been explained in these pages.

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<sup>56</sup> Holzner, T. Bedingungsloses..., *op.cit.* p.197.



# CIVIL LAW STATUS OF THE SUPERVISORY ORGAN IN EUROPEAN BUSINESS COMPANIES

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**Abstract:** *The Supervisory organ is a compulsory element in the governance structure of the European Structures for Business Association, namely the European Company (Societas Europaea) and the European Cooperative Society (Societas Cooperativa Europaea) that have chosen a two-tier system for their organizations. The organ under consideration presents a hybrid regulatory framework. On the one hand, these are the provisions in the regulations of the European Union, and, on the other, the national law regulations.*

*The organ in question has specific characteristics. Its members are elected by the General meeting. The staff of the first supervisory board may be appointed in the statutes. This should apply without prejudice to any employee participation arrangements determined pursuant to Directive 2003/72 / EC.*

*The members of the Supervisory organ are elected for the term specified in the Statute of the association. Their maximum term of office after the expiry mandate date may not exceed six months. The package of powers includes constitutional, authoritative and controlling rights and obligations. The supervisory organ shall elect and dismiss members or an individual member of the management organ. In cases explicitly provided for in the statute of the association, a certain category of legal transactions cannot be concluded by the management organ without the permission of the supervisory organ. Its controlling functions are particularly important. The supervisory organ shall supervise the duties performed by the management organ. It may not itself exercise the power to manage the associations. The supervisory organ may not represent the associations in dealings with third parties. It shall represent the associations in dealings with the management body, or its members, in respect of litigation or the conclusion of contracts. The management organ shall report to the supervisory body at least once every three months on the progress and foreseeable developments of the association's business, taking into account any information relating to undertakings controlled by the association that may significantly affect the progress of the association business. The members of the Supervisory organ are holders of Civil liability. Its legal basis is the relevant rules in the national law relating to joint stock companies or cooperative organizations in the Member States in which they have registered their office. This liability is based on the possible damage caused by illegal or incorrect acts or actions.*

**Keywords:** *Supervisory organ, European Company, European Cooperative Society, Management organ, General Meeting.*

## 1. INTRODUCTION

The rapid and intensive evolution of the integration processes between the Member States of the European Union, the effective functioning of the common market and the achievement of sustainable competitiveness determine the emergence of new legal and organizational forms of business association. Among the determinants of their emergence the establishment of a unique social market economy combining social justice and economic growth should be mentioned. These are the European Economic Interest Grouping (EEIG) [1], the European company (*Societas Europaea*) (SA) [2] and the (*Societas Cooperativa Europaea*) (SCE) [3]. These new cross-border European legal entities are totally unknown in the existing typology of company entities on the Old continent [4].

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The Community Acts governing them such as Council Regulation (EEC) No 2137/85, Council Regulation (EC) № 2157/2001 and Council Regulation (EC) No 1435/2003 determine their legal status. They also establish the architecture of their management. In addition to the General Meeting two additional alternative management systems are possible. One is a two-tier system, which includes a supervisory organ and a management organ. The other is a one-tier system, which provides only for an administrative organ.

The European lawmaker has granted the right of a company to choose its own management structure in the process of its establishing. The choice is limited within the available conventional set. This approach is a manifestation of company's democracy [5].

This hypothesis does not apply to the European Economic Interest Grouping. The organs of a grouping shall be the acting collectively members and the manager (or managers). No special supervisory organ is foreseen. A contract for the formation of a grouping may provide for other organs. If it does, it shall determine their powers [6].

## **2. CIVIL LAW FEATURES OF THE SUPERVISORY ORGAN**

The supervisory organ is a mandatory component of the governance structure of European companies that have chosen a two-tier system. In the event that only a one-tier system is statutory in a Member State, the state is obliged to adopt specific rules for a two-tier system of the supranational European forms established in its territory [7].

In the different countries the supervisory organ is named differently but the names possess similar denotations [8].

Council Regulation (EC) № 2157/2001 and Council Regulation (EC) No 1435/2003 clearly distinguish between the legal status of the supervisory organ and the management organ. There are specific Community provisions for both organs, as well as common rules for their operation. Some of the normative texts establishing the legal status of the supervisory organ are identical to those for the management organ.

As can be seen from its name, the supervisory organ supervises the work of the management organ [9]. This control function does not belong to each of its individual members but to the whole body as a collective establishment. In practice, it performs only one integral part of the complex of the company's management actions. Hence, a supervisory organ cannot exercise the entire management complex (Art.40, para. 1). Therefore, it is inadmissible for the supervisory organ to give obligatory instructions and orders on all issues of the operational management of the management organ, which is responsible for the management of the company. This distinction of functions is an essential legal feature of a two-tier system. This distinction is also clear when relocating the company's registered office [10].

The nature of the powers of the supervisory organ does not allow it to represent the company before third parties. It does not have the representative power to carry out any civil transactions. All external legal actions performed on behalf of the company and at its expense are illegitimate [11].

The Commerce Act of Bulgaria explicitly stipulates that the supervisory organ may not take part in the management of the company. The supervisory organ shall represent the company

only in its relations with the managing organ (Art. 242, para.1). The provision in German law is identical (Genossenschaftsgesetz (GenG) - § 39). This legal situation is also stipulated in the French law [12].

The members of the supervisory organ of the company are elected by the General Meeting of the shareholders or cooperators. The personnel of the first supervisory organ may be formed by the Statute of the company. The principle established in the Regulations will apply in compliance with the national law, which allows minority shareholders or other persons or organs to designate some of the members of the company's body and the employee participation in compliance with all the conditions defined in Council Directive 2001 / 86 / EC and Council Directive 2003/72/EC. This provision mirrors Art. 43, para. 3 postulating the election of the members of the administrative organ under the one-tier system (Viz. Art. 40 and Art. 43, para.3). This power of the General Meeting is its exclusive competence and therefore it cannot be delegated to another body.

The number of members of the supervisory organ and the rules for their election shall be laid down in the Statutes. The regulations make it possible for a Member State to fix the number of members of a supervisory body of companies registered in its territory, as well as the minimum and / or maximum number of members. The German law provides for a different number of supervisory organs for cooperatives and joint stock companies [13] as follows: a joint stock company with more than 2,000 employees must have a supervisory organ of at least 12 members; for staff between 10,000 and 20,000 it must have 16 members, and for more than 20,000 employees, their number must be 20 [14]. In contrast to this regulation, the European company is given the right to determine the maximum number of members of the supervisory board in its Statutes, provided that it is a multiple of three. The company can independently determine the number of members of the supervisory organ between three and nine members (with a capital of less than EUR 1, 500 000), between 3 and 15 members (with a capital of up to EUR 15. 000 000) and between 3 and 21 members with a capital of more than EUR 10, 000 000) [15]. Thus, the provisions for joint stock companies will not apply [16].

Twenty of the Member States have set the minimum staff of which 16 have defined three-member bodies. Six countries have specified the lower and the upper limits of the staff of the organ in question. With regard to the maximum number, it ranges from 7 to 21 members.

The constitution of the supervisory organ reflects the desire of a number of Member States to involve employees in the management of the company [17]. In Germany the participation of employees' representatives in this body is differentiated according to their number. For employees over 500 people, the representatives should be one third of its members, and for more than 2,000 people – two thirds. This approach is also observed in the Netherlands, where three management systems have been established. The Employees' Council (Werknemersraad) will nominate members of the supervisory organ under the structural model of the SE, and under a relaxed regime will express an opinion on the selection and dismissal of the members of the organ in view.

The exercised control [18] can be preliminary (*a priori*), current and subsequent (*a posteriori*) depending on the moment of its implementation. The most common practice is the exercise of control after the performance of the respective legal actions by the management body. The analysis of the supervisory activity, however, reveals that the *ex-ante* (before the event, au préalable) control functions are especially effective [19].



Those regulations establish only the essential legal characteristics of the supervisory body. A more detailed regulation is available concerning the tools for obtaining the information necessary for its functioning.

The management organ shall report to the supervisory organ at least once every three months on the progress and the foreseeable development of the SE's business (Art. 41, para. 1). The nature of the substantive content of this Community norm is interesting. On the one hand, it contains an imperative element, namely that the governing body is obliged to unconditionally provide information at least once every three months. On the other hand, it gives the reporting body the operational autonomy to choose the set of issues that it considers to be structurally determining for the development of the company at that moment. This dispositive principle is confirmed by the requirement that together with the specified periodic information, the management body is obliged to provide timely information to the supervisory body on all circumstances that may have a significant impact on the company. These regulations are logically justified as the governing body performs management functions and can assess which problems are a priority for the development of SE in the specific economic and social environment, as well as such issues that may have a strong negative impact on it.

It is by ensuring that the supervisory body is fully and systematically informed that it is empowered to request the information it needs to carry out its supervisory activities. The Regulation does not specify what the legal consequences would be in the event of non-performance or poor performance of this obligation in case the information provided is incomplete, inaccurate, incorrect, late, etc. Therefore, in the absence of relevant rules in the national law, these issues should be regulated in the company's Statutes.

Assuming that the supervisory body is not satisfied with the information provided, it is authorized to carry out inspections and/or to organize their implementation. These actions should be in line with the rule of law [20].

The right to information in question is a collective right, i.e. it belongs to the supervisory body as a collegial body. This is evidenced by the legal and technical formulations that are carried out in the singular grammatical number.

The analysis of the Community regulations in this area reveals only two cases of granting an individual right to information to a member of a supervisor organ. There is a special provision stating that each member of the supervisor organ has the right of access to all the information provided to them (Art. 43, para.5). In the second case, the individual right to information is conditional. Any member of the organ concerned may request from the management organ any information necessary for the performance of its control activities only if the Member State where the SE is located has provided for this possibility (Art. 41, para. 3, second sentence).

The individual right of information of the member of the management organ in the one-tier system is regulated in a different way. They have the personal right to investigate all the information delivered to the authority (44, para. 2).

The members of the supervisory organ of the European company and of the European Cooperative Society shall be elected for a term laid down in the Statutes, but not longer than six years [21]. Therefore, the period for the performance of their duties in this organ in the corporate enti-

ty may be fixed for a shorter period, but not for a longer period. This provision provides greater flexibility for both types of companies, as a number of national legislations provide for shorter terms for members of the organs of joint stock companies and cooperatives. For example, a member of the management organ of a joint stock company based in Estonia may be elected for five years if the Statutes do not provide for a shorter term [22].

The Shareholder Legislation of Bulgaria has adopted a general legal decision for all elected bodies of formations stipulating that the members of the administrative organ (one-tier system), supervisory organ and management organ are elected for a period of five years, unless the Statute indicates a shorter period [23]. The legal situation in Germany is identical, where the law stipulates that an executive member, i.e. a CEO in a joint stock company cannot be elected for a term exceeding five years [24], and the term of office of a member of the supervisory organ shall be interrupted no later than the closing of the General Meeting after the four-year term of office [25]. The maximum term of six years laid down by Council Regulation (EC) № 2157/2001 for members of the bodies of a European company is an advantage for the company and makes it more competitive in choosing the form of business association in the Member State concerned. The legal situation of the European Cooperative Society is identical. Council Regulation (EC) № 1435/2003 stipulates that the members of SCE organs shall be appointed for a period laid down in the Statutes not exceeding six years. The Cooperatives Act of Bulgaria states that the members of the control shall be elected among the members of the cooperative for a term of four years.

### 3. CONCLUSION

The supervisory organ is a pronounced form of social democracy. The selection of the staff of this essential body is also a manifestation of the exercise of the rights of citizens as a whole, and of shareholders and cooperators, in particular [26]. The direct election of its members by the General Meetings of the shareholders in the European company and of the cooperators in the European cooperative society determines its important place in the management architecture of the corporate entities considered. Reporting its activities to the highest body of companies helps to increase its economic and organizational activities, to increase their competitiveness and their sustainable smart development.

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