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Kamenička 6, tel. +381 69 8066 416, +381 11 2633 884
E-mail: cid@ekof.bg.ac.rs
http://cid.ekof.bg.ac.rs

Dean of the Faculty of Economics and Business
Žaklina Stojanović

Editors of the Conference Book of Proceedings
Grigoris Zarotiadis
Žaklina Stojanović
Dejan Molnar

Cover Design
Centre for corporate relations
Faculty of Economics and Business, University of Belgrade

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FOREWORD

The COVID19 crisis accelerated a procedure of structural transformations towards a new economic/social environment which needs to be further explored. The governments all over the world, exposed to huge external shocks, are ultimately forced to create a resilient and sustainable economic/social system. Furthermore, the COVID19 pandemic put our societies even more out of the way of the SDGs 2030. The papers presented in the Book of Proceedings aims at understanding various aspects of the pandemic crisis in the South and East European Countries (SEE) and the Black Sea Region and the overall influence of the crisis on economic and social systems.

Selected papers are previously discussed at the ASECU Conference held in September 2021 at the Faculty of Economics, University of Belgrade – Serbia (17th ASECU Conference "Post-COVID19 in SEE and Black Sea Region – Responses towards SDGs", 13-14.09.2021). The main topics covered by the Conference programme are: COVID-19 and SDGs: policy and responses, the macroeconomic impact of COVID-19: national, sectoral, and regional effects, income inequality and welfare state during and after COVID-19, financial impact on firms and markets, post COVID-19 and New Green Deal, as well as socioeconomic changes and resilience. The Conference brought together leading experts both from CEE countries and Black Sea Region and around the world. Both empirical and methodological research papers are included. The outcomes of the discussions contribute to scientific and policy debate in the region regarding the open Post-COVID19 questions and challenges.

Editors

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Panagiotis Tsitsoglou
Aristotle University of Thessaloniki, Greece
E-mail: patsitso@econ.auth.gr

Grigoris Zarotiadis
Aristotle University of Thessaloniki, Greece

IN SEARCH OF COMMERCIAL DIPLOMACY (CD)

Abstract. Commercial Diplomacy (CD) - one main strand of Economic Diplomacy (ED) –refers topolitical means that promote international competitiveness and thereby economic growth.In order to increase exports and/or inward/outward foreign investment, governments practice CD (i) by providing reliable foreign intelligence to firms, in order for the latter to encounter uncertainty as far as their internationalization endeavor is concerned and(ii) by enhancing credibility of domestic economy that it is a reliable partner in international economic relations. This paper's contribution to the existing literature is twofold. Starting from ED, we proceed to micro and macro analysis of the concept with respect to mobility of goods, services and capital, providing specific examples of practicing ED. Following, we specify the realm of the activity of CD, concluding to a definition of the relevant concept. Afterwards, we determine specific dimensions of CD– cognitive and political – in which relevant activities and interventions may be categorized –and finally, we introduce potential variables for the quantification of the aforementioned dimensions.

Keywords. Economic Diplomacy; Commercial Diplomacy.

Introduction

Diplomacy is a cluster of representation, social interaction and negotiation (Carta, 2012, p.13), through which interested parties conduct their business (Saner andYiu, 2003, p. 11). It is a way of conducting foreign policy (Kostecki and Naray, 2007, p.1), strongly related with the interaction between sovereign states (Berridge & James, 2003) through "*the medium of officials based at home or abroad*" (ibid, 2003, p. 69)or with the cooperation among actors in international field (Udovic, 2011, p.358).

Diplomacy and business are like communicating vessels (Justinek and Sedej, 2012, p. 80), since on the one hand diplomacy may be a key instrument and the additional factor for an international business outcome (Ruël, 2013, p. 14) and on the other hand pre-existing economic relations make diplomacy easier. Firms need diplomacy to internationalize their activities (Villanueva, 2017, p. 368), and governments needdiplomacy to attract foreign direct investment (Ruël, 2013, p. 14).

In that sense, in itself, the exercise of diplomacy to serve international economic relations implies the imperfection of international markets in terms of relevant infor-

mation and the violation of the supposed "invisible hand thesis". On the contrary, it proves the existence of an unstable international environment where more or less centralized interests play a significant role.

The remainder of the paper is structured as follows: the second part identifies the possible ways in which Economic Diplomacy (ED) and its related strands are defined in scholarship. Furthermore, we analyze ED with respect to mobility of goods services and capital in a micro and macro framework– citing specific examples – determining the boundaries of Commercial Diplomacy's (CD) scope of activity, and we develop a certain definition of this concept. Section 3 provides the necessary theoretical arguments in favor of practicing CD. In Section 4, the authors present two conceptual dimensions of CD, meaning *cognitive* and *political,* in which the various activities of CD may be categorized. Moreover, we select potential variables to quantify the intensity of the dimensions mentioned above, based on specific criteria. Last but not least, section 5summarizes the conclusions of the study.

From Economic Diplomacy to Commercial Diplomacy

There are several ways in which Economic Diplomacy (ED) appears in relevant literature. The common reference base is that it indicates political actions abroad towards the strengthening of that country's positioning in the frame of globalized economy. This may refer to either the activities of domestic businesses abroad, or to the ability of the state to effectively apply policies that improve its economic outreach. In the table below, we provide given definitions related to the concept of ED and its relevant strands.

Table 1. Definitions of Economic Diplomacy in relevant literature

Year	Author(s)	Used definition
2017	Bayne and Woolcock	"**Economic diplomacy** is best defined not by its instruments, but by the economic issues that provide its content. The authors follow the same categories as used by Odell (2011) in determining the scope of economic negotiation: policies relating to production, movement or exchange of goods, services, investments,(including official development assistance), money, information and their regulation."
2016	Okano-Heijmans	**"Trade diplomacy** is a diplomatic activity concerned with negotiations between two or more countries that support economic transactions and trade and/or investment agreements", while **Commercial Diplomacy** is generic and sector/company-specific trade and investment promotion".
2013	Romih & Logožar	"**Economic diplomacy** is the management of economic relationships between (two or more) countries."

Year	Author(s)	Used definition
2013	Moons & Bergeijk	**"Economic diplomacy** is the use of government relations and government influence in order to stimulate international trade and investment and this activity covers a broad range of semi-permanent international representations (embassies, consulates and other public sector business support facilities), domestic institutions (investment and export promotion offices), and diplomatic bilateral activities (trade and state visits)."
2013	Elbeshbish	"**Economic diplomacy** can be described as formulation and advancement of policies relating to production, movement or exchange of goods, services, labor and investment in other countries".
2012	Justinek and Sedej	"**Commercial diplomacy** is understood as being activities carried out by diplomats or any other officials from trade promotion agencies, chambers or any similar institutions or organizations and related to export support, investment support and others like promoting the country brand, image building or mediating trade disputes".
2012	Ruël and Visser	**"Commercial Diplomacy** is an activity conducted by state representatives which is aimed at generating commercial gain in the form of trade and inward and outward investment for the home country by means of business and entrepreneurship promotion and facilitation activities in the host country based on supplying information about export and investment opportunities, keeping contact with key actors and maintaining networks in relevant areas."
2012	Reuvers & Ruël	**"Commercial diplomacy** is the use of diplomatic means to support commercial activities, such as export and foreign direct investment (FDI) promotion. It is pursued with resources available to the home country, aiming at outputs such as economic stability, home country welfare, and a national competitive advantage. Countries thereby target one or several foreign countries on a bilateral or multilateral basis. Commercial diplomacy functions as an umbrella term, including nation branding and participation in multilateral meetings, such as those of the WTO, and rewarding and sanctioning other countries in order to achieve foreign policy objective."
2011	Okano-Heijmans M.	"**Economy diplomacy** is the political leverage in international negotiations with the purpose of enhancing national economic prosperity, and use of economic leverage to increase the political stability of the nation" or **"Economy diplomacy** is a strategy by which states pursue national interests, comprising economic prosperity and political stability."

Year	Author(s)	Used definition
2011	Naray	**"Commercial diplomats** are state representatives with diplomatic status who are working for business promotion in a broad sense between a home and a host country. **Commercial diplomacy** aims at encouraging bilateral business through a series of roles that commercial diplomats perform in various activity areas, such as trade promotion, investment promotion, and cooperation in science and technology."
2009	Pavól Baranay	**"Economic Diplomacy** is the predominant mechanism of fruitful achievement of the trade and economic relations based on the bilateral and multilateral levels. It is an instrument for development of effective cooperation between the countries and regions at the global level."
2009	Yakop and Van Bergeik	**"Economic Diplomacy** is an activity to support the promotion of foreign direct investment and international trade by supplying information and advice about trade and investment opportunities and by organizing and helping to act as hosts to trade missions from the home country."
2009	Moons & Bergeijk	**"Economic diplomacy** is a set of activities (both regarding methods and processes for international decision making) related to cross border economic activities (export, import, investment, lending, aid, migration) pursued by state and non-state actors in the real world "
2008	Blanchard and Ripsman	**"Economic diplomacy** as **economic statecraft** includes economic measures (sanctions and incentives) that are taken in the pursuit of political goals and the pivotal factor of the success of this economic statecraft is the level of target state's level of stateness comprised by three components: autonomy, capacity and legitimacy. "
2007	Rana	"**Economic Diplomacy** is the process through which countries tackle the outside world, to maximize their gain in all the field of activity comprising trade, investment and other forms of economically beneficial exchanges, where they appreciate comparative advantage, it has bilateral, regional and multilateral dimensions, each of which is essential."
2007	Kostecki and Naray	"**Commercial Diplomacy** is a government service to the business community which aims at the development of socially beneficial international business ventures.", while **Trade Diplomacy**(as part of general CD) is designed to influence foreign government policy and regulatory decisions that affect global trade and investment and comprises activities relating to trade policy-making (for example, multilateral trade negotiations, trade consultations and dispute settlement)."
2007	Mercier	**"Commercial diplomacy** is the art, or the science, of helping a country's enterprises trade abroad and to convince foreigners of the advantages of investing in the home country."

Year	Author(s)	Used definition
2004	Lee	"**Commercial diplomacy** is the work of a network of public and private actors who manage commercial relations using diplomatic channels and processes."
2004	Lee & Hundson	**"Commercial diplomacy** is the work of public officials from Foreign Ministries and overseas missions and officials from other government departments such as Trade/Commerce as well as private economic actors in support of the business and finance sectors of the economy."
2004	Potter	**"Commercial diplomacy** is the application of tools of diplomacy to help bring out specific commercial gains through promoting exports, attracting inward investment, and preserving outward investment opportunities, and encouraging the benefits of technological transfer."
2003	Saner & Yiu	**"Economic diplomacy** is concerned with economic policy issues such as the work of delegations of standard setting organizations such as World Trade Organization. Economic diplomats are responsible to report and monitor economic policies in foreign countries and provide advice to the home government on how to best influence those policies". "**Commercial Diplomacy** is the work of diplomatic missions in support of the home country's business and finance sectors in their pursuit of economic success and the country's general objective of national development ".
2003	Berridge & James	"**Economic diplomacy** is: (1) Diplomacy concerned with economic policy questions, including the work of delegations to conferences sponsored by bodies such as the World Trade Organization. It also includes the part of the work of diplomatic missions concerned with monitoring and reporting on economic policies and developments in the receiving state and advising on how best to influence them. (2) Diplomacy which employs economic resources, either as rewards or sanctions, in pursuit of a particular foreign policy objective. This is sometimes known as "**economic statecraft**". **Commercial diplomacy** is the work of diplomatic missions in support of the home country's business and finance sectors. It includes the promotion of inward and outward investment, as well as trade. Important features of this work are the supply to the sending state's trade ministry and businessmen (especially those from small businesses) of information about export and investment opportunities, maintaining contact with the businessmen and chambers of commerce of the receiving state, and organizing and supporting trade missions from home."

Taking into consideration the complexity of the phenomenon, we proceed with a combined definition considering the pre mentioned approaches: ED is diplomacy with respect to cross border mobility of goods, services and capital. ED can be further segregated in micro and macro framework. Thereby, we will be able to efficiently specify the realm of Commercial Diplomacy (CD) and conclude to a meaningful definition of it (see also table 2 in the following pages with reported relevant examples):

I. ***Mobility of goods and services.***
- In a *micro framework*, governments, in order to increase the country's exports and the consequent benefits, directly support home country companies through a series of instruments such as trade missions, trade fairs, trade shows, state visits, seminars, workshops ormarket investigations, business guides, etc. Through these tools, addressed to home country business sector, states support their companies' ability to export (e.g. provision of useful information, facilitation of business to business (b2b) or business to state(b2s) interaction etc.) and therefore their profitability and viability in the long term. According to relevant literature this procedure (export support oriented to home business) affects mobility of goods and services and belongs to the realm of commercial diplomacy (Berridge & James, 2003; Saner & Yiu, 2003; Potter, 2004; Lee, 2004; Rana, 2007; Mercier, 2007; Kostecki & Naray, 2007; Yakop and Van Bergeik, 2009; Naray, 2011; Okano-Heijmans M., 2011; Justinek and Sedej, 2012; Reuvers & Ruël, 2012; Ruël & Visser, 2012, Kosters, 2013).
- In a *macro framework*, negotiation and implementation of trade and economic agreements between countries, as well as the resolution of trade disputes in a bilateral, regional or multilateral basis affect cross border mobility of goods and services. According to Kostechi and Naray (2007) trade diplomacy comprises "*multilateral trade negotiations, trade consultations and dispute settlement*", while according to Okano-Heijmans M. (2017) it "*is a diplomatic activity concerned with negotiations between two or more countries that support economic transactions and trade agreements*". A representative example of trade diplomacy is the North American Free Trade Agreement (NAFTA) replaced by United States – Mexico – Canada Agreement (USMCA) in July 2020, the EU-Canada Comprehensive Economic and Trade Agreement (CETA) etc.

II. ***Mobility of capital.***
- *In a micro framework*, governments directly support business community (home and foreign) and promote inward and outward foreign investment. Specifically states, addressed to foreign potential investors, conduct relevant ED through a series of diverse instruments – e.g. trade missions, trade fairs, trade shows, state visits, etc. – through which they promote the 'brand' of home country focusing on specific competitive advantages, its credibility and reliability, which argue for the country to be an ideal investment loca-

tion and attract inward foreign investment. On the other hand, state officials support outward investment through provision of reliable foreign intelligence and through network activities using trade missions, trade fairs, trade shows, state visits, seminars, workshops or market investigations, business guides etc. According to the relevant literature this procedure of supporting the mobility of capital at the micro level belongs also to the realm of «Commercial Diplomacy» (Berridge & James, 2003; Saner & Yiu, 2003; Potter, 2004; Lee, 2004; Rana, 2007; Mercier, 2007; Kostecki & Naray, 2007; Yakop & Van Bergeik, 2009; Naray, 2011; Okano-Heijmans M., 2011; Justinek & Sedej, 2012; Reuvers & Ruël, 2012; Ruël & Visser, 2012, Kosters, 2013).

- In a macro framework, governments, in order to protect and promote foreign investments, conduct ED through International Investment Agreements (IIA) or Currency Swap Agreements (CSA) (between or among Central Banks). Investment Agreements (IA) are usually part of International Trade Agreements and comprise regulation regarding the treatment of foreign investment or dispute settlement procedures (Jacob, 2010, p. 7-8). Under a Currency Swap Agreement (CSA), a central bank has the ability to obtain foreign currency liquidity from the issuing foreign central bank in order to address claims of its' domestic banks. The latter, especially during a financial crisis, find it difficult to finance their currency-related claims, as they do not have direct access to the issuing foreign central bank. CSAs enable home central banks to provide their banking sector with the necessary liquidity in foreign currency without using its foreign reserves(European Central Bank,2016).[1]

"*Commercial Diplomacy (CD) is a micro level diplomacy with respect to mobility of goods, services and capital, through which states interact with home and foreign business sector in order to increase domestic exports, as well as inward or outward foreign investment*".

1 https://www.ecb.europa.eu/explainers/tell-me-more/html/currency_swap_lines.en.html

Table 2. Economic Diplomacy in practice

	MICRO-LEVEL	MACRO-LEVEL
Diplomacy with respect to mobility of goods and services	**Commercial Diplomacy** Positioning of home country products in foreign markets through provision of useful information to home state companies, through organization of business delegations, trade missions and state visits abroad in view of facilitation of business to business/ business to host state interaction or through exhibitions of home country products overseas.	**Trade Diplomacy** A representative example of trade diplomacy is the North American Free Trade Agreement (NAFTA), replaced by United States – Mexico – Canada Agreement (USMCA) in July 2020. The three participants agreed for example, for the gradual reduction of tariffs and other trade barriers on imports and exports, as well as for the establishment of procedures for the resolution of trade disputes.
Diplomacy with respect to capital mobility	**Commercial Diplomacy** Promotion of outward investments or attraction of inward investments through provision of relevant information to potential investors (outwardinvesting) (e.g. conferences, seminars, workshops, business guides, reports, how to invest handbooks e.t.c), or through network activities (inward and outward investing) (e.g. state visits, trade missions or trade fairs) in view of facilitation of business to business/business to host stateinteraction.	Investment Agreements (IA), which are usually part of International Trade Agreements and comprise regulation regarding the treatment of foreign investment or dispute settlement procedures (Jacob, 2010, p. 7-8), or Currency Swap Agreements (e.g. CHINA-EU currency swap deal in October 2013, extended until October 2022)

Why does Commercial Diplomacy matter?

Developing CD is of great importance (Lee and Ruël, 2012, p. xiv). Majorly, this is due to and at the same time, reveals the imperfectness of the international economic environment.

The necessity of encountering information problems explains the relevance of CD (Harris and Li, 2005, p. 72-73). Expanding overseas requires access to reliable and neutral information as far as the regulatory or cultural local environment (Van Veenstra et al., 2010, p. 6), while economic activities beyond national borders mean engagement in a costly (Volpe Martincus and Carballo, 2008, p. 90) and risky (Naray, 2012, p. 121; Van Veenstra et al., 2010, p. 6) process. Firms are obliged to deal with uncertainty in their endeavor of internationalization, due to the lack of knowledge mentioned above (Lim, 2008, p. 49), in which "*cultural distance makes it difficult to*

understand, control and predict the behavior of others, impeding the realization of business deals" (Möhlmann et al., 2009, p. 8) and increasing risk as far as decision-making is concerned (Kraus et al., 2015, p. 2).

Despite the progress in communication technologies, information imperfection is still a critical obstacle for firms seeking to internationalize (Gil-Pareja et al., 2015, p. 148). Firms in the importing country have a crucial advantage in obtaining and elaborating country-specific knowledge and evaluating its credibility (Yakop and van Bergeijk, 2009, p. 9).

Moreover, the private sector cannot provide foreign market information, as companies are not in favor of conducting relevant research that can benefit rivals (Lederman et al., 2016, p. 2). In other words, competitors do not have to proceed to additional investment to acquire information for a specific target country, asthey can "*free ride on the successful search of the first moving firm*" (Moons and Boer, 2014, p.5).

Consequently, the potential benefits of being a first mover and investing in obtaining reliable information about entering new foreign markets are thus limited (ibid, 2014, p. 6). In other words, "*a firm is less inclined to invest if other firms are able to observe the changed behavior of the firm and thus benefit from the information without making any investment"*(Van Veenstra et al., 2010, p. 6). Similarly, rivals may take advantage of exporters′ investments in developing contacts or organizing distribution chains (Lederman et al., 2009, p. 2).

Government diplomatic network through CD can offer "*reliable and impartial access to information*" (Harris and Li, 2005, p. 74), helping enterprises to expand overseas.

Reputation and trust are decisive factors as far as the decision-making process is concerned (Moons, 2017, p. 92), while the latter is considered an essential characteristic for economic advance (Yu et al., 2015, p. 102). International consumers are more willing to purchase products or brands made in a specific country due to a positive country image (Yang et al., 2008, p. 422). Moreover, a country's willingness to invest in another is positively related to thetrust towards the other country's citizens (Guiso et al., 2009, p. 1098). For example, technologically leading products from low-income countries may be perceived as less advanced and of lower quality in relation to the respective products from developed countries (Hudson and Jones, 2003).

However, not all countries have access to the distribution network of the product they want to promote. Networking between buyers and sellers is not only costly but also is determined "*by proximity and pre-existing ties*."(Rauch, 1999; Moons, 2012, p. 149).

Commercial diplomacy is critical when countries do not have access to global distribution networks (Van Veenstra et al., 2011; Moons, 2012, p. 149).Thus, the authorities, via commercial diplomacy "*have to invest in exporting nation's 'trademark' or 'trade capital' communicating that their economy is a reliable partner in international*

trade or that their firms meet high standards in terms of product quality, environmental standards or corporate responsibility" (Yakop and Van Bergeik, 2009, p. 10).

Dimensions and variables (instruments) of Commercial Diplomacy.

There are countless forms of looking at the types of services in CD (Ruël and Visser, 2013, p. 305). For the purpose of this paper, we propose two dimensions in which the scope of activity of CD may be integrated: cognitive and political. Each dimension was chosen based on relevant literature on the concept.

Afterwards, we identify potential variables (e.g. instruments of CD)relevant for the quantification of the aforementioned dimensions.

Measuring CD activity in a given state:

I. *"input variables"* comprise resources (human, economic etc.), constituting essential tools for implementing CD (e.g., number of foreign missions, number of state representatives at foreign posts, budget for foreign posts, wages of state officials responsible for the implementation of CD etc.).
II. *"process variables"* are related to CD's implementation by using the resources above. Practical application of CD includes specific instruments such as trade missions, official visits, trade fairs, seminars, workshops, business guides, reports, sectoral inquiries, e.t.c.

Cognitive Dimension

Intelligence gathering is an activity of CD (Kostecki and Naray, 2007, p. 8),including information analysis and dealing with business searches (Ruël and Zuidema, 2012, p. 5). According to Lee (2004, p. 51), "*commercial intelligence, undoubtedly, is part of the broad sweep of commercial diplomacy and goes beyond gathering information to using diplomatic channels in order to keep ahead of foreign economic rival*."Intelligence gathering and analysis comprise data collection and relative elaboration for the home-country business community (Naray, 2011, p. 137), derived from a variety of sources (Saner et al., 2000, p. 84)and is a challenging (Naray, 2011, p. 137) and iterative process (ibid, p. 138), better achieved due to embassy's public relations activities (Kostecki and Naray, 2007, p. 17). According to Reuvers and Ruël (2012, p. 8) and Ruël and Visser (2013, p. 309), intelligence as a central activity of CD, includes "*gathering and disseminating commercial information, market research, reporting to home country, image studies, consultant to both countries and joint scientific research*," while Busschersand Ruël (2012, p. 76) subdivide intelligence into different types of information as far as cultural, regulatory, market environment and public tenders.

Information is crucial for governments and businesses to obtain a competitive advantage (Yannopoulos, 2010, p. 39). Harris and Li (2005, p. 37) stress the role of knowl-

edge generation both within the firm and its external environment in the process of internationalization. Thus, many authors highlight, in detail, the informational-advisory role of CD.

According to Lee (2004, p. 51), intelligence on existing and potential markets constitutes a strand of CD activities. Naray (2011, p. 135, 137-138) points out the advisory role of CD, which comprises not only information gathering having a "country competition aspect," that is, "*data collection and analysis*" (for example, determining potential growth sectors or regulations) but also "*internal communication activities*," mainly reporting the information collected to the home country. The main difference between the strands above of the advisory role of CD is that the former is often directed to "*outside stakeholders,*" while the latter to "*internal entities*" (ibid, p. 137). Stadman and Ruël (2012, p. 208) also highlight reporting as an intelligence task from part of the employees of a foreign post, regarding *"the current status of the post, the work accomplished, the events organized or the economic situation of the host country and the position of the host country government as far as economic affairs are concerned, "*while reporting to the Federal Government on economic advances or improvements in the host country, constitutes a fundamental part of Commercial Counselor's work according to Herbst (1996, p. 323).

Lederman et al. (2006, p. 2, 11) highlight an export promotion agency's informational role, which is related to "*market research and publications such as market surveys or importer and exporter contact databases*." Similarly, "*seminars for potential exporters, how to export handbooks, or export counseling*" (Kotabe & Czinkota, 1992, p.639), "*investment seminars or feasibility studies*" are crucial for the government to pursue investment promotion (Wells and Wint, 2000, p. 4). Moreover, informational support comprises "*export market information, market analysis about foreign markets, newsletters and export marketing seminars*" according to Yannopoulos (2010, p. 39), or export and investment advice according to Saner and Yiu (2003, p. 13). Delivering valuable host country market/country information, that is, gathering business intelligence, is a strand of broader-out activities carried out by actors operating abroad, directing to export-ready companies (Potter, 2004, p. 57).

Many authors point out the intelligence function of CD which is related to advising in contract negotiations (Kostecki and Naray, 2007, p. 10), given the familiarity that commercial diplomats have as far as the legal system of the host country is concerned (Bondarouk and Ruël, 2012, p. 254) or to the provision of lists with potential business partners (Ruël et al., 2013, p. 265) or the provision of reliable and neutral information regarding export and investment opportunities (Justinek and Sedej, 2002, p. 82; Saner and Yiu, 2003, p. 13; Ruël and Visser, 2012, p. 44, Yakop and van Bergeijk, 2009, p. 8; Van Bergeijk et al., 2011, p. 105; Ruël et al., 2013, p. 266 ; Coolsaet, 2004, p. 64), or "*opportunities resulting from calls for tenders or the needs of industrial customers*" (Kostecki & Naray, 2007, p. 8), rules and regulations (Ruël, 2013, p. 24), changes in

them (Kostecki & Naray, 2007, p. 8), trade-cultural (Ruël, 2013, p. 24) and market information (ibid, p. 24, Kostecki and Naray, 2007, p. 27; Busschers, 2011), political situation (ibid, p. 8), "*competition conditions for specific projects*" (Coolsaet, 2004, p. 64), "*information on potential business contracts providing help in finding legal assistance*" (Justinek & Sedej, 2002, p. 82).

"*Responding to requests for information on the part of the home and host country companies accounts for an average of 43 percent of a commercial diplomat's time*" (Kostecki and Naray, 2007, p. 11).Intelligence is the most useful service for Canadian firms (Yanopoulos, 2010, p. 47), while according to a study by Ruël (2013, p. 24),provision of information comprising market, cultural and regulatory intelligence is most often used by S.M.E.s.

On the other hand, as far as the intelligence function of CD is concerned, "*the internet makes it possible for companies to conduct their own analysis of the market characteristics and opportunities in a target country*" (Bondarouk and Ruël, 2012, p. 251). Since much information about foreign markets has become quickly available through a variety of sources (Rose, 2005, p. 1) and *information on "tariffs, regulations or call for tenders are easily available from public sources through the internet" (Kostecki & Naray, 2007, p. 29),* more emphasis is being put on discovering "*hidden information*" (ibid, p. 29), or to put it differently, "*there is a shift towards more value-added and tailor-made intelligence based on personal contacts and direct observation*" (Naray, 2008, p. 5), often presented in *confidential reports* (Kostecki & Naray, 2007, p. 9*), "pronounced in servicing the larger companies*" (ibid, p. 29). Thus, the classic intelligence function of CD is decreasing in favor of new forms of activities (Villanueva,2017, p. 371).

In light of the above considerations, the cognitive dimension of CD is defined as follows: *Cognitivedimension of CD is related to the provision of reliable information (through specific instruments such as seminars, workshops, business guides, market investigations e.t.c.) by state representatives with diplomatic status, directed either to potential exporters/investors who want to export from/ invest to the home/ host country respectively, either to potential investors who want to invest to the home country, regarding mainly cultural, political, regulatory and market information as far the home or the host country is concerned, as well as advising in case of contract negotiations or business conflicts.*

After defining cognitive dimension of CD, we proceed to the selection of potential variables for the its quantification:

POTENTIAL VARIABLES	VARIABLE CHARACTERISTIC
Number of annual reports in which the home country's diplomatic staff located at foreign posts informs the Ministry of Foreign Affairs (or another responsible ministry regarding CD), about the host country's economic situation, about the events that have been organized or generally about the work that has been accomplished.	process
Number of responses from the home county's diplomatic staff, located at foreign posts, to questions received from companies or individuals asking information about the host country's economic sectors or possible business partners.	process
Number of organized seminars or workshops in the home country with the home country's diplomatic staff's active involvement, highlighting investment/export opportunities in a host country.	process
Number of business guides (how to export handbooks-practical instructions for operating in international markets).	process
Number of sectoral inquiries or market investigations (analyzing consumers' habits, preferences, demands, market trends e.t.c).	process

Political Dimension

It is known that political factors such as common foreign policies, participation in the same international organization, or the network of diplomatic representations affect trade patterns (Nitch, 2005, p. 1).Using diplomatic representations, governments can stress investment opportunities, and provide direct communication with government and business representatives through the close ties that diplomats have acquired through their work in embassies (Ruël et al., 2013, p. 15).

The network of diplomatic representations was first highlighted by Rose (2005). According to his seminal analysis, the diplomatic network's macroeconomic impact on bilateral trade was between six (6) to ten (10) percent. His study was revised by Yakop & Bergeijk (2009), who supported the findings. Following Rose's methodology, Van Bergeijk et al. (2011) empirically investigated the contribution of different forms of diplomatic representation to the bilateral trade flows and found a positive and highly significant effect for embassies.

Developing business and government interaction in host countries and highlighting the home private sector is a broad category of activity of CD, according to Lee (2004, p. 51). Trade shows and missions are two types of CD services that are believed to be among the most beneficial when the government intervenes in the internationalization process (Wilkinson and Brouthers, 2000, p.725). Trade fairs help exporters to

interact with potential partners (Narula & Dunning, 1998, p. 391), while trade missions, as CD instruments, facilitate communication and interaction of home country entrepreneurs with multinational companies (Ruël, 2013, p. 29) or government representatives (Spence, 2003, p. 83). Trade missions can also be composed of governmental (Mercier, 2007, p. 9) or political (Stadman & Ruël, 2012, p. 208) personalities and, as networking occasions, provide match-making opportunities, helping home country companies get in touch with potential partners (Ruël, 2013, p. 29). Besides, diplomats are usually seen as trustworthy, making it more feasible to attract inward and outward investment (Ruël et al., 2012, p. 15).

Apart from searching potential partners, as a primary activity of CD (Busschers & Ruël, 2012, p. 76),actors of CD through the presence in networking events -representing interests of their county- promote country brand or home country's image in the sense of being a suitable investment location, enhancing the trustworthiness of their respective firms, which desire to enter to foreign markets.

In order to encounter political risk, CD takes the form of classified discussions in high-level meetings and working visits by state executives (Gertz, 2018, p. 4). As an instrument of CD, state visits are another form of interaction between the home and host countries (Reuvers & Ruël, 2012, p. 7).They are the highest form of diplomatic interaction among nations, and they often highlight the further improvement in bilateral relations (Nitch, 2005, p. 2). Leaders are accompanied by a delegation of businesspeople and administrators, while topics to be discussed may range from global economic concerns to trade conflicts (ibid, p. 1).

The problem-solving activities are related to "*the protection of intellectual property rights, tax issues, assistance to national companies which have suffered losses and wish to obtain compensation*" (Kostecki & Naray, 2007, p. 10). Diplomats, having access to high-level contacts (Ruël et al., 2013, p. 15), and serving as "*informal mediators of disputes*" (Gertz, 2018, p. 4) associating the resolution of a dispute to a specific policy goal solicited by the host state (Gertz, 2018, p. 5), practice "*conflict-handling diplomacy*" (Naray, 2008, p. 5; Stoddard, 2016, p. 4) and assist in the finding of a mutually accepted solution without judicial procedures when business disputes arise (Kostecki & Naray, 2007, p. 10).

Consequently, the political dimension of CD comprises public relations activities (Kostecki and Naray, 2007, p. 10), communication with target audiences overseas (Sevin & Dinnie, 2015, p. 268), network activities (Reuvers & Ruël, 2012, p. 8; Ruël and Zuidema, 2012, p. 5; Ruël et al., 2013, p. 267-268), building ties with the officials, which can facilitate firms in their search for allies, (Buschers, 2011) through specific instruments of CD like state visits, trade missions or trade fairs.

Following the above, the political dimension of CD can be defined as follows: *political dimension of CD represents state's direct and active interaction with home and foreign*

business sector, comprising public relations activities, communication with target audiences overseas or the establishment of ties with foreign officials/entrepreneurs, through concrete tools like state visits, trade missions or trade fairs, to generate commercial benefits for the home country, meaning.

After defining political dimension of CD, we proceed to the selection of potential variables for its quantification, according to the relevant literature:

POTENTIAL VARIABLES	POSSIBLE VARIABLE CHARACTERISTIC
Number of foreign missions abroad (diplomatic network)	input
Number of Offices of Economic and Commercial Affairs or number of Foreign Trade Offices abroad	input
Number of external official visits (by the Head of State or the Prime Minister) to generate commercial gains.	process
Number of Trade Missions from a home to a host country with a home state representative's active involvement.	process
Number of Trade Missions from a host to a home country organized with a home state representative's active involvement.	process
Number of home country's national booths during international trade fairs or shows in the host country, (co)-organized by the home country's diplomatic representations abroad.	process

Conclusions

The present study, after analyzing Economic Diplomacy as diplomacy with respect to mobility of goods, services and capital in micro and macro framework, defines Commercial Diplomacy (CD) as "*a micro level diplomacy with respect to mobility of goods, services and capital, through which states interact with home and foreign business sector, in order for the home country to achieve an increase in exports, inward or outward foreign investment*".

Afterwards, based on relevant literature, we determine two dimensions, cognitive and political, in which CD activities may be integrated. The former comprises provision of reliable information (through specific instruments such as seminars, workshops, business guides, market investigations etc.) by state representatives with diplomatic status, directed either to potential exporters/investors who want to export from/ invest to the home/ host country respectively, either to potential investors who want to invest to the home country, regarding mainly cultural, political, regulatory and market information as far the home or the host country is concerned, as well as advising in case of contract negotiations or business conflicts, while the latter represents state's direct and active interaction with home and foreign business sector, comprising public relations activities, communication with target audiences overseas

or the establishment of ties with foreign officials/entrepreneurs, through concrete tools like state visits, trade missions or trade fairs, to generate commercial benefits for the home country.

Furthermore, taking into consideration the quantification of the above dimensions, we introduce potential variables (e.g. instruments of CD), characterizing each of them as "*input*" or "*process*" as far as CD's concept is concerned. "Input" variables comprise resources (human, economic, etc.) essential for implementing CD (e.g., number of foreign missions, number of state representatives at foreign posts, budget for foreign posts, wages of state officials responsible for the implementation of CD, etc.), while "process" variables are related to CD's implementation by using the resources above. Practical application of CD includes trade missions, official visits, trade fairs, seminars, workshops, business guides, reports, sectoral inquiries etc.

Finally, taking into consideration that "*a composite indicator is the mathematical combination of individual indicators representing different dimensions of a concept whose description is the objective of the analysis*" (Nardo et al., 2005, p.7), and that composite indicators are used intensively to compare country performance in specified areas such as competitiveness, globalization, innovation, etc. (Freudenberg, 2003, p. 8),we propose the creation of an Index of a state's CD activity, thus such a complex index would result in:

- Easier understanding, by specialized and non-specialized audiences, of CD and its multidimensional reality of relevant activities, applied by state actors.
- Mathematical evaluation of the intensity of a particular state's CD activities during a specific year(s).
- Comparing the performance of different states in the CD's field, especially in the intensity of relevant activities.

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Masayuki Susai
University of Nagasaki, Japan

Leonid Nakov
"Ss. Cyril and Methodius University" in Skopje, North Macedonia
E-mail: Leonid.Nakov@eccf.ukim.edu.mk

MANAGING DYNAMIC EMPLOYEE CAPABILITIES IN FUNCTION OF ROLE-BASED ENGAGEMENT: COMPARATIVE ANALYSES OF EUROPEAN UNION AND JAPANESE EXPERIENCE IN TIMES OF COVID19

Abstract: Contemporary tendencies of building – up and further sustain a competitive advantage at businesses of all types have focused their predominant attention at shifting the core managerial focus from resource-based view, to competence-based and especially to capabilities-based view, with a prior developmental goal at establishing an integrative, inter-related and dynamic features within the very process of capabilities development.

Nowadays, majority of national economies are consistently suffering from the overall scope of consequences, not only the health ones, which Covid19 has introduced, which substantially impacted towards introducing a supra-national, wide-ranging response, initiated by the World economic Forum (WEF) in the light of the 'Great Reset Initiative' (WEF, January, 2021), which pays increased attention to a more inclusive, resilient, fair and sustainable economic and social development. In the area of business development, it is evident (McKinsey Global Survey, April, 2021) that building-up new work-force skills highly related to sustainable capabilities, indicated by the fact that, for 69% of businesses, skills building are of more prevalent importance, compared to the period prior to the pandemic.

Managerial attempts at advanced national economies, such as European Union countries and Japan, in Covid19 period have been and still remain, to a great extent, placed at increasing the proportion of business that beat and outperform market expectation (varying from Q2/2020 to Q1/2021 from 32-45% compared prior to the pandemic, with increasing tendency), and particularly at decreasing the proportion of national businesses that underperform market expectation (varying in the period Q2/2020 to Q1/2021 from 20-34% compared prior to the pandemic, with decreasing tendency). Having in mind that the degree and diversity of market expectation in the pandemic aftermath have shifted towards dynamic and inter-functional capabilities character, business decision-makers are increasingly adopting various, distinctive dynamic capabilities frameworks, in function of their sustained integration with other 2 elements of competitive advantage, i.e. overall resources and strategy.

If we clearly identify that Japan has been ranked as number 2 world-wide (after New Zealand) according to Bloomberg Resilient National Score Ranking (November, 2020), whereas in the first 10, only 3 are from European, i.e. Scandinavian countries (Finland, Norway & Denmark).We could predictan expected slowing down of the Covid19, starting from the Q4 of 2021and assume that change-oriented managers would increasing-

ly focus at role-based modality of employee engagement, as a managerial instrument that measured the overall engagement in accordance with the job, organization, manager and co-workers. Dynamic managerial analyzes, through the Role-based engagement scale (RBES), would be illustrated from business practices of selected EU countries, on one hand, and Japan, on the other hand, in order to identify the key comparable national strengths and opportunities which would foster the future national developmental pathways for increasing the level of competitive advantage of their businesses, both nationally and internationally.

Key words: *Dynamic capabilities, Role-based engagement, Covid19 pandemic*

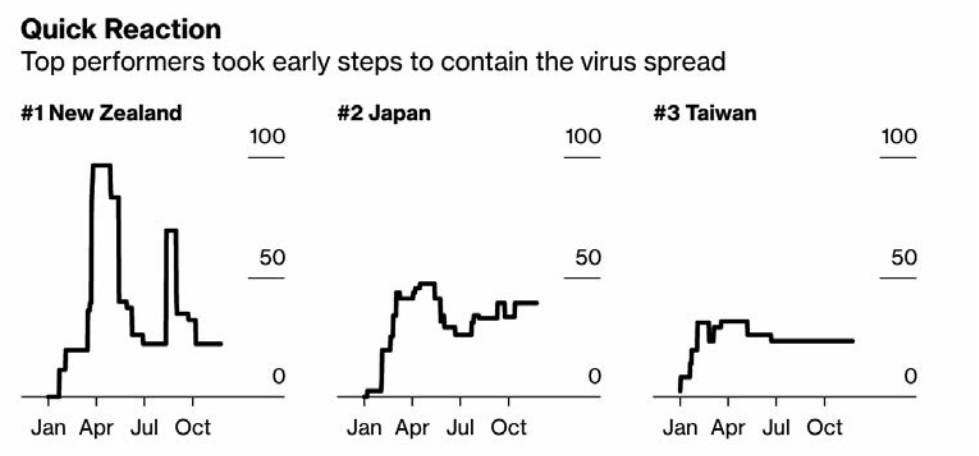
Introduction

Contemporary tendencies of building – up and further sustain a *competitive advantage at businesses* of all types have focused their predominant attention at:

- shifting the core managerial focus *from resource-based view, to competence-based and especially to capabilities-based view,* with
- a fundamental developmental goals at establishing an *integrative, inter-related and dynamic features* within the very process of *capability development.*

One of the most important aspects in handling the Covid19 environment relates to the *Speed of the reaction for containing the virus spread,* measured through *the Oxford Coronavirus Government Response Tracker (OxCGRT)*, calculated on composite metrics of 11 elements, as well as the *Oxford University Stringency Index which consists of 9 metrics elements, according to which, in 2020, New Zealand, Japan and Taiwan are ranked on top 3 places*, illustrated on the Figure 1.

Figure 1. World countries ranking of Speed of the reaction for containing the virus spread



Source: Oxford University's Stringency Index, (2020)

It could clearly be identified that *as early steps are undertaken by certain national economy in preserving and containing the influence, particularly the economic one, of the Covid 19 virus influence, the overall capacity, as well as the responsivity of the particular national economy increases*, and, therefore, influences to the overall national competitiveness and sustainable development.

National Resilient Ranking in function of Role-based modality of Employee engagement

In accordance with the *Bloomberg Resilient National Score Ranking*(as of August, 2021, first edition published November, 2020), *national country ranking* is as follows:

- The methodological segment of the Resilient National Ranking is composed of *12 national resilient indicators,* aggregated on max-min method,
- *It ranks the largest 53 economies*, according to positive results in containing the Covid19 virus,by using as less as possible amount for preserving social and economic disruption,
- *Consequently analyzed, Japan* has been r*anked as 2 world-wide (after New Zealand as number 1*), in November, 2020, when*in the first 10, only 3 were from European, i.e. Scandinavian countries (Finland, Norway, Denmark).* In the *ranking of August, 2021*, *Norway was ranked number 1, followed by the Netherlands (highest jump of 10 places), Finland and Ireland,* and *Japan was ranked at 33 place,* whereas in the latest ranking of October 2021, *Ireland is ranked number 1, Japan ranked as 16, and in the first 10, 8 are European countries*.

We have witnesses the national resilience reality at the 1 week of September 2021 in which, *several Scandinavian countries have entirely lifted their Covid19 restrictions, such as Denmark (83% of the population above 12 is entirely vaccinated), Sweden etc.* At the same time, BioNTech announced that, jointly with Pfizer, *have approved their-vaccine for children between 5-11 years*, previously approved for children above 12.

According to numerous international health and economic experts, we would witness slowing down of the economic influence of Covid19, starting from the Q4 of 2021, in a period of 12-18 months (up to recovering on the basis prior to Covid19), a fact which principally is dependent to the fact that *change-oriented managers would increasingly focus at role-based modality of employee engagement,* as a managerial instrument that *measures the overall engagement in accordance with the job, organization, manager and co-workers*.

Principal managing of developmental features of Dynamic Employee capabilities

Principal developmental managerial attempts at numerous advanced national economies, such as European Union countries and Japan, in Covid19 period have been and still remain, to a great extent, placed at:

- *increasing the proportion of business that beat and outperform market expectation*, varying from Q2/2020 to Q1/2021 *from 32-45%,compared prior to the pandemic,* with increasing tendency, and particularly at,
- *decreasing the proportion of national businesses that underperform market expectation*, varying in the period Q2/2020 to Q1/2021 *from 20-34%,compared prior to the pandemic,* with decreasing tendency.

In this context, one of the key determinants in increasing the competitive position of businesses affected by particular healthy-driven crises, such as Covid19 pandemia, relates to the following 2 *behavioral developmental features:*

1. Creating*dynamic capabilities at employee behavior and performances,* as well as,
2. Fostering the model of *role-based engagement,* crucial for*continuous changes at the prevalent dynamic environment in majority of the competitive business environments.*

Originally, dynamic capabilities at employees are *an integral element of the systems management theory and are focused at holistic treatment of employees*, i.e. from quantitative and qualitative point of view, predominantly focused *not only on adapting to dynamic environment, but rather to change, reshape it.* Dynamic capabilities *consist of resources and strategic segment of employee's abilities, arising from the inner, original change rather than the external, induced one.*

Theoretically taken, *dynamic capabilities* are defined as *'the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments'* (Teece, Pisano, & Shuen, 1997). As such, they *influence systematic changes and development at corporate level, business unit level, as well as products/services degree.*

The prevalent importance of dynamic capabilities lies, according to our core research analyses, at their following *unique capability characteristics:*

- They *can be divided into smaller change components, so called 'micro-foundations'*, which reflect the system potential internally to change the elements, in the strategy, business model or products/services, if that do not perform optimally, without risking other elements to perform well,
- It *enables creating a bottom-up innovative model, not only the top-down prevailing innovative approach*, especially at efficient systems,

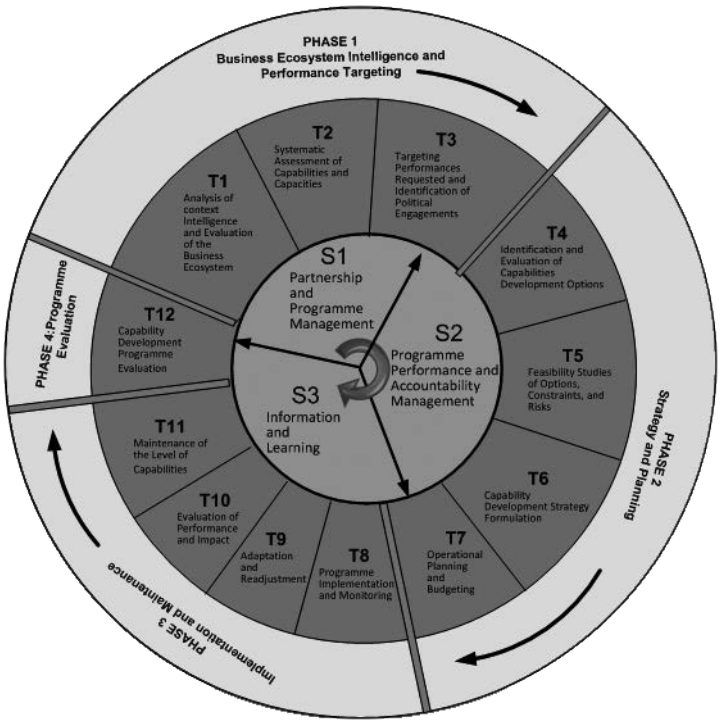
- Dynamic capabilities are directly linked to *enabling the model of 'competing on analytics'* (Davenport & Harris, 2007), which, in fact, relates to creating an analytical competitor, through developing enhanced employee analytical capabilities,
- Introducing *the concept of 'progressive business models'* (Higgins & Zsolnai Ed., 2018), which indicates a unique combination of dedicated leadership through socially responsible actions, circular and sustainable developmental models, as well as, radical, transformative changes for exponential innovations.

Capability Development Management Process

Due to the fact that dynamic capabilities are *oriented towards developing the 'unique business features', at all organizational levels, i.e. corporate, divisional and individual*, it systematically supports *'competitive differentiation'*, which is manifested through *'change butterfly effect'*, indicated through small reasons which influence to transformative changes.

In this context, dynamic capabilities development are usually applied at *private business or large public institutions* at more developed countries of the European union, as well USA and Japan, owing to their consistent potential to apply the *Capability Development Management Process* (Beaulieu, LeBlanc, 2012), illustrated on the following Figure 2:

Figure 2. Capability Management Development Process



Source: Beaulieu, LeBlanc, (2012), *Methodology for dynamic capabilities development and management at Sector-wide level,* March, UK

Key element in above detailed 4 phases *Capability Development Management Process,*in fact, lies in increasing the following behavioral employee orientations:

- *Accountability,*
- *Effective employee engagement* focused on sustainable performances,
- *Industry/Sector focus,* as well as,
- Potential for *'unique combination of business assets and abilities'*, from the view point of increased employee satisfaction, as one of the key transformational challenges in developing economies.

Developmental indicators of management capabilities

One of the most challenging contemporary managerial challenges implies to *identifying and measuring the management capabilities in businesses,* which is conducted through the following *key management development indicators* (Tamkin, et.al, 2002):

1. Indicators of the *development of management capability,* i.e.:
   - Education and qualifications,
   - Experience, and,
   - Ongoing formal and informal training and development.
2. Indicators of *management capabilities itself,* i.e.
   - Management knowledge,
   - Skills, and,
   - Aptitude.
3. Indicators for *application of capability to management practice*, i.e.:
   - HRM and high-level work practices,
   - Quality processes,
   - Research and development,
   - Market promotion etc.
4. Indicators of *individual benefit,* i.e.:
   - Lower rates of unemployment,
   - Higher salary,
   - Promotions, and,
   - Improved performance.
5. The last and most complex group of indicators relates to Indicators of *business activity and outcome*, i.e. *value spent on*:
   - Innovation,
   - Patenting activity,
   - Customer and employee satisfaction,
   - Productivity,
   - Profitability, and,
   - Share-holder value.

Competitive managing of Role-based engagement

Capability-based and competency based management view, enables introducing, through specific modality of effective and efficient employee engagement with dynamic capabilities, i.e. *Role-based engagement*.In essence, it refers to advanced model which initially has been developed through *'personal employee engagement'*, and especially with advancing of the *'HRM employment practices'*.

Theoretically, *Role-based employment* is defined as (Young F. S. et. al., 2020): *'the extent to which an individual is attached to and invested in his or her work-related roles'*. Therefore, it indicates *the current and future potential of each employee*, analyzed not only individually, but also through *'his/her relative work contribution'*.

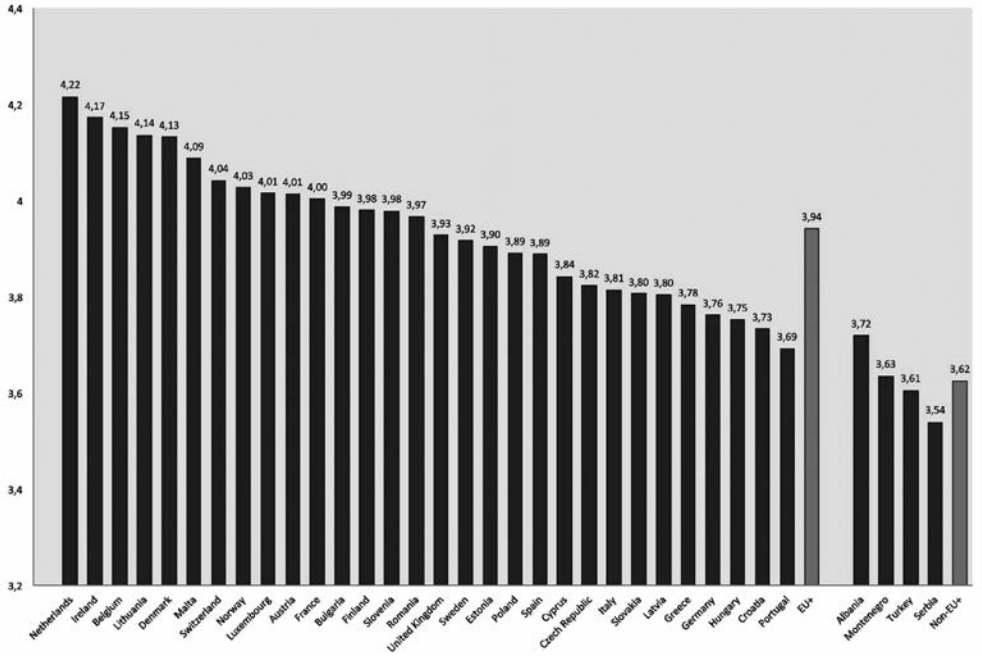
Principally, Role-based employment is *linked to role performances,* in terms that employees nowadays are not expected to perform only their particular working roles, but rather *to intervene in colleagues working roles, on one hand, and to perform numerous 'flexible social interactions', part of them externally also, while their work, on the other hand.*In this context, it is important *to interact the concept of engagement with the one of commitment*, in terms that *numerous employees possess engagement at their specific work place, whereas they may not be committed to the overall organization.*

Contemporary Managing of National Work Engagement

National *Work Engagement across European countries* would best be illustrated through the empirical data of the *6th European Working Conditions Survey (EWCS),* conducted in 2015, in the following Figure 3. In measuring the *National Work Engagement score (NWES)*are used the following *3 national economic indicators:*

- *Average number of working hours, as total nominal employee engagement,*
- *Economic activity, illustrated through GDP, as well as,*
- *Productivity, measured as real output per unit of labor input.*

Figure 3. Measuring Work Engagement across Europe (Means levels 1-5)



Source: According to Schaufelli (2018), Work Engagement in Europe: Relations with national economy, governance and culture, *Organizational Dynamics,* Vol. 47, pp. 99-106

We can clearly identify the following *national engagement tendencies* from the above presented Figure 3, related to the national rankings with regards to work employment:

- *High work engagement score (above 4)* may be seen at *North-western EU (lead by the Netherlands & others) and Alpine countries (Austria and Switzerland), with 2 exceptions like Malta and Lithuania,*
- *EU + (including Norway and Switzerland) average work engagement score is 3,94 (slightly below high),* whereas for the analyzed *non EU countries (Serbia, Albania, Montenegro and Turkey),average work engagement score is 3,62 (low score – below 3,8),* very similar to *Southern (Greece and Portugal), Eastern EU countries (Hungary), as well as Western Balkan EU countries (Croatia),*
- *In EU+ countries only 11% of their work force feel highly engaged and consequently work on average less weekly hours, for instance in the leading country Netherlands employees, in order to achieve same economic effect, have to work 30,5 hours/week, compared to Greece where employees have to work 42,2 hours/week and feel less engaged.*

Conclusion

Profound integration of above methodological and empirical analyses enables us to identify the following *conclusive research elements*:

- *Competitive advantage at businesses* is connected to *competence-based and especially to capabilities-based view, alongside with capability development,*
- Several *international country rankings* are presenting the national capacities after Covid19 pandemia, such as *Bloomberg Resilient National Score Ranking, Oxford Stringency Index etc.,*
- Change-oriented managers would increasingly focus at *role-based modality of employee engagement that relies on dynamic employee capabilities,*
- *Dynamic capabilities* are directly linked to *enabling the model of 'competing on analytics', the concept of 'progressive business models', can be divided into smaller change components, and enable creating a bottom-up innovative model, whereas finally,*
- *Role-based engagement* is elaborated through the *Capability Development Management Process,* as well as *Work Engagement across Europe,* which indicate *the phases of the management development process, and the real employee engagement across national economies.*

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Sasho Kjosev
Faculty of Economics
University Ss. Cyril and Methodius in Skopje, North Macedonia
E-mail: saso.kosev@eccf.ukim.edu.mk

Martin Noveski
Budget and Funds Department
Ministry of Finance, Skopje, North Macedonia

Nina Mojsova – Kjoseva
Sparkasse Bank Makedonija AD, Skopje, North Macedonia

STRATEGIC DEVELOPMENT PLANNING FOR POST-COVID SOCIO-ECONOMIC DEVELOPMENT

Abstract: COVID-19 pandemics caused the largest and most sever global economic crisis since the Great Depression, resulting in rapid increase of unemployment and huge reduction of output. In order to offset the downwards economic pressure and prevent further job losses, governments worldwide undertook massive economic recovery programs. As to this point, the Government of the Republic of North Macedonia adopted five packages of economic measures worth around 1.2 billion euros. Given the already tight fiscal space, it led to an increase of the public debt for more than 10 percentage points in 2020, breaking through the 60% debt-to-GDP ratioceiling. COVID-19 crisis emphasized again the importance of strategic planning, as a tool for effective risk management and sustainable development. In this regard, the paper shall provide answers to the question why post-covid societies need adequate strategic sustainable development planning and will propose new approach in building institutional (Agency for macroeconomic models and economic policy analysis) and methodological foundations (Social Accounting Matrix and macroeconomic modelling) for strategic sustainable development planning in North Macedonia.

Key words: strategic development planning, institutional and methodological basis

Introduction

Until this point (August 2021), Covid-19 pandemics resulted in almost 200 million infected and more than 4 million death cases across the globe. It was a cause of numerous restrictions and lock downs in almost every country in the world, which inevitably led to permanent structural changes in everyday life, both, in positive and negative way. Namely, Covid-19 outbreak had undoubtedly positive impact from environmental point of view, air quality in particular (Nakada & Urban, 2020; Gautam, 2021; Mostafa, Gamal, & A Wadfiq, 2021; etc.). However, many studies show severe adverse socioeconomic implications, especially for the poorest citizens, intensifying

and increasing inequality, unemployment, poverty, hunger and food insecurity (Odeku, 2021; Suparmono & Patrina, 2021; etc.).

According to the World Bank data, global GDP last year decreased by 3.6%, or in absolute terms more than 3 trillion USD loss, which is the most severe recession in the modern history. For comparison, the economic recession in 2009 caused by the global financial crisis resulted in decrease of the global GDP by 1.7%, or slightly more than 1 trillion USD. In this respect, Macedonian economy was hit even harder. Economic growth in 2020 was -4.5%, which is a loss in the country's GDP of 5.3 million USD.

COVID-19 also increased global unemployment, from 5.4% in 2019 to 6.5% in 2020, which has not been seen since the Great Depression (Couch, Fairlie, & Xu, 2020). According to Kawohl and Nordt (2020), increased unemployment as a consequence of the COVID-19 crisis would cause an increase of nearly 1,000 suicides per year, primarily affecting those who are already at risk (e.g., individuals suffering from depression).

However, COVID-19 does not affect everyone equally. On the contrary, contemporary empirical literature provides strong evidence of disproportionate impact, especially concerning minorities, which raise important concerns of long-term consequences regarding wealth distribution and inequality (Galea & Abdalla, 2020; Couch, Fairlie, & Xu, 2020; etc.).

In the Republic of North Macedonia, unemployment has been an issue ever since the painful transition in the 1990s. After 15 years of slow and gradual reduction, unemployment rate in North Macedonia broke its downward trend last year, reaching 18.4%, widening even further the inequality gap between the population.

Blusteinand Guarino (2020) believe that growing inequality and marginalization in the workforce prior to the advent of the health crisis is a major antecedent that set the stage for the unemployment crisis that now defines this era. Moreover, good governance plays an important role, since countries with better governance record less severe revisions of growth forecasts (König & Winker, 2020).

North Macedonia, as many other European countries, is at a turning point when it comes to planning its future socio-economic development and securing welfare and quality of life for its citizens, both women and men, having in mind that the COVID-19 pandemic amplified inequalities and affected women disproportionately. In the next decades the country will face challenges such as climate change and its environmental and socio-economic consequences, and the country needs to build resilience to global threats such as the current COVID-19 pandemic. Economic recovery from the pandemic and, in parallel, the adjustments required by the technological advancements need to be reflected in the long-term planning of the future of the country, both in terms of geo-politics and in terms of sustainable development and growth.

Review of literature

Recent empirical literature provides wide variety of different aspects regarding the socioeconomic impact of COVID-19. However, it seems like there is an agreement among economists that sectors which are unable to reorganize their work remotely and adapt to the new situation experienced significantly greater losses (Papanikolau& Schmidt, 2020). On the other hand, from individual point of view, lower-paid workers, especially female workers with young children, and minorities were also significantly more affected. For example, Alon, et al. (2020) point out the impact of COVID-19 on gender equality, particularly the impact on working mothers, arising from the massive increase in child care needs, due to closures of schools and daycare centers.

Nevertheless, the magnitude of the socioeconomic impact remains uncertain and depends on the evolution of the outbreak. The Asian Development Bank (2020) suggests that rather than focusing on a single estimate, it is important to explore a range of scenarios, and assess the impact conditionally on those scenarios. Based on a sectorial approach, focusing on primary, secondary and tertiary sectors, Nicola, et al. (2020) emphasize the need of medium and long-term planning in order to re-balance and re-energize the economy following this crisis. In this regard, according to the United Nations' Committee for Development Policy (2020), one of the issues that need to be urgently reformed are the rules that limit the capacity of countries to implement progressive tax systems, mobilize fiscal resources, manage international capital flows and curb illicit financial flows. Furthermore, Padhan & Prabheesh (2021) underline the need for greater coordination at national and international levels, referring to coordination between monetary, macroprudential, and fiscal policies (trio) to mitigate the adverse economic effects of COVID-19.

Fiscal consolidation aimed at reducing budget deficits and improving the fiscal stance is inevitable after this crisis. Brewer & Gardiner (2020) suggest that it should be designed in a way to account for the differential impacts on different groups within society, referring to those whose overall financial situation has been least affected. The idea is to allow policy-makers to support the recovery most effectively and prevent COVID-19 crisis from becoming a long-term crisis in living standards.

The basic objective of optimizing the national development planning system is to promote sustainable development of the national economy. Kjosev (2017) focuses on the need for sustainable development planning in North Macedonia. He analyzes the issue of integrating the sustainable development concept in the economic planning process and proceeds by explaining why and what kind of economic planning for sustainable development is needed. He concludes by focusing on the main reasons why there is a need for implementing sustainable development planning in North Macedonia. Kjosev (2012), Kjosev, Gockov and Eftimov (2014) and Kjosev

and Novkovska (2017) are urgently proposing developing and implementation of the SAM methodology and approach for creation of effective strategic macroeconomic and development planning policy documents.Finally, Kjosev (2007) gives clear suggestions how to define and organize the institutional and methodological aspects of development planning in North Macedonia (one must admit, nothing has been done so far – 13 years after this article has been published).

Socio-economic impact of Covid in the economy of North Macedonia

COVID-19 left immense socio-economic impact in the Republic of North Macedonia, especially affecting vulnerable groups of the population, such as poor and unemployed. Unlike 2009 and 2012, when Macedonian economy was hit by the global financial crisis and the European sovereign debt crisis, COVID-19 left much stronger consequences (Table 1). Country's GDP fell down by 4.5% in 2020, whereby its downwards trend continued in the first quarter of 2021. According to the production approach for calculation of GDP, manufacturing industry recorded strongest decline (-10.6%), along with trade, transportation and tourism sectors (-7.9%).

The economic slowdown is also visible by the reduction in the private consumption and investments, as observed through the decrease in the domestic credit to private sector and direct investments. Consequently, such situation led to deepening the deficit of the current account balance and worsening the trade balance of the country, which in turn put additional pressure to the monetary policy as well.

Table 1: Republic of North Macedonia, selected macroeconomic indicators

Indicator	2009	2012	2018	2019	2020	2021Q1
Real GDP growth rate (%)	-0,4	-0,5	2,9	3,2	-4,5	-1,9
Inflation rate (period average, %)	-0,8	3,3	1,5	0,8	1,2	2,0
Budget balance (% of GDP)	-2,6	-3,8	-1,8	-2,1	-8,1	-1,0
Domestic credit to private sector (annual change, %)	5,2	5,6	7,3	6,0	4,7	5,2
Average exchange rate MKD/USD	44,1	47,9	52,1	55,0	54,1	51,1
Trade balance (mill. EUR)	-1.700	-1.947	-1.804	-2.008	-1.817	-528
Current account balance (mill. EUR)	-457	-240	-7	-372	-373	-61
Current account balance (% of GDP)	-6,8	-3,2	-0,1	-3,3	-3,5	-
Direct investments (net, mill. EUR)	137	131	604	363	206	-26
Direct investments (net, % of GDP)	2,0	1,7	5,6	3,2	1,9	-
Gross external debt (mill. EUR)	3.780	5.172	7.844	8.154	8.630	9.833
Gross external debt (% of GDP)	55,9	68,2	73,0	72,7	80,2	84,8

Source: Data from the Central Bank of the Republic of North Macedonia. Available at: https://www.nbrm.mk/osnovni_ekonomski_pokazateli.nspx [Accessed: 28.07.2021]

Vulnerability and exposure of the Macedonian economy to a reduction in global trade flows and financing is especially highlighted in the reports of the international institutions. According to OECD (2021), although authorities acted quickly to contain the spread of the virus, and took measures to mitigate the negative effects of restrictions on the economy, the medium- to long-term impact of the pandemic will largely depend on pre-existing socio-economic vulnerabilities.

However, the government response came with a price. Excessive government spending, particularly through the massive economic recovery programs, led to an unseen budget deficit of more than 8% of GDP, and consequently significant increase of the public debt (64.4%) and the gross external debt (84.8%). The overall macroeconomic environment, domestically and globally, inevitably led to increase of the average price level in the country and significant inflationary pressure, also affecting the average exchange rate of the Macedonian Denar. Having in mind the devastating consequences of the hyperinflation in the early 1990s, policy makers in North Macedonia should be especially careful. OECD (2021) points out that building resilience will largely depend on the institutional capacities to timely design and implement policy measures, as well as on the citizens' trust in the public decision-making process and the efficiency of the public administration.

Zulfiu (2020) highlights the role of the small business as a growth generator in times of crisis. She argues that effective and efficient crisis management requires structural reforms that will ensure quick and easy access to financial support.

From today's perspective, it seems like policy makers around the world were caught unprepared. The absence of national development planning and risk management procedures led to ineffective and inefficient economic recovery measures, which on one hand did not achieve their primary objectives, yet, on the other, caused significant loss in the fiscal space necessary for mitigation of future potential risks. In this regard, the need of establishing infrastructure for strong national development planning is highly important, especially for small and open economies, such as North Macedonia, highly exposed to external macroeconomic shocks.

The need for strategic development planning after Covid North Macedonia

Economic planning is a process which ensures the generation, sharing, and consumption of wealth on national, regional, and local level. Economic planning includes all aspects of society ambitions to encourage the country's social, economic and environment development. Therefore, economic planning, the degree to which governments consciously interfere in the free market mechanism, has a key role to play in achieving a vibrant and sustainable economy, especially after the massive socio-economic downward pressures imposed by the COVID-19 pandemic.

According to Kjosev (2017) the need for implementation of macroeconomic indicative planning after COVID is muchmore visible in North Macedonia, where the government should implement managerial activities in the public sector, public finances, etc. A basis for such indicative economic planning is the macroeconomic policy document of thegovernment which should be a program for the government medium-term economic and social policy, with clearly specified activities for the public investments, public enterprises, local economic development, social assistance, public revenues and expenditures, etc.

So far, the weakest aspects that the already prepared strategic planning documents in North Macedonia are the following:

- Lack of focused approach on the cross-cutting issues in the analysed strategic documents: youth, vulnerable groups and women, social justice, environment
- Action plans often unavailable, or inappropriate
- No progress reports available on the relevant Ministries/Agencies' websites
- Non-existence of well-defined SMART indicators
- Complete disconnection between the process of preparation, implementation, monitoring and evaluation of the strategic documents (absence of systematic approach; progress reports and action plans often do not follow the structure of the strategic documents)
- Lack of sufficient transparency in the process of strategy preparation and implementation
- Lack of institutional capacity for strategy implementation
- Non-existence of technical standards/guidance regarding the structure of the strategic documents (some does not even have a content table)
- Weak/unreliable financial planning
- Undefined adoption jurisdiction (although most of the strategies are adopted by the Government, there are also some adopted by the Parliament, Strategy for balanced regional development for example)
- Undefined and inconsistent planning period

Hence, one should seriously have in mind several recommendations that will significantly improve the strategic development planning process in the country:

– Preparation of updated strategies (which implemented period finished back in 2020)/Draft policy documents that will serve as guidelines for implementation of future activities in sectors where such documents do not exist or have expired
– Strategy goals should be associated with clear indicators that vigorously follow and apply the SMART principle(s)
– Allocate sufficient funds and resources for successful implementation of the adopted strategies. Financial allocations for the implementation of the national development strategies should be clearly and precisely defined, with strict calculation of the financial resources needed, as well as clear division and distribution

of financial allocations between the central budget and international donor and financial institutions
- Develop and implement more efficient and productive M&E tools and frameworks to monitor implementation of strategic planning documents
- Building institutional capacities should continue and raising awareness of the general public should be enhanced.
- Creating methodology for improved cooperation and coordination of all the relevant stakeholders in the process of strategy planning documents preparation and implementation

Applying sustainable development planning will create a number of benefits for the national economy:

- Economic planning will allow us to know when something needs to be done
- Economic planning will help us to mitigate the consequences, to manage crises, and to provide easier implementation
- Economic planning will improve our focus on long-term priorities and will lead to more efficient use of time, money, and other resources
- Economic planning will help us to determine how development processes success will look like (Kjosev, 2017)

Institutional basis for strategic development planning

According to Kjosev (2017), the most important task, when it comes to implementing strategic development planning, must be the establishment of some form of a planning organization (institution). This planning organization (institution) can serve as a national consensus-building mechanism that brings different stakeholders together to generate broad-based partnerships and to institutionalize participatory processes in national sustainable development decision-making. The basic goals of this institution would be:

- Analyze the main strengths, weaknesses, opportunities, and threats related to implementing sustainable development concept in the national economies (address the economic, social, and environmental dimensions in a balanced manner while considering the interests of the future generations).
- Coordinate the activities of different relevant stakeholders in the process of economic policy creation and implementation. In other words, strives to meaningfully engage all relevant stakeholders in decision-making processes, maintaining an effective balance between top-down and bottom-up processes.
- Prepare short-, medium-, and long-term plans for the implementation of the mutually agreed sustainable development goals and targets.
- Monitors and evaluates the implementation of the plans, as well as propose amendments for their more successful implementation.

Kjosev (2007) suggests that the most significant part of the institutional arrangements of the future economic planning system in North Macedonia should be the so called "**economic triangle**" (see picture 1), representing the close relations between the:

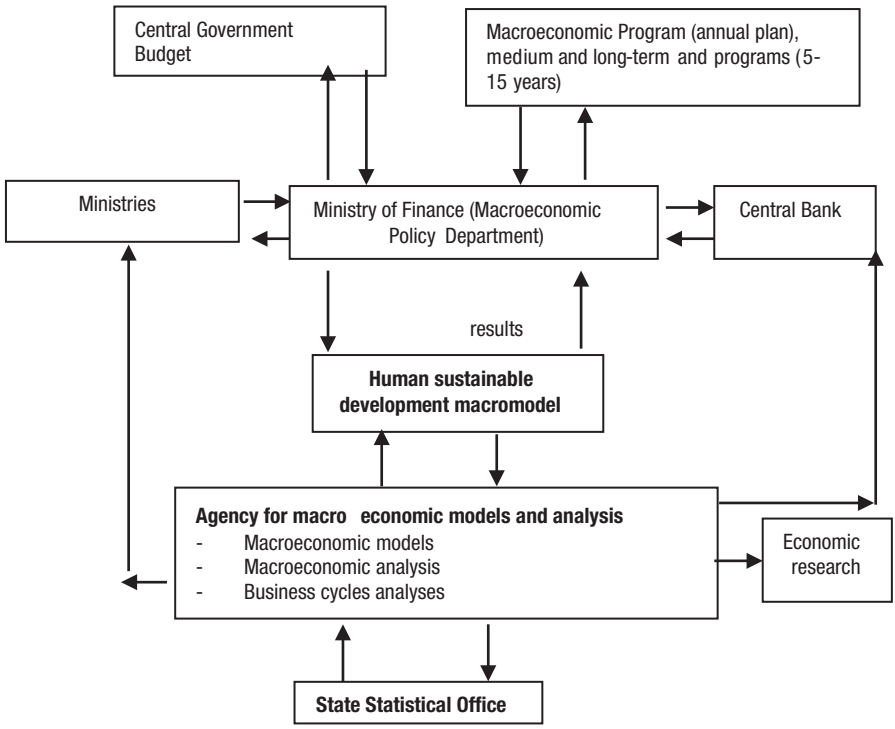
- State Statistical Office;
- Agency for macroeconomic models and analyses; and
- Ministry of Finance (Macroeconomic Policy Department).

The **State Statistical Office** collects, processes, analyses and publishes statistical data, studies' results and analyses related to the numerous socio-economic aspects in the society. It implements great number of research activities and surveys within the companies, households, public and private institutions in North Macedonia, which provide wealth of information about the national economy.

The most significant role in the process of preparation, elaboration and harmonization of the macroeconomic strategic development plans and programs rests with the **Agency for macroeconomic models and analyses** (Agency in the rest of the text). The Agency would have two basic tasks: economic data collection and preparation of macroeconomic studies, analyses, and forecasts. The Agency should be the basic institutional and organizational Government unit responsible for preparation and operational use of macroeconomic models for preparation of macroeconomic development policy and planning documents and programs. It basic tasks should also include: (1) analysis of the sectorial and structural effects of the EU integration processes in North Macedonia; (2) analyses of the global macroeconomic effects of the EU integration processes in North Macedonia; and (3) econometric evaluation/estimation of the economic content of the political parties' electoral programs, which will increase the democratic responsibility and accountability of the political parties.

The **Macroeconomic Policy Department** (link: https://finance.gov.mk/macroeconomic-policy/?lang=en) prepares macroeconomic projections and macroeconomic policy as part of the medium-term fiscal strategy; contributes to the budget, supplementary budget and Annual Report of the Budget, coordinates the process and is actively involved in the preparation of the Economic Reform Program, as well as in the financial dialogue with EU; as well as prepares and publishes monthly and quarterly reports and statistical review on the economic developments in the country.

Picture 1: Institutional framework of strategic planning system in North Macedonia



Source: Kjosev (2007)

Methodological basis for strategic development planning

The development planning methodology is of highest importance for the unity, complexity, and consistency of the sustainable development planning system. It should enable methodological consistency in the process of evaluation of the development conditions, problems, and perspectives; perception of interests, objectives, and tasks of the relevant stakeholders; and their harmonization, the simultaneity of the planning process, as well as the mandatory preparation and execution of plans (Kjosev, 2017).

Developing and implementing relevant methodology for a proper macroeconomic and development analysis is significantly important for the national economies' system of sustainable development. Its main goal is to provide adequate methodological basis for analyzing development challenges of the national economies existing in the process of preparing ad implementing strategic and planning documents (Kjosev & Novkovska, 2017).

It is necessary the creative effortsin North Macedonia to be focused on preparation of a complex analytical framework, consisting of:

a) preparation of a highly disaggregated Social Accounting Matrix – SAM
b) preparation of a macroeconomic human sustainable development model.

a) ***preparation of a highly disaggregated Social Accounting Matrix – SAM***

A SAM is defined as the presentation of System of National Accounts (SNA) accounts in a matrix which elaborates the linkages between a supply and use table and institutional sector accounts. This methodology will significantly contribute to preparing and implementing scientifically and analytically based sustainable development strategic planning documents for obtaining higher economic development and growth potentials and economic welfare possibilities for the citizens of North Macedonia (Kjosev&Novkovska, 2017).

SAM's basic features include:

1. SAM successfully combines indicators of growth, allocation of income and poverty in one coherent framework. By including elements of input-output table, national accounts and other databases, SAM provides complex quantitative image suitable for macroeconomic analysis and planning;
2. SAM is a useful tool for harmonizing various sources of data and filling the gap in information received from various statistical databases, thus contributing to greater consistency and adequacy;
3. SAM proved its usefulness as an integrated statistical database suitable for preparation of macroeconomic models of the national economy to the end of better understanding and envisaging the interrelationship of the determinants of economic trends in the national economies (Kjosev, 2012).

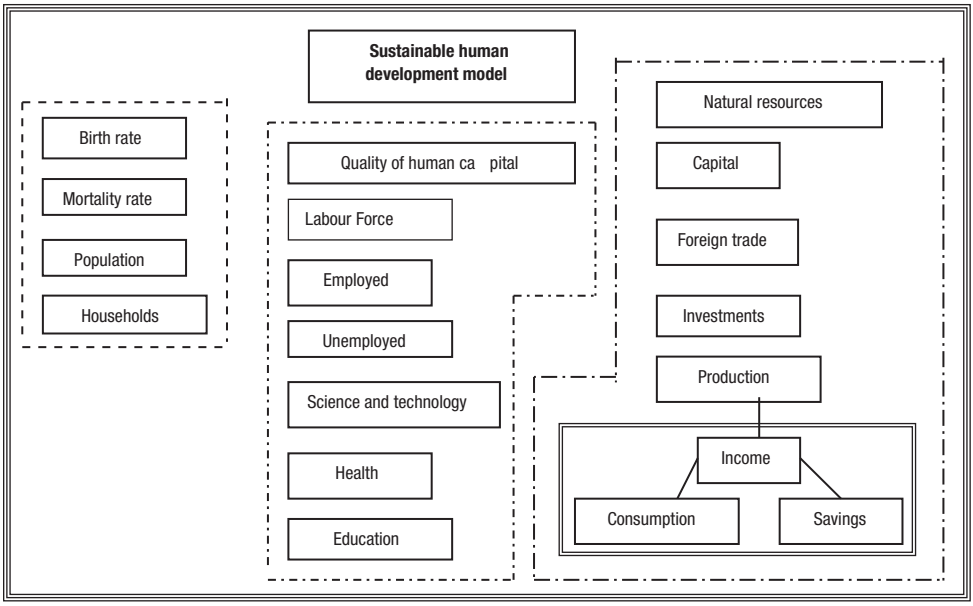
According to Kjosev (2012), couple of activities are of significant importance for our country:

– creation, harmonization and implementation of an integrated analytic-accounting framework as a basis for planning, programming and decision-making for the future socio-economic development of the national economy, based on the United Nations SNA and harmonized with the system and methodology for planning, analyses and decision-making in the developed market economies;
– affirmation of the role and the importance of the SNA and the SAM for the methodology for preparation, adjustment and implementation of the macroeconomic and development policy and planning documents in the national economy;
– construction of a SAM for North Macedonia, based on a comparative analysis of the SAM construction and implementation experiences in the developed market and transition economies.

b) ***preparation of a macroeconomic sustainable development macromodel***

According to Kjosev (2017), there is a need to construct a sustainable human development macromodel, based on alternative human development strategies, which construction, implementation and maintenance should become a permanent process.

Picture 2. Sustainable human development model



Legend :

Sustainable human development model
Demography (population) model
Education and health protection model
Economic model
Household income distribution and consumption structure model

Source: Kjosev (2007)

The sustainable human development model is a dynamically linked set of components, presented on picture 2, consisting of:

1. Economic model;
2. Demography (population) model;
3. Education and health protection model; and
4. Household income distribution and consumption structure model.

The **economic model** presents the well-known basic macroeconomic feedback mechanism, which depicts from production, powered by factors labour and capital along with technology and import, generating income which is used for consump-

tion and the balance is saved. Then foreign saving plus domestic saving are mapped to investments and capital formation and back to production.

The **demography (population) model** can be disaggregated according to the sex, age structure and the urban/rural migrations.

The **education and health protection model**is a model that includes at least education and health. There are at least two important links from education: first, to quality of the skilled labour force and refinement in the production function; and second, to more informed choices and decisions about family size and child survival.

The **household income distribution and consumption structure model** provides wealth of information on the income distribution (calculation of the GINI coefficient), the level of satisfaction of the basic needs, the poverty levels according to the household categories and the total population, etc.

This model will provide many benefits for the national economy:

- Policy justification and effectiveness: The model can serve as a solid background for the Ministries in the Government to support their decision making, justify their policies, and make sure these policies are consistent;
- International relations: Using a model-based approach in national planning will strengthens and enhances the position of the Government in dealing with international donors and agencies, and earn respect from other countries;
- Efficiency: With a good, transparent model, it is possible to identify differences among opinions and test them, so that consensus can be reached.
- Comprehensiveness: With an interactive computer model, it is possible to think through the vitally important connections among economic development, social development, and potentially environmental development in ways that become increasingly apparent, actionable, and effective.

The institutions in the Government of North Macedonia can use these analytic-accounting framework (consisting of SAM and a sustainable human development model) for:

- preparation of macroeconomic analyses, studies and strategies for the economic, social and regional development;
- preparation of a macroeconomic policy document (yearly macroeconomic plan for the national economy), which is a operationalization of the tasks and goals set in the medium-term planning document;
- preparation of medium and long-term planning documents (for the next 5-15 years);
- planning and implementation of the Government macroeconomic and development policy and strategy;

– implementation of cooperative activities with the international development organizations and institutions.

Conclusions

Sustainable development and sustainable development planning are complementary processes which, ultimately, should contribute to enhanced and improved wellbeing of the population in the national economy. North Macedonia, as many other European countries, is at a turning point when it comes to planning its future socio-economic development and securing welfare and quality of life for its citizens, both women and men, having in mind that the COVID-19 pandemic amplified inequalities and affected women disproportionately.

According to Kjosev (2017) the need for implementation of macroeconomic indicative planning after COVID is muchmore visible in North Macedonia, where the government shouldimplement managerial activities in the public sector, public finances, etc. The implementation of efficient macroeconomic and development policies requires utilization of modern planning and forecasting techniques, as well as a developed information system as a basis for an efficient macroeconomic and developmentpolicies. This will result in permanent improvement of the economic policy instruments, as well as the other types of planning and programming of the national economic development.

Having this said, the authors of this paper try to define institutional and methodological basis for organizing and implementing strategic national development planning system in North Macedonia. The most significant part of the institutional arrangements of the future strategic national economic/development planning system in North Macedonia should be the so called "**economic triangle**", consisting of: 1) the State Statistical Office; 2) Agency for macroeconomic models and analyses (non-existent at the moment); andMinistry of Finance (Macroeconomic Policy Department).

In addition, the development planning methodology is of highest importance for the unity, complexity, and consistency of the sustainable development planning system. According to the humble initiative of the authors of this article, the creative efforts in North Macedonia should be focused on preparation of a complex analytical framework, consisting of: a) preparation of a highly disaggregated Social Accounting Matrix – SAM; and b) preparation of a macroeconomic human sustainable development model (dynamically linked set of four components: 1) Economic model; 2) Demography (population) model; 3) Education and health protection model; and 4) Household income distribution and consumption structure model).

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Ana Aleksić Mirić
University of Belgrade, Faculty of Economics and Business, Serbia
E-mail: ana.aleksic@ekof.bg.ac.rs

Biljana Bogićević Milikić
University of Belgrade, Faculty of Economics and Business, Serbia

Nebojša Janićijević
University of Belgrade, Faculty of Economics and Business, Serbia

ORGANISATIONAL RESILIENCE DURING THE CRISIS CAUSED BY THE COVID-19 PANDEMIC IN THE REPUBLIC OF SERBIA: EXPERIENCES AND RECOMMENDATIONS FOR THE FUTURE

Abstract: COVID-19 pandemic had a deeply disturbing impact on organizations in different sectors around the world, forcing them to quickly adapt and find new, flexible forms of organising and functioning in order to achieve their goals and social roles, while simultaneously enabling the required level of employee and client protection. The main organizational challenges included (1) fast organizational redesign through reconsidering high and low priority tasks and critical roles and key positions, job redesign, regrouping units and cross-functional teams, developing effective decision-making under various scenarios, introducing flexible and remote work options and redefining mechanisms to coordinate and control the activities of different units, as well as (2) new focus in people management by ensuring effective communication with employees, organising safe work environment for employees who cannot work remotely, preparing for increased absenteeism (due to school and other forms of quarantine), responding effectively to the increased stress burden on employees and life-work imbalance, preparing temporary succession plans for key executives and critical roles; also, introducing new leadership styles, providing necessary trainings and regular payroll payments, etc. Individual, as well as organisational ability to overcome obstacles, to adapt positively and to bounce back from adversity became one of the qualities that make a difference. This quality is defined as "resilience". The term resilience has been applied in recent years at individual, group, organizational, interorganizational and societal level as to address the ability to cope with often sudden and dramatic changes while maintaining positive adjustment under pressure and capacity to learn and to act upon a call.

Driven by the idea to identify, describe, explain, and systematize the effects of COVID-19 pandemic impact on managing organizations and people, we designed a research using a questionnaire with 2 171 answers collected from the end of March till the beginning of May 2021, during the pandemic and overlapping changes that kept bringing to the forefront the question "Are we to adopt "the new normal"?

The main idea of this paper is to explore organisational resilience during the crisis caused by the COVID-19 pandemic in the Republic of Serbia and to discover the most effective organisational responses that best served organisations, employees and the community. The basic assumption is that organisations in various sectors have adapted to work in pandemics by changing the standard task design, organisational structures,

systems, routines, HRM policies and practices. This organisational change was forced by an external threat to people's lives, under the pressure of emergency reaction and without prior preparation, and to the best of our knowledge, it differs from the previously developed and accepted models of organisational change during the crisis. We question if organisational resilience is an important organisational quality in the enduring crisis, how organisational resilience is interrelated with other organisational qualities and explain how firms can develop capacity for resilience as a part of preparation strategy for future unpredictable crisis.

Keywords: Crisis; Changes; Organisational resilience; "The New Normal"; Serbia.

Introduction

COVID-19 pandemic had a deeply disturbing impact on organizations in different sectors around the world, forcing them to quickly adapt and find new, flexible forms of organising and functioning to achieve their goals and social roles, while simultaneously enabling the required level of employees' and clients' protection. Both economic and non-economic organizations have reacted and changed in a state of uncertainty, discontinuity and emergency caused by COVID-19 pandemics. They changed the usual task design, organizational routines, HRM policies and working practices. This organizational change was forced by an external threat to people's lives, under the pressure of emergency reaction and without prior preparation, and according to our best knowledge, it differs from the previously developed and accepted models of organizational change in the crisis.

The main organizational challenges of adapting to the new working conditions included (1) *extremely fast organizational redesign* and (2) *the new focus in people management*. *The fast organizational redesign* was operationalized through reconsidering high and low priority tasks and critical roles and key positions, job redesign, regrouping units and cross-functional teams, developing effective decision-making under various scenarios, introducing flexible and remote work options, and redefining mechanisms to coordinate and control the activities of different units. *The new focus in people management* included ensuring effective communication with employees, organizing a safe work environment for employees who cannot work remotely, preparing for the increased absenteeism (due to school and other forms of quarantine), responding effectively to the increased stress burden on employees and life-work imbalance, preparing temporary succession plans for key executives and critical roles and introducing new leadership styles, providing necessary training and regular payroll payments, etc. One of the most important changes was the *work from home*. Covid–19 sent office people worldwide home, moving them from the usual office workplace to their living areas, making a huge change in the life of those who did not have this kind of experience before. These new conditions brought into the forefront individual as well as organisational ability to overcome obstacles, adapt positively and bounce back from adversity. This capacity we consider as "resilience". The

term resilience has been applied at individual, group, organizational, inter-organizational and societal levels to address ones' capacity to cope with sudden and dramatic changes, while maintaining positive adjustment under pressure and capacity to learn, act, adapt and even develop a new skill in disruptive and uncertain conditions (Coutu, 2002; Lengnick-Hall et al., 2011; Kantur, İşeri-Say, 2012; Boin, Van Eeten, 2013, Cunha, Castanheira, Neves, Story, Rego, A. and Clegg, 2013). Some authors suggest that resilience will prove to be the critical competitive advantage in the age of turbulence—when companies are being challenged to change more profoundly, and more rapidly, than ever before (Hamel & Välikangas, 2003).

Driven by the idea to identify, describe, explain, and systematize the effects of COVID-19 pandemic impact on managing organizations and people, we designed research using a questionnaire with 2 171 answers collected from the end of March till the beginning of May 2021, during the pandemic and overlapping changes that kept bringing to the forefront the question "*Are we to adopt "the new normal"*?"

The main idea of this paper is to explore the resilience of organisations in the Republic of Serbia during the crisis caused by the COVID-19 pandemic, within those that changed their standard working habits by shifting to work from home. We were motivated by the willingness to understand factors that contribute to individual and organizational resilience and to discover the most effective organisational responses that best served organisations, employees and the community. The basic assumption is that organisations in various sectors have adapted to work in pandemics by changing the standard task design, organisational structures, systems, routines, HRM policies and practices. The main research questions we aim to answer are: Have organizations and the employees in Serbia revealed organizational and individual resilience during the COVID-19 pandemic? What are the main sources of organizational resilience in the Republic of Serbia? Is it possible for firms to develop this potential capacity as a part of preparedness strategy for some future unpredictable crisis? The experiences of different types of organizations in Serbia represent a newly-generated, invaluable knowledge that should be systematized and generalized so it could be used in possible future crises as well as for improving their everyday functioning

The paper is structured as follows. We provide a brief theoretical framework of the analysis together with the research background. We proceed by explaining research methodology including context, questionnaire, sample, measures, data, and statistical techniques used. Research findings are presented in Section 4. We finalize with a discussion and implications of the study, conclusion, limitations of the study and the directions for future research.

Theoretical and research background

Theoretical Background

Since the outbreak of Covid-19 pandemics, we have witnessed that some organizations and institutions demonstrated the capability of maintaining functional behaviour and structures facing extreme macro-environmental changes, while others crumbled under ongoing pressure of disruptive, uncertain and extremely challenging conditions. This observation opens the question of how / *how some organizations, institutions, and individuals within them managed to strike back and survive without losing ground under their feet and to bounce back without the losses in the key defining elements of their organizations*?; *how do the individuals and units of which they are composed continue to achieve desirable outcomes amidst adversity, strain, and significant barriers to adaptation or development?*

This is the issue that emerged for organizations from the beginning of the crisis, but it is not of less importance for the national economies. National economies all over the globe have faced deeply disturbing influence throughout 2020 and 2021. Back in 2008, when the World was faced with the danger of global crisis, the World Economic Forum echoed "resilience" quality, been applied at individual, community, organizational, and societal scales, to describe an ability to cope with often sudden and dramatic changes. According to WEF, *'Resilience', denotes society's ability to withstand and recover from these shocks when they occur. Together, insured resilience frames a society designed to both prevent and protect against crisis, and to recover quickly from damage*.

Consequently, resilience research appeared, leveraging important knowledge from social science, physics, and engineering science (Gibson, Tarant, 2010). In physics, the term resilience means the ability of a body that has deformed under the action of a force to return to its original state and regain its former shape[1]. Psychological literature observes the resilience of an individual who is exposed to a very negative situation, trauma or series of stresses, and assess the degree of his ability to return to his normal state. According to Milivojević (2000) optimal mental resilience is not hard insensitivity, but elastic sensitivity. Hypersensitive people are those who attach great importance to negative events, perceiving them as catastrophes, which makes them prone to emotional disorders. Nor should the negative event be underestimated, that is, hardness and insensitivity. Between hypersensitivity and insensitivity, there is sensitivity.

Organizational theory on resilience is in a developing phase (Boin,Van Eeten, 2013; Annarelli, Nonino, 2015; Linnenluecke, 2017). It is cited that the topic of resil-

1 Often given example is with a sheet of paper: if we bend a sheet of paper, it will return to its original state, but if we crumple it, this action will prevail over its ability to bounce back and retain the form, and it will no longer be able to regain its shape.

ience has started to gain attention within management academia and scholars after Holling's work in 1973. The concept of organizational resilience has been developed within the two recognizable streams. The first one is predominantly focused on operationalizing resilience as an economic output expressed in financial terms (Pal, Torstensson, & Mattila, 2014). From this viewpoint, a resilient organization retains financial health and economic performance under disadvantaged market circumstances. Not only that resilience allows organisations to go through times of organisational instability and adversity, but to thrive and capitalise on change and uncertainty (Youssef & Luthans, 2007). More recent standpoints include dimensions of organizational resilience (Horne, Orr, 1997; Mallak, 1998; Riolli, Savicki, 2003; Boin, Van Eeten, 2013; Cunha et al, 2013; Kantur, İşeri-Say, 2012; King, Newman, and Luthans, 2015; Rodríguez-Sánchez, Vera Perea, 2015; Van Der Vegt, Essens, Wahlström, & George, 2015; Annarelli, Nonino, 2016; Shatté, Perlman, Smith, & Lynch, 2017; Vera, Rodríguez-Sánchez, Salanova, 2017) suggesting a more holistic view of resilience as "*embedded in a set of individual-level knowledge, skills, and abilities and organizational routines and processes by which a firm conceptually orients itself, acts decisively to move forward, and establishes a setting of diversity and adjustable integration that enables it to overcome the potentially debilitating consequences of a disruptive shock* (Lengnick-Hall, Beck, &Lengnick-Hall, 2011)" or as *"the process by which an actor (i.e., individual, organization, or community) builds and uses its capability endowments to interact with the environment in a way that positively adjusts and maintains functioning prior to, during, and following adversity*" (Williams et al., 2017: 742); Another approach (Rose, 2004; Worline, Dutton, Frost, Kanov, Lilius, J. & Maitlis, 2002) made a distinction between the "static" and the "dynamic" resilience. The first one indicated *the ability of a system or organization to maintain its core functions when shocked*, while the later refers to *resilience as the speed at which it is possible to return to ideal functioning conditions.*

Some authors even emphasize that organizational resilience is quite a different phenomenon compared to adaptability, agility, flexibility, improvisation, recovery, redundancy or robustness; it refers to the organization reaction and capacity to recover and develop in a state of uncertainty, discontinuity, and emergency (Xiao and Cao, 2017). It may be comprehended as having three levels: individual level, group level, and organizational level, whereas the individual resilience of an employee is the main source of organizational resilience (Cunha et al, 2013; Bardoel, et al, 2014; Horne, Orr, 1997; Lengnick-Hall et al, 2011; Malik, Garg, 2017).

During the last two decades, some authors have called for more research in organizational theory that would provide insight into how organizations, individuals and groups continue to achieve desirable outcomes amidst adversity, strain, and significant barriers to adaptation and development (Sutcliffe, Vogus, 2003; Bardoel, Pettit, De Cieri, & McMillan, 2014; Linnenluecke, 2017; Williams et al., 2017; Vera, Rodríguez-Sánchez, & Salanova, 2017). In a systematic literature review accompa-

nied with the co-citation analysis, Annarelli & Nonino (2015) propose the definition of organizational resilience as "*the organization's capability to face disruptions and unexpected events in advance thanks to the strategic awareness and a linked operational management of internal and external shocks. The resilience is static, when founded on preparedness and preventive measures to minimize threats probability and to reduce any impact that may occur, and dynamic, when founded on the ability of managing disruptions and unexpected events to shorten unfavourable aftermaths and maximize the organization's speed of recovery to the original or to a new more desirable state*". Their finding from systematic literature search reveals the predominance of conceptual and literature review studies, compared to empirical studies on resilience (65% *vs* 35%). We find this result challenging to search for more empirical evidence on organizational resilience.

Research Background

Work from home implies a work arrangement in which the worker fulfils the key tasks and essential responsibilities of his job while staying at home, using information and communication technology. Until the escalation of the pandemics COVID-19, working from home in Serbia was a work practice applied by a very small number of organizations and was mostly related to the ICT industry and knowledge-intensive jobs. According to the Labour Law of the Republic of Serbia[2] Article 42, an employment relationship may be established for work outside the employer's premises and includes teleworking and working from home. The Law further (in Article 43) specifies the essential elements of the contract (duration of working time following the work norms, manner of supervision and quality of employee performance, use of employee's means of work and compensation for the use thereof, compensation of other work-related cost and ways to determine them, and other rights and duties) and defines that the basic salary of an employee cannot be less than the basic salary of an employee who performs the same job at the employer's premises. Also, the Law specifies that the amount and deadlines for the performance of work performed based on employment contracts from home cannot be determined in a way that prevents the employee from using the rights to rest during daily work, daily, weekly and annual leave, by the Law and the general act. So, although the Law regulates work from home as an institute of work engagement of employees, the complex work practice caused by the pandemic surpassed modest legal provisions and raised some new issues for employees, employers and public policymakers in the Republic of Serbia.

The first case of the Corona virus in Serbia was publicly reported on March 6th 2020. Only a week after the state of emergency was declared, and kindergartens, schools and universities were closed. At that moment, a lot of companies operating in Serbia decided to shift to work from home, in part or completely. During 2020 and 2021, the

2 *Official Gazette of the Republic of Serbia* no. 24/2005, 61/2005, 54/2009, 32/2013, 75/2014, 13/2017, 113/2017 & 95/2018.

Government implemented various measures that regulated social life and influenced working practices. We started our research in March 2021 when a lot of organizations in Serbia have already experienced work from home as work practice. The sample included only the subjects who experienced work from home from the beginning of Covid-19 in Serbia.

Methodology

Instrument

The basic research instrument used for the data collection was a specially designed questionnaire consisting of several sections, covering a wide range of organization related constructs (work attitudes, organizational culture, leadership, individual and organizational learning, work-life balance, to name a few). For the point of this paper, we forefront the 1) questions about the demographic characteristics of the respondents and general questions about the characteristics of the organisation in which the respondents are employed and 2) questions related to organizational resilience. Our research students helped administer the questionnaire in Google form. The data were collected between March and May 2021.

Sample

Our sample included 2,138 respondents from as many different organizations operating in the Republic of Serbia. A comprehensive description of the researched sample is presented in Table 1.

Table 1: Sample

Levels	Counts	% of Total	Cumula-tive %	Levels	Counts	% of Total	Cumula-tive %	Levels	Counts	% of Total	Cumula-tive %	Levels	Counts	% of Total	Cumula-tive %
Gender[3]				Education				Work experience				Org Size			
Male	852	39.9 %	39.9 %	Highschool	370	17.1 %	17.1 %	do 1 year	136	6.3 %	6.3 %	up to 50	653	30.1 %	30.1 %
Female	1286	60.1 %	100.0 %	Higher	27	1.2 %	18.3 %	1-3 years	360	16.6 %	22.8 %	50-100	370	17.0 %	47.1 %
Age				BA	1092	50.3 %	68.6 %	3-5 years	347	16.0 %	38.8 %	100-250	335	15.4 %	62.6 %
do 24	290	13.4 %	13.4 %	MA	505	23.3 %	91.9 %	5-10 years	390	18.0 %	56.8 %	250-500	250	11.5 %	74.1 %
25-34	838	38.6 %	52.0 %	PhD	63	2.9 %	94.8 %	10-20 years	446	20.5 %	77.3 %	above 500	563	25.9 %	100.0 %
35-44	425	19.6 %	71.5 %	Mag	73	3.4 %	98.2 %	20-30 years	388	17.9 %	95.2 %				
45-54	455	21.0 %	92.5 %	Spec	30	1.4 %	99.6 %	above 30 y	104	4.8 %	100.0 %	**Org Age**			
55-64	152	7.0 %	99.5 %	Other	9	0.4 %	100.0 %	**Years within organization**				up to 5 years	158	7.3 %	7.3 %
above 65	11	0.5 %	100.0 %					1	331	15.2 %	15.2 %	5-10 years	292	13.5 %	20.8 %
Marital status				**Occupation**				2	629	29.0 %	44.2 %	10-20 years	478	22.0 %	42.8 %
Single	1033	47.6 %	47.6 %	Manager	738	34.0 %	34.0 %	3	325	15.0 %	59.2 %	20-30 years	406	18.7 %	61.5 %
Married	1002	46.2 %	93.7 %	Expert	896	41.3 %	75.3 %	4	329	15.2 %	74.3 %	30-50 years	792	36.5 %	98.1 %
Divorced	110	5.1 %	98.8 %	Administrative	397	18.3 %	93.6 %	5	331	15.2 %	89.6 %	more than 50	13	0.6 %	98.7 %
Widow	26	1.2 %	100.0 %	Qualified worker	116	5.3 %	98.9 %	6	226	10.4 %	100.0 %	more than 100	29	1.3 %	100.0 %
Kids				Other manual jobs	24	1.1 %	100.0 %								
0	1064	49.0 %	49.0 %	**Ownership**											
1	458	21.1 %	70.1 %	Private	1055	48.6 %	48.6 %								
2	543	25.0 %	95.1 %	Public	589	27.2 %	75.8 %								
3	88	4.1 %	99.2 %	MNK	463	21.3 %	97.1 %								
4	18	0.8 %	100.0 %	JV and alike	62	2.9 %	100.0 %								

Source: Authors

3 1,5 % of the respondents did not want to answer the gender related question.

Measures

For the most of research items in our questionnaire we used scales that have been validated and which are well-known in the literature, following the reliability information by Cronbach's α (Cronbach, 1951). However, some scales are tailor-made for this research and have been evaluated for the first time. Scale for organizational resilience is one of them. We assessed "organizational resilience" with the nine items scale inspired by Näswall, Kuntz, Hodliffe, & Malinen (2013). The analysis showed that the two items of the scale are correlated negatively with the rest of the scale. Following the rule that if an item correlates negatively with the rest, but it is not because of reverse-wording of the item, then that items is not measuring the same thing as the other items in the subset and it should be dropped altogether. Reliability information (Cronbach's α) for the original and corrected measurement scales of resilience are presented in Tables 2 and 3. The scale we developed is presented in Table 4.

Table 2: 9-item scale (.0.67)

Scale Reliability Statistics	Item Reliability Statistics	if item dropped
I don't like surprises at work and I think the task of management is to prevent them.	**mean**	**Cronbach's α**
When I face unusual situations at work, I always manage to cope.	2.57	0.762
I think it is important for employees to be able to cope with any situation that befalls them at work, no matter how unusual and new it may be.	3.96	0.611
I notice that my colleagues successfully solve unusual and new problems they face at work.	3.94	0.596
One should be able to apply a new method of work or approach to work if the situation or requirements have changed.	3.68	0.591
The management of my organization appreciates and actively supports the resourcefulness of the employees.	4.12	0.597
My organization is not too rigid and has the ability to adapt to any change, even drastic.	3.76	0.577
In my organization, we have the freedom to deviate from established practices, procedures or rules if the situation requires it.	3.64	0.574
If we allow everyone to deviate from the usual way of working at their own discretion, chaos will occur.	3.42	0.598
Cronbach's α	2.42	0.773
Scale 0.67		

Table 3: 7-item scale (.087)

	Scale Reliability Statistics	Item Reliability Statistics	if item dropped
		mean	**Cronbach's α**
78.2	When I face unusual situations at work, I always manage to cope.	3.96	0.855
78.3	I think it is important for employees to be able to cope with any situation that befalls them at work, no matter how unusual and new it may be.	3.94	0.848
78.4	I notice that my colleagues successfully solve unusual and new problems they face at work.	3.68	0.85
78.5	One should be able to apply a new method of work or approach to work if the situation or requirements have changed.	4.12	0.846
78.6	The management of my organization appreciates and actively supports the resourcefulness of the employees.	3.76	0.844
78.7	My organization is not too rigid and has the ability to adapt to any change, even drastic.	3.64	0.846
78.8	In my organization, we have the freedom to deviate from established practices, procedures or rules if the situation requires it.	3.42	0.866
	Cronbach's α		
	Scale 0.869		

Table 4: Items within resilience construct

Ability to cope.	When I face unusual situations at work, I always manage to cope.
Adjustment to unusual.	I think it is important for employees to be able to adjust to any situation that come about them at work, no matter how unusual and new it may be.
Colleagues' ability to face uncertainty.	I notice that my colleagues successfully solve unusual and new problems they face at work.
Openness towards new work method.	You should be able to apply a new method of work or approach to work if the situation or requirements change.
Resourcefulness.	Management of my organization appreciates and actively supports the resourcefulness of the employees.
Flexibility.	My organization is not too rigid and has the ability to adapt to any change, so it was drastic
Freedom.	In my organization, we have the freedom to deviate from established practices, procedures or rules if the situation requires it

Source: Authors

Results

Overall resilience in Serbian organizations. Research results show that the respondents from the sample report, on average, high resilience (the rated level of resilience for each item has a value above the neutral mean). If the observed items ranked according to the rated resilience level, the collected data show that the average resilience level of the respondents is highest with the *ability to apply new work method* (M = 4.12), while lowest (M = 3.64) for organizational flexibility as opposite to rigidity. The highest std. deviation in the respondents' responses occurred for "the freedom to deviate from established practices, procedures or rules if the situation requires it" (SD = 1.20), while the smallest one occurred for "the personal ability to cope unusual work situations" (SD = 3.29). Descriptive measures (Mean and Standard Deviation) are presented in Table 5.

Table 5: Descriptive on resilience

	78.2	78.3	78.4	78.5	78.6	78.7	78.8
N	2171	2171	2171	2171	2171	2171	2171
Missing	97	97	97	97	97	97	97
Mean	3.96	3.94	3.68	4.12	3.76	3.64	3.42
Median	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Standard deviation	0.944	1.00	1.03	0.969	1.11	1.12	1.20
Minimum	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Maximum	5.00	5.00	5.00	5.00	5.00	5.00	5.00

Source: Authors

Previous experience with work from home. Experience is an important element that influences behaviour of individuals and organizations. It is strongly connected to individual and organizational ability to learn, which is very well documented in organization theory (for the review look at Aleksić Mirić, 2017). Individuals learn from the experience of performing a task (learning by doing) while organizational ability to gain insight from its own experience, the experience of others, and to modify the way it functions according to such insight is considered to be the core of organizational learning behaviour. Therefore, previous experience with work from home could have been expected to influence organizational ability to resiliently react to Covid-19 work from home social measure.

Contrary to the expected, our results report that previous work from home experience has no statistically significant impact on resilience (Table 6).

Table 6: Previous experience of working from home

Independent Samples T-Test

		Statistic	df	p
Rez(7f)	Student's t	-0.2749	2106	0.783

[a]Levene's test is significant ($p < .05$), suggesting a violation of the assumption of equal variances

Group Descriptives

	Group	N	Mean	Median	SD	SE
Rez(7f)	Yes	210	-0.01469	0.1752	0.772	0.0533
	No	1898	3.83e-4	0.1320	0.752	0.0173

Source: Authors

We evaluated the influence of the following individual, employee related factors: gender, age, marital status, education, occupation, and children. Among **employee-related factors**, results indicated two factors to be related with the resilience behaviour: *gender* and *age.*

Resilience and gender. Compared to male, female report higher overall resilience (Table 7).

Table 7: T-test resilience and gender

Independent Samples T-Test				
		Statistic	df	p
Rez(7f)	Student's t	-3.17	2136	0.002

Group Descriptives

	Group	N	Mean	Median	SD	SE
Rez(7f)	Male	852	-0.0553	0.0687	0.762	0.0261
	Female	1286	0.0491	0.188	0.735	0.0205

Source: Authors

Observed by the resilience components, statistically significant differences appear in the following resilience elements **adjustment to unusual** (*When I face unusual situations at work, I always manage to cope.*), **ability to cope with the unusual** (*I think it is important for employees to be able to cope with any situation that befalls them at work, no matter how unusual and new it may be*), **colleagues' ability to face uncertainty** (*I notice that my colleagues successfully solve unusual and new problems they face at work*), **openness towards newwork method** *(You should be able to apply a new method of work or approach to work if the situation or requirements have been mentioned),* **flexibility** (*My organization is not too rigid and has the ability to adapt to any change, so it was drastic*), where female report statistically significant higher resilience (Table 8).

Table 8: T-test resilience and gender

Independent Samples T-Test				
		Statistic	**df**	**P**
P78.1mod	Student's t	-0.21	2136	0.834
P78.2mod	Student's t	-2.592	2136	0.01
P78.3mod	Student's t	-2.609	2136	0.009
P78.4mod	Student's t	-3.538	2136	< .001
P78.5mod	Student's t	-3.711	2136	< .001
P78.6mod	Student's t	-0.405	2136	0.686
P78.7mod	Student's t	-2.757	2136	0.006
P78.8mod	Student's t	-1.017	2136	0.309
P78.9mod	Student's t	0.571	2136	0.568

[a]Levene's test is significant ($p < .05$), suggesting a violation of the assumption of equal variances

	Group	**N**	**Mean**	**Median**	**SD**	**SE**
P78.1mod	Male	852	-0.01185	-0.4947	0.998	0.0342
	Female	1286	-0.0026	-0.4947	0.999	0.0279
P78.2mod	Male	852	-0.06087	0.0474	0.998	0.0342
	Female	1286	0.05312	0.0474	0.994	0.0277
P78.3mod	Male	852	-0.05791	0.0571	1.007	0.0345
	Female	1286	0.05634	0.0571	0.981	0.0274
P78.4mod	Male	852	-0.08662	0.3078	1.006	0.0345
	Female	1286	0.06913	0.3078	0.99	0.0276
P78.5mod	Male	852	-0.08825	-0.1222	1.046	0.0359
	Female	1286	0.07444	-0.1222	0.955	0.0266
P78.6mod	Male	852	-0.00699	0.2202	0.982	0.0336
	Female	1286	0.01088	0.2202	1.009	0.0281
P78.7mod	Male	852	-0.06576	0.3206	1.01	0.0346
	Female	1286	0.05556	0.3206	0.987	0.0275
P78.8mod	Male	852	-0.02081	0.4824	0.991	0.0339
	Female	1286	0.02407	0.4824	1.004	0.028
P78.9mod	Male	852	0.0128	-0.3499	1.021	0.035
	Female	1286	-0.01245	-0.3499	0.987	0.0275

Source: Authors

Resiliency and age. In terms of age, a statistically significant difference in resilience occurs between respondents of 25-34 years of age on one side, and those older than 65 (still working), on the other side. Elder ones report statistically significant lower resilience compared to the group of their younger coworkers (Table 9; Table 10).

Table 9: Resilience-age mean results

Mean	do 24	3.83
	25-34	4.01
	35-44	3.91
	45-54	3.99
	55-64	3.99
	above 65	3.18

Source: Authors

Table 10: Resilience and age (One-way ANOVA)

One-Way ANOVA (Fisher's)							
	F	df1	df2	p			
Rez(7f)	2.77	5	2165	0.017			
Homogeneity of Variances Test (Levene's)							
	F	df1	df2	p			
Rez(7f)	4.44	5	2165	<.001			
Tukey Post-Hoc Test – Rez(7f)							
		Up to 24	25-34	35-44	45-54	55-64	above 65
do 24	Mean difference	—	-0.0615	0.0428	-0.0405	-0.0281	0.611
	p-value	—	0.836	0.976	0.98	0.999	0.086
25-34	Mean difference		—	0.1042	0.021	0.0334	0.673
	p-value		—	0.182	0.997	0.996	0.037
35-44	Mean difference			—	-0.0832	-0.0709	0.569
	p-value			—	0.569	0.918	0.13
45-54	Mean difference				—	0.0124	0.652
	p-value				—	1	0.051
55-64	Mean difference					—	0.639
	p-value					—	0.07
above 65	Mean difference						—
	p-value						—

Source: Authors

In terms of individual items, there is a statistically significant difference in the category of **adjustment to unusual**: *I think it is important for employees to be able to adjust to any situation that come about them at work, no matter how unusual and new it may be* (see Table 11).

Table 11

Tukey Post-Hoc Test – P78.2mod							
		do 24	**25-34**	**35-44**	**45-54**	**55-64**	**above 65**
Up to 24	Mean difference	—	-0.182	-0.0807	-0.1615	-0.16845	0.692
	p-value	—	0.081	0.897	0.26	0.541	0.212
25-34	Mean difference		—	0.1011	0.0203	0.0133	0.873
	p-value		—	0.531	0.999	1	0.046
35-44	Mean difference			—	-0.0808	-0.08779	0.772
	p-value			—	0.837	0.939	0.114
45-54	Mean difference				—	-0.007	0.853
	p-value				—	1	0.057
55-64	Mean difference					—	0.86
	p-value					—	0.064
above 65	Mean difference						—
	p-value						—

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Source: Authors

None of the organizational design properties–job design, unit groupings, authority delegation, integration mechanisms did report to impact organizational resilience under work from home disturbance.

Discussion and conclusion

Covid-19 pandemic has changed the traditional workplace in so many ways through reconsidering high and low priority tasks and critical roles and key positions, job redesign, regrouping units and cross-functional teams, developing effective decision-making under various scenarios, introducing flexible and remote work options, and redefining mechanisms to coordinate and control the activities of different units as well as by ensuring effective communication with employees, organising safe work environment for employees who cannot work remotely, preparing for the increased absenteeism (due to school and other forms of quarantine), responding effectively to the increased stress burden on employees and life-work imbalance, preparing temporary succession plans for key executives and critical roles and introducing new leadership styles, providing necessary trainings and regular payroll payments, etc. With the COVID-19 outbreak, the application of these new forms of flexible organizing had to be additionally innovated so the organizations were able to adapt to working during the pandemic. Therefore, organizations around the world as well as in Serbia were forced to innovate and apply completely new methods of flexible, horizontal, and vertical organizing and people management. These new, flexible organizing and managing methods haven`t yet been sufficiently studied, neither in Serbia nor in the world.

Working from home soon became a working practice applied by organizations of various profiles, ranging from primary schools to multinational global companies. In this research, we understand working from home as a temporary, alternative work arrangement that occurred due to the COVID-19 pandemic, when a large number of people in Serbia had to replace their business offices with a home work environment. The paper presents the experiences of employees in Serbia, based on a survey conducted on more than 2,100 employees in the period March-May 2021. Preliminary empirical testing shows the following.

- *Our measure of resilience captures both employee (individual) and organizational resilience*, which are occasionally considered and measured separately. Our resilience measure is operationalized through the ability to cope with the unusual work situations, adjustment to unusual, colleagues' ability to face uncertainty, openness towards new work methods, resourcefulness, flexibility and freedom. The reliability results represent a good grounds for further improvements of the resilience measurement scales.
- *Overall, organizations in Serbia demonstrated a high level of organizational resilience* **during the COVID-19 pandemic.**
- *Covid-19 pandemic has changed the traditional workplace in so many ways that previous experience in working from home does not affect much the capacity of the organization to behave resiliently during these new disruptive, emergent, and uncertain circumstances.* **L**iterature in organizational theory following the stream of the importance of individual and organizational learning views resilience as a transformational process in which individuals not only strive to survive the uncontrollable change, but also learn from it (Lengnick-Hall et al., 2011; Richardson, 2002; Baird et al., 2013). In that manner, employees can utilise past experiences to develop adaptive capacity of flexible reacting to external stresses. Contrary to the expected, in our dataset respondents with and without previous working from home experience did not report statistically significant difference in resilience level. Therefore, we may conclude, which is in line with previous research findings, the following:

  Proposition 1: The organizational resilience is only a potential capacity of an organization which is demonstrated during, not before, the disruptive situation.

  Proposition 2: The organizational resilience is derived from the individual resilience of the employees and their individual capacity to adapt, learn and develop new skills.
- *As working from home implies a work arrangement in which the worker fulfils the key tasks and essential responsibilities of his job while staying at home, individual-related factors are more important that organization-related factors in building organizational resilience.* Among employee-related factors, two of the explored do make a difference: *gender* and *age*. Our results suggest that organizational resil-

ience strongly depends on individual resilience and is higher if the organization mainly employs women and younger people. Therefore, we may propose the following:

Proposition 3: Women, compared to men, and younger employees, compared to their colleagues older than 65, demonstrate higher levels of resilience and stronger individual capacity to adapt, learn and develop.

- Among organization-related factors, different *organizational design properties* did not report significant differences in resilience behaviours under work from home disturbance. This is a signal for us to *search for the sources of resilience differences in behavioural components of an organization* – organizational value system (culture), leadership, learning patterns and styles, etc. Therefore, we may propose the following:

  Proposition 4: Structural dimensions of an organization do not influence organizational resilience.

The experiences of different types of organization in Serbia, although represent only a first step in our understanding of organizational resilience, created a new, invaluable knowledge that should be systematized and generalized so it could be used in possible future crises as well as for improving their everyday functioning. Still, this research is constrained by several methodological limitations. First, the data are collected a year after the beginning of the pandemic Covid-19 in the period of three months. It would be of interest to run a longitudinal study to determine resistance factors in conditions of prolonged disturbance. The second limitation refers to addressing resiliency only of organizations whose employees experienced work from home as one of the forms of adapting to working conditions during the Covid-19 pandemic. Further studies should explore other forms of adjustment applied by companies, primarily by those that did not have the option to send employees to work from home - public services, retail facilities, health services, etc. Third, our research did not capture group resilience, as our research design did not allow for it. Future studies should expand our knowledge about organizational resilience and its sources at all three recognized levels: organizational, group and individual. Furthermore, the research is done in a country with specific characteristics of national culture such as collectivism, high avoidance of uncertainty and female values. The open question for further research is whether the same results would be obtained in cultures - economies with different cultural values and whether resilience can be related to the dimensions of national culture?

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Katerina Lyroudi, PhD
Adjunct Assistant Professor
Hellenic Open University, Patra, Greece
Email: lyrkat@gmail.com

DOES INNOVATION LEAD TO GROWTH? A SDG OF THE COMPANIES IN THE BLACK SEA MARKETS.

Abstract: Based on the agenda 2030 for a healthier, safer and more prosperous world, there were proposed 17 sustainable development goals (SDGs) with economic, social and environmental dimensions. One of those goals, actually number 8, is about "promoting sustained, inclusive and sustainable economic growth". One of the factors promoting economic growth is innovation for the economy as a whole and for the various corporations.

During the last decades the economy in most of the developed countries has been transformed to a knowledge economy from a production one. As a proxy for innovation for the companies are considered the expenditures in research and development (R&D) and the intangible assets of the underlying company. Therefore, the existence of intangible assets in a company indicates that it pursues a level of innovation and the higher the innovation of a company, the more competitive advantages and the higher potential for survival and growth in the future globalized markets that company faces.

Our objective in this paper is to examine the research question whether the existence of more innovation proxied by intangible assets or/and by the R&D investments in a company leads to an increasing market value, better performance and future growth in the years before and after the Covid-19. The focus of this study are the companies of the Black Sea countries: Bulgaria, Georgia, Romania, Russia, Turkey and Ukraine. From a preliminary examination of the data which is obtained from the Thomson EIKON database, we found that the research and development expenses are not reported for most of the Bulgarian and the Russian companies and for very few of the Romanian and Turkish ones and there is no data at all for the listed companies of the Georgian and the Ukrainian markets. Hence, we limit our investigation on the three markets out of the six, specifically on the Balkan area countries, the companies listed in the stock markets of Bulgaria, Romania and Turkey. For the examination of the testable hypotheses we use correlation and regression analysis. The results will shed more light in this issue and will help the practitioners to plan their strategy accordingly and the academicians to learn more about this intricate relationship especially in the framework of developing economies.

Keywords: R & D investments, firm performance, value, growth.

Introduction

Based on the agenda 2030 for a healthier, safer and more prosperous world, there were proposed 17 sustainable development goals (SDGs) with economic, social and environmental dimensions. One of those goals, actually number 8, is about "promoting sustained, inclusive and sustainable economic growth". One of the factors promoting economic growth is innovation for the economy as a whole and for the various corporations.

During the last decades the economy in most of the developed countries has been transformed to a knowledge economy from a production one. Griliches (1984), Sher and Yang (2005) and Cho and Pucik (2005) are some of the studies that have used as a proxy for innovation for the companies the expenditures in research and development (R&D) and the intangible assets of the underlying company. The intangible assets are immaterial assets that in the past were not reported in the balance sheet, but now they are reported and can be knowledge, information, creativity and inventions as intellectual capital or knowledge capital of the company.

Idris (2003) stated that intellectual property assets are a "power tool" for economic growth that has not been exploited to its maximum limit yet. There are several definitions for intellectual property or intellectual capital in the pertinent literature [Sitar and Vasic (2004)]. In general, these terms are used interchangeably. Therefore, the existence of intangible assets in a company indicates that it pursues a level of innovation. Hence, the higher innovation of a company, the more competitive advantages and the higher potential for survival and growth in the future globalized markets. As firms use and exploit their knowledge resources and their intellectual capital they build strong competitive advantages (Stewart, 1997; Teece et al. 1997; Teece, 2006).

Mauboussin and Kawaja (1999) found that the value of a company is the present value of all the future free cash flows it will generate. Therefore, as a company has more innovation, this will imply that it has more intangible assets and R & D investments (expenditures), so there should be a higher company value and higher future cash flows.

Our objective in this paper is to examine the research question whether the existence of more innovation proxied by intangible assets or/and by the R&D investments in a company leads to an increasing market value, better performance and future growth in the years before and after the Covid-19. The focus of this study are the companies of the Black Sea countries: Bulgaria, Georgia, Romania, Russia, Turkey and Ukraine. From a preliminary examination of the data which is obtained from the Thomson EIKON database, we found that the research and development expenses are not reported for most of the Bulgarian and the Russian companies and for very few of the Romanian and Turkish ones and there is no data at all for the listed companies of the Georgian and the Ukrainian markets. Hence, we limit our investigation on the

three markets out of the six, specifically on the Balkan countries from the Black Sea countries, the companies listed in the stock markets of Bulgaria, Romania and Turkey. For the examination of the testable hypotheses we use correlation and regression analysis. The results will shed more light in this issue and will help the managers of those companies that are interested in innovation to plan their strategies accordingly and the academicians to learn more about this intricate relationship especially in the framework of developing economies.

The rest of the study is organized as follows: the next section presents the relevant review of literature. The third section contains the data, the methodology and the testable hypotheses. The fourth section depicts and analyses our empirical results and the final section contains a summary and offers future research ideas.

Review of literature

The concept of research and development (R&D) contains the various activities that a company is involved with and realizing so that it can a) create new products, or processes or services and as products are considered formulas, inventions, pilot models, computer software and techniques; b) discover solutions to problems and/or c) improve existing products or services [OECD (2002)]. Intangible assets can be defined as business assets that have no physical form and are distinguished in two types: those that are purchased and those that are internally generated. If a company has its own R&D department it incurs the relative expenses and if the research results in specific products/solutions it creates intellectual property or intellectual capital such as patents or copyrights, etc. which will create future probable economic benefits to the enterprise. There are national laws that treat the accounting of R&D expenses and intangibles which have differences, the International Financial Reporting Standards (IFRS) and the US-GAAP.

There is rich literature on the relation of innovation as expressed by investments in R&D and by intangible assets with firm value and firm performance. Most studies have revealed a positive relation between innovation and performance. However, some researchers found that there is no linear relationship between the above-mentioned variables and some studies have found a negative relationship.

We examine this relation as early as 1984 whereby Grilishes and Mairesse (1984) for a sample of 133 large U.S. firms for the period 1966 to 1977 analyzed the relationship between output, employment, and physical and R&D capital. They found a strong positive relationship between firm productivity and the level of its R&D investments. Johnson and Pazderka (1993) for a sample of Canadian companies, listed on the Toronto stock exchange, showed a positive, statistically significant relationship between the R&D expenditures and the market value of the firms. These results implied that "investment in R&D is a rational allocation of resources".

Mairesse and Hall (1996) compared the contribution of R&D expenses to the firm's productivity for the French and the US manufacturing companies in the 1980s and found that the contribution of R&D expenses to sales productivity growth had declined during the 1980s and this decline was higher for the US firms than for the French ones. Lev and Sougiannis (1996) for USA companies found a positive relation between the R&D capital and the stock returns of the underlying companies. This implied that either R&D-intensive firms were systematically mispriced by the market, or investors required a compensation for the extra-market risk that is associated with R&D investments. Later, Ho, Keh, and Ong (2005) for a sample of USA companies examined the relationship between firm performance and the intensity of their investments in R&D and advertising expenses for 40 years from 1962 to 2001. They found that investment in R&D had a positive effect on the one-year stock market performance for the manufacturing companies but not for the non-manufacturing ones. Lin and Chen (2005) for 78 US technology companies found that large firms have more advantages for technological innovation due to better exploitation of synergy effects of their technology portfolios, compared to smaller companies. Warusawitharana (2015) for a sample of non-financial USA companies found that the R&D expenditures had an economically and statistically significant impact on profits and firm value. VanderPal (2015) investigated the R&D impact on the company value for a sample of 103 US listed companies for the period 1979 to 2013. His results indicated a positive relationship between R&D expenses and equity, revenue and the ROA and a negative relationship with the ROE.

Abrahams and Sidhu (1998) for a sample of Australian companies indicated that capitalized R&D on the balance sheets had a significant positive information effect on the firms' value (stock prices).

In Asia, Sher and Yang (2005) for the Taiwanese integrated circuit (IC) industry found that higher R&D intensity and higher R&D manpower were positively related to firm performance as measured by the return on assets ratio (ROA). Zhu and Huang (2012) for the Chinese listed information technology (IT) companies found that R&D expenditures had a positive effect on the firm performance but it was lagged for one year. Ghaffar and Khan (2014) for the pharmaceutical industry companies of Pakistan found the relationship between research and development and firm performance to be positive. Jaisinghani (2016) for a sample of Indian companies in the pharmaceutical sector for the period 2005-2014 found that there existed a positive relationship between R&D intensity and performance, with performance being proxied by two measures of profitability, the ratios return on assets and return on sales. Wang et al. (2017) found that R&D investments create additional value for the underlying companies when there are interactions with IT investments in several industry sectors for China. Chen et al. (2019) examined this issue for Taiwanese semiconductor industry companies and found that R&D investments had a positive and one-year lagged effect on the companies' performance. Firm size was also significant in af-

fecting positively the business performance. More recently, Tung et al. (2021) for the listed companies of the developing economy of Vietnam, for the period 2010-2018 found that R&D expenditures/investments had positive effects on revenues, profits, the return on assets (ROA) and the return on equity (ROE). In addition, their results suggested that the companies with high R&D investments outperform those with low R&D in terms of profit, revenue and ROA.

In Europe, Greenhalgh and Rogers (2006) found that companies that filed for patents in the European patent office had on average higher R&D expenditures and this led to higher company value compared to those that filed in the UK patent office. Harhoff (2006) found that since the early 1980s patent rights as a type of innovation have become important resources for companies to build and maintain their value. Beld (2014) for a sample of publicly listed firms in Belgium, Luxembourg and the Netherlands found that the return on assets (ROA) was positively affected by the research and development (R&D) expenditures. Regarding the European markets Almeida et al. (2019) based on the EU Industrial R&D Investment Scoreboard, for the period 2003–2013 found that R&D investments influenced positively the firm's performance measured by sales and operating profit. Dimitropoulos (2020) examined the impact of intangibles on financial performance by examining the impact of the R&D investments on the profitability of Greek firms especially during the sovereign debt crisis for the period 2003-2016. He used panel regression analysis and the results indicated that R&D investments and expenses affected negatively the sample firms' profitability before the crisis, while during the crisis from 2011 to 2016 those companies that managed to sustain or increase their R&D investments improved their profitability. This finding is important because it indicated that during a period of scarcity of external financing and financial uncertainty, R&D investments could be a vital tool for the sustainability and growth of the companies.

Regarding the market of Turkey, Bouaziz (2016) for the BIST technology index companies in the Istanbul stock exchange examined the impact of R&D expenses on firm performance. for the period 2010-2014. The author employed pooled regression model and cross-sectional time series analysis technique and concluded that there is no relation between R&D expenses and firm performance. Yildirim (2020) for a sample of 138 companies listed on the Istanbul Stock Exchange during the period 2007 to 2018 examined the impact of R&D investments on firm value in different groups of firms. These groups were classified according to the R&D investment level, the company size and risk. His results revealed that R&D investments had a positive effect on firm value. However, the effect of R&D investments was significant and positive in the group of companies with a high R&D investment level, while for the other group of companies with a low level of R&D investments there was no meaningful relationship. In terms of size, the results showed that the impact of R&D investments on firm value for small firms was positive, while it was negative for large firms. In terms of riskiness, for the subsample of low-risk companies the R&D investments

affected the firm value positively, while for the high-risk companies there was no significant effect on the firm value.

Regarding the market of Romania, Diaconu (2018) showed that the main weaknesses in business innovation in Romania over time consisted of the extremely low share of innovative firms, a low level of business innovation expenditures and a high volatility of innovation performance based on creative effort resulted from R&D activities still concentrated in a few industries.

Fábio de Oliveira and Ferreira da Silva (2018) investigated whether internal and external R&D expenses had any impact on innovation development and whether the latter had any effect on the financial performance of a sample of European manufacturing firms. Among the selected countries were Bulgaria and Romania, forming one group out of the seven examined. Their results indicated that R&D that affected innovation performance did not influence financial performance for the Balkan countries of Bulgaria and Romania, while it had a positive impact on financial performance for Portugal and Spain (group 3) as well as Estonia and Lithuania (group 4).

Regarding the market of Bulgaria, Georgieva (2019) indicated that Bulgarian innovative enterprises if they apply the national accounting standards do not publish any R&D information. She revealed that Bulgarian enterprises do not develop high technological innovations but focus on developing mainly incremental products and processes. So, under the current global technological development, the fact of not disclosing the mandatory R&D information by innovative enterprises may question the accuracy of the data reported in the financial statements. This cannot be interpreted as a good and positive sign by investors and could lead to bigger lack of investments, which as noted, is an essential part of the budgets for research and development of the Bulgarian companies.

Therefore, since there are few studies for Bulgaria and Romania regarding this issue and a bit more for Turkey, this study that examines all these three markets will shed more light on the pertinent subject.

Data, testable hypotheses and methodology

Data and Variables

The focus of this study are the firms in the three Black Sea countries that belong to the area of Balkans too. Turkey is a growing emerging economy, while Bulgaria and Romania are ex-communistic economies or transition economies whereby are moderate or modest innovators in Europe and globally.

Our sample is consisted of all the companies listed in the stock markets of Turkey, the Borsa Istanbul in Istanbul; Bulgaria, the Bulgarian Stock Exchange in Sofia; and

Romania, the Bucharest Stock Exchange (BVB) in Bucharest. The initial sample consisted of 398 firms in Turkey, 261 firms in Bulgaria and 354 firms in Romania. The initial total sample consisted of 1013 companies. All the data were collected from the Thomson EIKON database. The time period examined is from 2000 to 2020. The year 2020 is the year of the global health crisis of the covid-19 pandemic and it has caused a severe negative economic impact to all the markets and companies around the world. Therefore, we tested our hypotheses three times. One for the whole time period. The second time, we excluded the year 2020, in order to avoid contamination of our results by this crisis. Hence, we examined the same hypotheses for two subperiods: the first period 2000 to 2019 (before the COVID-19 crisis) and for the year 2020 (the COVID-19 year). We did not have the necessary financial statement information for all the years for all the companies, so some cases/companies with missing data were excluded. The final sample consists of 377 Turkish firms, 221 Bulgarian firms and 147 Romanian firms. Hence, the final sample in total was composed of 746 firms.

We used the market value of equity as a proxy for firm value based on Warusawitharana (2015); the R&D expenses following VanderPal (2015) and Dimitropoulos (2020) and the ratio of R&D divided by sales for size adjustment according to Ho et al. (2005) and Jaisinghani (2016) as the first proxy for firm innovation investments; the intangible assets and the ratio of intangible assets divided by total assets as the second proxy for firm innovation investments according to Bolek and Lyroudi (2017); the return on assets (ROA) and the return on equity (ROE) as the two proxies for company performance according to VanderPal (2015). Finally, as control variable we used the company size as measured by the logarithm of total assets, following Richard et al. (1991) and Kumar and Warne (2009), since size is commonly used in corporate finance empirical research testing for a "size effect" [Rajan and Zingales (1995); Frank and Goyal (2003); Moeller, Schlingemann, and Stulz (2004); Klapper and Love (2004); Shubita and Alsawalhah (2012); Vijh and Yang (2013); Dang et al. (2013); Gabaix, Landier, and Sauvagnat (2014)]. Hence, we also tried to test for a "size effect". Based on Asimakopoulos et al. (2009) and Lee (2009) and others, larger companies perform better because they have access to more financial resources, lower financial costs and better bargains and are able to take advantage of scale economies.

Regarding the profitability ratios that measure the company performance we follow the determination of Jose et al. (1996), since we have companies from different countries and different taxation systems. Therefore, instead of earnings after taxes in the numerator for both ratios as is the classical approach, we use for the ROA the ratio of earnings before interest and taxes (EBIT) to total assets and for the ROE we use the ratio of earnings before taxes (EBT) to equity capital.

Testable Hypotheses

Based on the relevant literature we discussed above, in order to achieve our objectives, we test the following hypotheses. Specifically:

Some researchers highlight that R&D expenses or investments enhance corporate value: Sougiannis (1994), Abrahams and Sidhu (1998), Toivanen et al. (2002), Greenhalgh and Rogers (2006), Pindado et al. (2010), Duqi et al. (2011) and Wang et al. (2017). Hence, we have formulated our first testable hypothesis:

H1: *The R&D expenditures and the intangible assets as proxies of innovation in a company are expected to increase the value of the underlying company.*

Based on Sher and Yang (2005), Beld (2014), Warusawitharana (2015), VanderPal (2015) and Jaisinghani (2016) which found that R&D expenses were positively related to firm performance as measured by the return on assets (ROA), we have formulated our second testable hypothesis:

H2: *The R&D expenditures and the intangible assets as proxies of innovation in a company are expected to increase the performance of the underlying company as measured by the ROA and ROE indicators.*

Lin and Chen (2005), for the US technology companies found a size effect, since large firms had more advantages for technological innovation compared to smaller firms. Pindado et al. (2010) reported a positive relationship between size and the market response to R&D investments. Schimke and Brenner (2014) for 1000 European companies found that the positive relationship of R&D activities on turnover growth depended strongly on firm size and industry sector. The same result was found by Chen et al. (2019) for Taiwanese semiconductor companies, since the larger the company, the greater is the exposure to R&D and the more innovative products and services can be produced. This can lead to gaining more market share and more firm growth. In this aspect regarding innovation, the variable of size should matter. Hence, based on these studies we have formulated our third testable hypothesis:

H3: *The size of a company is expected to affect positively the innovation effect (from R&D expenses and from Intangible assets) on the firm value and on the company performance.*

Fábio de Oliveira and Ferreira da Silva (2018) investigated whether internal and external R&D had any impact on innovation development and whether the latter had any the effect on the financial performance of a sample of European manufacturing firms and found that the impact of innovation on financial performance was different for different groups of European companies. Banerjee and Gupta (2021) for 42 countries and the period 1981–2013, examined the extent that firm, industry and country-level factors could explain firm-level R&D expenditures and found that firm

and industry-level determinants had higher explanatory power than country-level determinants. Thus, since the country factor in some cases is significant and in some other is not significant in the R&D relation to performance, it is interesting to investigate this for our sample companies and therefore, we formed our fourth hypothesis:

H4: *The country of a company is expected to affect significantly the innovation effect (from R&D expenses and from Intangible assets) on the firm value and on the company performance.*

Methodology

In order to investigate our testable hypotheses we apply correlation analysis with the Pearson correlation coefficient and regression analysis, using the following models for all the years together cross-sectionally:

$$\textbf{Value of firm}_{it} = a_1 + b_1\,\textbf{RD}_{it} + b_2\,\textbf{Size}_{it} + b_3\,\textbf{Country}_{it} + \textbf{e}_{it} \quad (1)$$

$$\textbf{Value of firm}_{it} = a_1 + \gamma_1\,\textbf{Intangibles}_{it} + \gamma_2\,\textbf{Size}_{it}\ \gamma_3\,\textbf{Country}_{it} + \textbf{e}_{it} \quad (2)$$

$$\textbf{Performance of firm}_{it} = a_1 + b_1\textbf{RD}_{it} + b_2\,\textbf{Size}_{it} + b_3\,\textbf{Country}_{it}\ \textbf{e}_{it} \quad (3)$$

$$\textbf{Performance of firm}_{it} = a_1 + \gamma_1\textbf{Intangibles}_{it} + \gamma_2\,\textbf{Size}_{t} + \gamma_3\,\textbf{Country}_{it}\ \textbf{e}_{it} \quad (4)$$

The models 3 and 4 that examine the effect of the explanatory variables on the company's performance are run twice, one whereby the performance is proxied by the return on assets, (ROA) and the other whereby the performance is proxied by the return on equity (ROE).

These four models are run three times for three different time periods as we have specified in the above paragraphs.

Empirical results

Table 1 presents the descriptive statistics of our variables for the whole examined period. Table 2 depicts the Pearson correlation coefficients between our selected variables for the whole examined period.

Table 1: Descriptive Statistics (for the whole period)

	Minimum	Maximum	Mean		Std. Deviation
			Statistic	Std. Error	Statistic
MV	,000000	235672499999,999	896407541,910	44084213,406	4814876092,99
R&D	-1578460	615484000	10721942,99	844820,914	37210501,340
RDS	-,03	,63	,0129	,00094	,04142
Intangibles	-54438000	27675815000	134707120,52	13123528,235	1088145477,00
INTANGTA	-7,26	166,61	,1267	,02570	2,09914
ROA	-411,81	3243,65	1,6549	,36067	38,57780
ROE	109,00	212,55	,0528	,02856	3,11841
Size	5,94	26,75	17,5437	0,02314	2,48845

Based on the Pearson correlation coefficients in Table 2, the R&D and the Intangibles variables are positively correlated to the market value. Neither the R&D nor the Intangibles are correlated to the return on assets (ROA) and the return on equity (ROE). On the other hand, the variables of size and country are significantly related to the R&D expenses, the market value of the company, the intangible assets and the ROA. For more in depth analysis we perform regression analysis to see the explanatory power of the independent variables and test our hypotheses.

Table 2: Pearson Correlation Coefficients (for the whole period)

	MV	R & D	RDS	Intangibles	INTANGA	ROA	ROE	country	Size
MV	1	,550**	-,044	,265**	,011	-,005	,006	,081**	,283**
		,000	,051	,000	,355	,576	,513	,000	,000
R&D	,550**	1	-,004	,306**	-,006	-,010	,017	-,389**	,399**
	,000		,869	,000	,844	,675	,465	,000	,000
RDS	-,044	-,004	1	-,045	,386**	,027	,009	,024	-,297**
	,051	,869		,150	,000	,234	,697	,288	,000
Intangibles	,265**	,306**	-,045	1	,060**	-,003	,003	,119**	,244**
	,000	,000	,150		,000	,823	,778	,000	,000
INTANGA	,011	-,006	,386**	,060**	1	,013	-,001	,059**	-,044**
	,355	,844	,000	,000		,291	,966	,000	,000
ROA	-,005	-,010	,027	-,003	,013	1	,005	,039**	-,112**
	,576	,675	,234	,823	,291		,569	,000	,000
ROE	,006	,017	,009	,003	-,001	,005	1	,022*	,022*
	,513	,465	,697	,778	,966	,569		,015	,018
count	,081**	-,389**	,024	,119**	,059**	,039**	,022*	1	,170**
	,000	,000	,288	,000	,000	,000	,015		,000
Size	,283**	,399**	-,297**	,244**	-,044**	-,112**	,022*	,170**	1
	,000	,000	,000	,000	,000	,000	,018	,000	

Source: Authors' results based on the statistical analysis. **. Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

Effect of Innovation (by R&D and Intangibles) on Firm Value

We reported in Table 3 only the empirical results of the OLS regression analyses of those models that had the best explanatory power, regarding the influence of the variable R&D expenses in two forms, as is (R&D) and as a ratio of R&D to sales (RDS) and the influence of intangible assets, along with the other explanatory variables (size) and (country) on the company's market value (MV). We checked for autocorrelation and in all reported models we have positive autocorrelation since the Durbin and Watson (DW) statistic is less than 2.

Regarding the independent variable R&D expenses for the whole examined period, the results in Table 3, model 1 indicate that the coefficient of the explanatory variable R&D is statistically significant and positive. This implies that the R&D expenditures affect significantly and positively the market value of the sample firms. This result is consistent with our first hypothesis and the studies of Johnson and Pazderka (1993), Abrahams and Sidhu (1998), Ho, Keh and Ong (2005), Harhoff (2006) and VanderPal (2015). Model 2 depicts the effect of the R&D expenses to sales ratio (RDS) on the firm value and is similar to model 1. However, the coefficient of the variable for R&D as explanatory variable versus the R&D ratio, (RDS) has stronger significance (t-value), while on the model 2 the Size is the best explanatory variable.

Regarding the independent variable intangible assets for the whole examined period, the results in Table 3, model 3 indicate that the coefficient of the explanatory variable intangible assets is statistically significant and positive. Similar results can be seen in model 4 where we have the ratio of intangible assets to sales as proxy for innovation. This implies that intangible assets affect significantly and positively the market value of the sample firms supporting our first hypothesis. The control variable size is significant and positively related to the market value of the company in any of the 4 models, supporting our third hypothesis and consistent to Lin and Chen (2005). The implication of this result is that large companies have more advantages for technological innovation, since they have better access to more sources of financing to support these investments. More innovation in products and services can lead the underlying company to better competitive advantages and more market share hence, more sales, more revenues and higher growth potential. All these lead to higher market value.

Regarding the third explanatory variable, (Country) our results in models 1 and 2 support our fourth hypothesis in the sense that the variable (Country) affects significantly the effect of R&D on company value. However, this effect is positive in the case of R&D expenses and negative in the case of the ratio R&D to sales (RDS). Regarding the variable Intangible assets (model 3) and the ratio of intangibles to total assets (model 4), as proxy variables for innovation, we observe that the variable (Country) is not significant statistically, rejecting our fourth hypothesis. So, we can conclude that since we did not have many data regarding the variable R&D expenses in Bulgar-

ia, because they are not obliged to report them, we cannot rely on the models 1 and 2 that use this variable for innovation to make any inferences for the influence of the country factor to the impact of innovation on the firm value. Since we had more data for the variable Intangible assets, for all three countries, the results of models 3 and 4 are more reliable regarding this control variable. From these latter models, 3 and 4 we can infer that for the three Balkan and Black Sea countries the country factor did not have any influence on the impact of innovation to the firm value, rejecting our fourth hypothesis.

Table 3: Regression Analysis for Innovation Effect on Market Value for the whole period 2000-2020.

Models. Dependent: **MV** Independent Variables	**Beta coef.**	**t-test**	**Sign**	**R^2**	**D-W**
1. Constant	19343422913.83			0.428	0.616
R&D	52.896*	21.163	0.000		
Size	770666052.054*	20.550	0.000		
Country	1996782802.055*	3.203	0.001		
2. Constant	-1.349E+10			0.309	0.535
RDS	1904700327*	6.243	0.000		
Size	1110297212*	27.219	0.000		
Country	-1949652142	-2.997	0.003		
3. Constant	-9734552498			0.157	0.494
Intangible Assets	1.051*	20.740	0.000		
Size	583608156.8*	21.759	0.000		
Country	-24928198.9	-0.369	0.712		
4. Constant	-1.205E+10			0.103	0.471
INTANGA	56973047.95**	2.138	0.033		
Size	710202026.6*	26.270	0.000		
Country	39291715.38	0.563	0.573		

Source: Authors' results based on the statistical analysis. * Statistical significance at the 1% level. ** Statistical significance at the 5% level. *** Statistical significance at the 10% level.

Table 3a depicts the results regarding the influence of the variable R&D expenses in two forms, as is (R&D) and as a ratio of R&D to sales (RDS) and the influence of intangible assets, along with the other explanatory variables (size) and (country) on the company's market value (MV) for the period before the Covid-19 pandemic crisis. We checked for autocorrelation and in all reported models we have positive autocorrelation since the Durbin and Watson (DW) statistic is less than 2.

Regarding the independent variable R&D expenses for the pre-Covid-19 period, the results in Table 3a, models 1 and 2 indicate that the coefficients of the explanatory variables R&D and RDS respectively are statistically significant and positive with the former being stronger in its influence. This implies that the R&D expenditures affect significantly and positively the market value of the sample firms in the pre-covid-19 period. This result is consistent with our first hypothesis and the studies of Johnson and Pazderka (1993), Abrahams and Sidhu (1998), Ho, Keh and Ong (2005), Harhoff (2006) and VanderPal (2015).

Regarding the independent variable intangible assets for this subperiod, the results in Table 3a, model 3 indicate that the coefficient of the explanatory variable intangible assets is statistically significant and positive. Similar results can be seen in model 4 where we have the ratio of intangible assets to sales as proxy for innovation. This implies that intangible assets affect significantly and positively the market value of the sub-sample firms supporting our first hypothesis. The control variable size is significant and positively related to the market value of the company in all 4 models, supporting our third hypothesis and consistent to Lin and Chen (2005). The implication of this result has been discussed for the whole sample and is the same.

Regarding the third explanatory variable, (Country) our results in model 1 depict a non significant relation, while in model 2the results support our fourth hypothesis in the sense that the variable (Country) affects significantly and negatively the effect of R&D on company value. Regarding the variable Intangible assets (model 3) we observe that the variable (Country) is negative and significant statistically, supporting our fourth hypothesis. However, the ratio of intangibles to total assets (model 4), as proxy variable for innovation, has no statistically significant relation to the control variable (Country). So, we can conclude that the country factor for the three Balkan and Black Sea countries influences negatively the impact of innovation on the firm value.

Table 3a: Regression Analysis for Innovation Effect on Market Value before Covid-19 (2000-2019).

Models. Dependent: **MV** Independent Variables	**Beta coef.**	**t-test**	**Sign**	**R^2**	**D-W**
1. Constant	-1.430E+10			0.407	2.007
R&D	44.155*	18.215	0.000		
Size	678124252.8*	19.890	0.000		
Country	866676265.6	1.469	0.142		
2. Constant	-7766365804			0.312	2.041
RDS	1586147220*	5.994	0.000		
Size	941309842.5*	25.716	0.000		
Country	-2857580175	-4.827	0.000		
3. Constant	-8432150584			0.146	1.949
Intangible Assets	1.149*	20.529	0.000		
Size	520124926.9*	19.686	0.000		
Country	-133259436**	-2.018	0.044		
4. Constant	-1.067E+10			0.146	1.934
INTANGA	53741617.9**	2.114	0.035		
Size	642292161.7*	24.073	0.000		
Country	-64883268	-0.950	0.342		

Source: Authors' results based on the statistical analysis. * Statistical significance at the 1% level. ** Statistical significance at the 5% level. *** Statistical significance at the 10% level.

Table 3b shows the results regarding the influence of the variable R&D expenses in two forms, as is (R&D) and as a ratio of R&D to sales (RDS) and the influence of intangible assets, along with the other explanatory variables (size) and (country) on the company's market value (MV) for the period of the year 2020 with the Covid-19 pandemic crisis and the severe hit to the global economy. We checked for autocorrelation and in most reported models we have no autocorrelation or a bit of positive autocorrelation since the Durbin and Watson (DW) statistic is close to 2.

Regarding the independent variable R&D expenses for the year 2020, the Covid-19 period, the results in Table 3b, models 1 and 2 indicate that the coefficients of the explanatory variables R&D and RDS respectively are statistically significant and positive with the former being stronger in its influence. This implies that the R&D expenditures affect significantly and positively the market value of the sample firms during the covid-19 period. This result is consistent with the results in the previous time periods. In conclusion, regardless of the time period and the crisis of the pandemic, the R&D expenditures affect significantly and positively the market value of the companies in the Romanian and Turkish markets and in some Bulgarian companies.

Regarding the independent variable intangible assets for this crucial year, the results in Table 3b, model 3 indicate that the coefficient of the explanatory variable intangible assets is statistically significant and positive. A positive relation can be seen in model 4 where we have the ratio of intangible assets to sales as proxy for innovation, but it is not significant. This implies that intangible assets affect significantly and positively the market value of the sample firms supporting our first hypothesis. The control variable size is significant and positively related to the market value of the company in all 4 models, supporting our third hypothesis and consistent to Lin and Chen (2005).

Regarding the third explanatory variable, (Country) our results in all 4 models support our fourth hypothesis in the sense that the variable (Country) affects significantly the effect of innovation on company value and positively, supporting our fourth hypothesis. This outcome for the year of the Covid-19 crisis is different from the previous years, whereby, for the three Balkan and Black Sea countries the country factor did not have any influence on the impact of innovation to the firm value, rejecting our fourth hypothesis.

Table 3b: Regression Analysis for Innovation Effect on Market Value during Covid-19 (year 2000).

Models. Dependent: **MV** Independent Variables	**Beta coef.**	**t-test**	**Sign**	**R^2**	**D-W**
1. Constant	-5.767E+10			0.622	1.918
R&D	75.048*	6.959	0.000		
Size	226119561*	7.572	0.000		
Country	5336837071***	1.711	0.090		
2. Constant	-8.297E+10			0.484	1.673
RDS	1.239E+10**	1.985	0.049		
Size	3389985301*	10.442	0.000		
Country	6641961245***	1.825	0.071		
3. Constant	-2.501E+10			0.266	1.605
Intangible Assets	0.590*	3.925	0.000		
Size	1262397797*	7.562	0.000		
Country	1411998621*	3.241	0.001		
4. Constant	-2.849E+10			0.238	1.590
INTANGA	277164937	0.545	0.586		
Size	1452985334*	8.830	0.000		
Country	1399098469*	3.095	0.002		

Source: Authors' results based on the statistical analysis. * Statistical significance at the 1% level. ** Statistical significance at the 5% level. *** Statistical significance at the 10% level.

Effect of Innovation (by R&D and Intangibles) on Firm Performance

Tables 4 and 5 refer to the period 2000-2020 and depict only the empirical results of the OLS regression analyses of those models that had the best explanatory power, regarding the influence of the variable R&D expenses in two forms, as is (R&D) and as a ratio of R&D to sales (RDS) and the influence of intangible assets, along with the explanatory variables (size) and (country) on the company's performance, measured by the return on assets (ROA) and the return on equity (ROE) respectively. We checked for autocorrelation and in most reported models we have no autocorrelation since the Durbin and Watson (DW) statistic is close or equal to 2.

Regarding the independent variable R&D expenses for the whole examined period, the results in Table 4, model 1 indicate that the coefficient of the explanatory variable R&D is statistically and significantly positive. In model 2 where we have the ratio of R&D expenses to sales as proxy for innovation the coefficient of this explanatory variable is negative but not statistically significant. This implies that the R&D expenditures affect significantly and positively the performance as measured by the profitability ratio ROA of the sample firms. This result is consistent with our second hypothesis and the studies of Sher and Yang (2005), Ozdemir et al. (2012), Beld (2014), VanderPal (2015), Warusawitharana (2015) and Jaisinghani (2016).

Regarding the independent variable intangible assets for the whole examined period, the results in Table 4, model 3 indicate that the coefficient of the explanatory variable intangible assets is statistically and significantly positive. However, in model 4, the results indicate that the coefficient of the explanatory variable intangible assets to sales ratio is negative but not statistically significant.

This implies that the intangible assets affect significantly and positively the performance as measured by the profitability ratio ROA of the sample firms, consistent with our second hypothesis.

The control variable (size) is significant and negatively related to the performance of the company as measured by the return on assets ratio (ROA) in any of the 4 models, in contrast to the third hypothesis. The control variable (Country) is significant only in models 3 and 4 and positive. As we stated before while analyzing the results in Table 3, the results in these two models are more reliable since we have data from all three countries. This result implies that the impact on the firm profitability as measured by the ROA, of innovation as measured by the intangible assets, is affected by the different countries and is consistent to our fourth hypothesis.

Table 4: Regression Analysis for Innovation Effect on Performance-ROA

Models. Dependent: **ROA** Independent Variables	**Beta coef.**	**t-test**	**Sign**	**R^2**	**D-W**
1. Constant	57.380			0.020	1.969
R&D	4.255E-8***	1.747	0.081		
Size	-2.286*	-6.259	0.000		
Country	-4.498	-0.741	0.459		
2. Constant	66.076			0.019	1.970
RDS	-1,777	-0.656	0.512		
Size	-2.147*	5.932	0.000		
Country	-8.107	-1.404	0.160		
3. Constant	5.345			0.039	1.718
Intangible Assets	9.550E-11**	2.095	0.036		
Size	-0.356*	-14.211	0.000		
Country	0.735	11.975	0.000		
4. Constant	5.133			0.039	1.718
INTANGA	-0.007	-0.317	0.751		
Size	-0.344*	-14.094	0.000		
Country	0.742	12.066	0.000		

Source: Authors' results based on the statistical analysis. * Statistical significance at the 1% level. ** Statistical significance at the 5% level. *** Statistical significance at the 10% level.

Tables 4a and 4b refer to the before Covid-19 period 2000-2019 and the Covid-19 period, year 2020, respectively and depict only the empirical results of the OLS regression analyses of those models that had the best explanatory power, regarding the influence of the variable R&D expenses in two forms, as is (R&D) and as a ratio of R&D to sales (RDS) and the influence of intangible assets, along with the explanatory variables (size) and (country) on the company's performance, measured by the return on assets (ROA) and the return on equity (ROE) respectively. We checked for autocorrelation and in most reported models we have no autocorrelation since the Durbin and Watson (DW) statistic is close or equal to 2.

Regarding the independent variable R&D expenses for the pre-Covid-19 period, the results in Table 4a, models 1 and 2 indicate that the coefficients of the explanatory variable R&D and the ratio of R&D expenses to sales respectively, as proxies for innovation are not statistically significant. This implies that the R&D expenditures do not affect the performance of the sample firms as measured by the profitability ratio ROA. This result is inconsistent with our second hypothesis and the studies of Sher and Yang (2005), Ozdemir et al. (2012), Beld (2014), VanderPal (2015), Warusawitharana (2015) and Jaisinghani (2016).

Regarding the independent variable intangible assets for the whole examined period, the results in Table 4a, model 3 indicate that the coefficient of the explanatory variable intangible assets is statistically and significantly negative. However, in model 4, the results indicate that the coefficient of the explanatory variable intangible assets to sales ratio is negative but not statistically significant.

This implies that the intangible assets affect significantly and negatively the performance as measured by the profitability ratio ROA of the sample firms, in contrast to our second hypothesis for the pre-Covide-19 period. This result differs from the equivalent one of the whole time period 2000-2020.

The control variable (size) is significant and negatively related to the performance of the company as measured by the return on assets for all the 4 models, in contrast to the third hypothesis. The control variable (Country) is significant only in models 3 and 4 and positive. As we stated before while analyzing the results in Table 4, the results in these two models are more reliable since we have data from all three countries. This result implies that the impact on the firm profitability as measured by the ROA, of innovation as measured by the intangible assets, is affected by the different countries and is consistent to our fourth hypothesis.

Table 4a: Regression Analysis for Innovation Effect on Performance-ROA for the period 2000-2019, pre-Covid-19 period.

Models. Dependent: **ROA** Independent Variables	**Beta coef.**	**t-test**	**Sign**	**R^2**	**D-W**
1. Constant	59.973			0.021	1.994
R&D	4.523E-8***	1.633	0.103		
Size	-2.412*	-6.192	0.000		
Country	-4.620	-0.685	0.493		
2. Constant	71.337			0.020	1.996
RDS	-2,032	-0.723	0.470		
Size	-2.297*	-5.913	0.000		
Country	-8.960	-1.426	0.154		
3. Constant	5.021			0.036	1.984
Intangible Assets	-9.825E-11***	1.866	0.062		
Size	-0.335*	-12.953	0.000		
Country	0.687*	10.962	0.000		
4. Constant	4.827			0.035	1.985
INTANGA	-0.006	-0.252	0.801		
Size	-0.324*	-12.853	0.000		
Country	0.694*	11.053	0.000		

Source: Authors' results based on the statistical analysis. * Statistical significance at the 1% level. ** Statistical significance at the 5% level. *** Statistical significance at the 10% level.

Table 4b depicts the results for the Covid-19 period. Models 1 and 2 indicate that the coefficients of the explanatory variable R&D and the ratio of R&D expenses to sales respectively, as proxies for innovation are statistically significant and positive. This implies that the R&D expenditures affect the performance of the sample firms as measured by the profitability ratio ROA. This result is consistent with our second hypothesis and the studies of Sher and Yang (2005), Ozdemir et al. (2012), Beld (2014), VanderPal (2015), Warusawitharana (2015) and Jaisinghani (2016).

The independent variables intangible assets and intangible assets to sales ratio for the Covid-19 period, in Table 4b, models 3 and 4 respectively, do not influence corporate performance as measured by the ROA, in contrast to the results for the whole period that the impact was positive and the subperiod without Covid-19, whereby the impact was negative. This implies that the intangible assets do not affect the performance as measured by the profitability ratio ROA of the sample firms, in contrast to our second hypothesis, for the Covid-19 period.

The control variable (size) is significant and negatively related to the performance of the company as measured by the return on assets (ROA) for all the 4 models, in contrast to the third hypothesis. The control variable (Country) is significant only in models 3 and 4 and positive. As we stated before while analyzing the results in Table 4, the results in these two models are more reliable since we have data from all three countries. This result implies that the impact on the firm profitability as measured by the ROA, of innovation as measured by the intangible assets, is affected by the different countries and is consistent to our fourth hypothesis.

Table 4b: Regression Analysis for Innovation Effect on Performance-ROA for the period 2020, the covid-19 period.

Models. Dependent: **ROA** Independent Variables	**Beta coef.**	**t-test**	**Sign**	**R^2**	**D-W**
1. Constant	3.092			0.165	2.029
R&D	3.663E-9*	3.223	0.002		
Size	-0.141*	-4.481	0.000		
Country	0.039	0.119	0.906		
2. Constant	0.836			0.339	1.935
RDS	3,330*	6.648	0.000		
Size	-0.045***	-1.731	0.086		
Country	0.140	0.479	0.633		
3. Constant	13.348			0.141	1.998
Intangible Assets	1.500E-10**	1.544	0.123		
Size	-0.844*	-7.613	0.000		
Country	1.553	5.470	0.000		
4. Constant	12.550			0.137	2.015
INTANGA	-0.184	-0.570	0.569		
Size	-0.802*	-7.478	0.000		
Country	1.589	5.477	0.000		

Source: Authors' results based on the statistical analysis. * Statistical significance at the 1% level. ** Statistical significance at the 5% level. *** Statistical significance at the 10% level.

Table 5a presents the impact of innovation on the profitability ratio return on equity (ROE) for the pre-Covid-19 period. Neither model of the four analyzed had statistically significant coefficients of the explanatory variables representing innovation, R&D expenses and Intangible assets. This result is inconsistent with our second hypothesis and the studies of Sher and Yang (2005), Ozdemir et al. (2012), Beld (2014), VanderPal (2015), Warusawitharana (2015) and Jaisinghani (2016). This result is inconsistent to that one for the whole time period examined whereby the innovation had a positive impact on the firm performance.

The control variable (size) is positive but not significant and for all four models. The control variable (Country) is not significant in all four models. This result implies that the impact on the firm profitability as measured by the ROE, of innovation as measured by the R&D is not affected by the company size nor by the different countries. Thus, our results are not consistent to our third hypothesis and our fourth hypotheses for the period 2000-2019.

Table 5a: Regression Analysis for Innovation Effect on Performance-ROE for the period 2000-2019, pre-Covid-19 period.

Models. Dependent: **ROE** Independent Variables	**Beta coef.**	**t-test**	**Sign**	**R^2**	**D-W**
1. Constant	-0.482			0.001	2.355
R&D	7.910E-10	0.459	0.647		
Size	0.016	0.676	0.499		
Country	0.069	0.165	0.869		
2. Constant	-0.438			0.001	2.355
RDS	0.086	0.492	0.623		
Size	0.024	0.974	0.330		
Country	0.011	0.028	0.978		
3. Constant	-0.262			0.003	2.008
Intangible Assets	-3.802E-12	-0.117	0.907		
Size	0.013	0.863	0.388		
Country	0.042	1.102	0.271		
4. Constant	-0.254			0.003	2.008
INTANGA	-0.001	-0.082	0.935		
Size	0.013	0.851	0.395		
Country	0.042	1.100	0.272		

Source: Authors' results based on the statistical analysis. * Statistical significance at the 1% level. ** Statistical significance at the 5% level. *** Statistical significance at the 10% level.

Table 5b presents the impact of innovation on the profitability ratio return on equity (ROE) for the Covid-19 period. Neither model of the four analyzed had statistically significant coefficients of the explanatory variables representing innovation, R&D expenses and Intangible assets. This result is inconsistent with our second hypothesis and the studies of Sher and Yang (2005), Ozdemir et al. (2012), Beld (2014), VanderPal (2015), Warusawitharana (2015) and Jaisinghani (2016). This result is similar to that for the whole time period examined

The control variable (size) is significant and negative for models 1 and 2 only. The control variable (Country) is not significant in all four models. This result implies that the impact on the firm profitability as measured by the ROE, of innovation as measured by the R&D is affected by the company size but it is not affected by the different countries. Thus, our results are partially consistent to our third hypothesis but are not consistent to our fourth hypotheses.

Table 5b: Regression Analysis for Innovation Effect on Performance-ROE for the period 2000-2019, pre-Covid-19 period.

Models. Dependent: **ROE** Independent Variables	**Beta coef.**	**t-test**	**Sign**	**R^2**	**D-W**
1. Constant	10.092			0.065	1.969
R&D	5.251E-9	1.088	0.279		
Size	-0.381*	-2.853	0.005		
Country	-0.702	-0.503	0.616		
2. Constant	7.181			0.077	1.949
RDS	3.913	1.648	0.102		
Size	-0.257	-2.077	0.040		
Country	-0.569	-0.411	0.682		
3. Constant	0.418			0.003	2.039
Intangible Assets	1.007E-11	0.408	0.684		
Size	-0.026	-0.941	0.347		
Country	0.060	0.841	0.401		
4. Constant	0.352			0.003	2.041
INTANGA	0.019	0.236	0.813		
Size	-0.022	-0.830	0.407		
Country	0.057	0.788	0.431		

Source: Authors' results based on the statistical analysis. * Statistical significance at the 1% level. ** Statistical significance at the 5% level. *** Statistical significance at the 10% level.

Conclusions

This study focused on the firms in three Balkan countries that are also in the Black Sea region to explore the innovation effects on firm value and corporate performance. The paper found a positive relation between the innovative investments as proxied by the research and development expenses and the intangible assets with the firm's value. The results indicated a positive relation between the innovation as proxied by the research and development expenses and the intangible assets with the firm's performance as measured by the return on assets (ROA). However, regarding the company performance as measured by the ROE our results rejected our hypothesis since we found a negative relation between the innovation variables and this profitability ratio as performance variable. Regarding the existence of a "size effect" the firm size was found to affect positively the firm value and negatively the performance measured by the ROA. The control variable country was found to be significant only in the case of

the intangibles impact on the ROA. The Covid-19 crisis based on our results affected only the performance of the companies and not their value.

Future research could concentrate on the impact of innovation on the firm value and the firm performance and investigate whether there are any differences among the various industries regarding these issues, as the more recent literature suggests based on Vrontis and Christofi (2019) and Boiko (2021). The same hypotheses can also be examined for other developed and developing countries to get more insights for academicians, investors and policy makers about the significance of innovation in the company's survival and growth and the factors affecting it, since innovation is important for companies in terms of strategic, organizational, behavioral, knowledge, legal, economic and business perspectives.

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Funda H. Sezgin
Istanbul University-Cerrahpaşa, Turkey
E-mail: hfundasezgin@yahoo.com

Yilmaz Bayar
Bandirma Onyedi Eylul University, Turkey

THE IMPACT OF COVID-19 PANDEMIC ON STOCK MARKETS: EVIDENCE FROM BORSA ISTANBUL

Abstract: The ongoing COVID-19 pandemic has many negative economic implications for nearly all economies in the world. This study explored the effect of COVID-19 pandemic on stock markets in sample of Borsa Istanbul through Bayer and Hanck (2013) cointegration test. The vector error correction model and cointegration analyses disclosed a significant short and long run negative effects on Borsa Istanbul 100 index.

Key words: COVID-19 Pandemic, Stock Markets, Borsa Istanbul, Time Series Analysis

Introduction

The COVID-19 (2019 Novel Coronavirus) was firstly detected in China and swiftly spread to the rest of the world. The continuing COVID-19 pandemic has caused many socio-economic implications for all economic units in the world. The UNDP (United Nations Development Programme)(2020) expressed that 'The COVID-19 pandemic is far more than a health crisis: it is affecting societies and economies at their core. While the impact of the pandemic will vary from country to country, it will most likely increase poverty and inequalities at a global scale, making achievement of SDGs (sustainable development goals) even more urgent.' In this context, many scholars have also explored the aforementioned effects of COVID-19 pandemic at national and international levels (Josephson et al., 2020; Osterrieder et al., 2021)

In this study, we explored the influence of COVID-19 on stock markets, because most of the firms made the considerable losses due to the measures in combat with the pandemic and the uncertainty in financial markets at national and global level significantly raised in the financial markets. In this context, the researchers have generally disclosed that COVID-19 pandemic negatively affected the stock markets and raised the uncertainty and financial risk (e.g. see Uddin et al., 2021; Ashraf, 2020; Liu et al., 2020).

In the study, the effect of COVID-19 pandemic on stock markets in sample of Borsa Istanbul 100 index was analyzed for the period of March 13, 2020-April 30, 2021 with daily data through Bayer and Hanck (2013) cointegration analysis. In this context, the next section summarized the related literature and the data and method were

described. Section 4 conducted the empirical analysis and the study is over with the Conclusion.

Literature Review

The COVID-19 pandemic has caused many social and economic implications for the societies. In this context, a large number of scholars have explored the impact of COVID-19 pandemic on the stock market index, stock market returns, stock market volatility and spill-over effects among the stock markets for different countries and periods and have generally reached a negative effect of COVID-19 pandemic on the stock market index and returns and a positive effect of the pandemic on the stock market volatility (e.g. see Liu et al., 2020; Bahrini and Filfilan, 2020; Qing et al., 2020; Zhang et al., 2021)

In the relevant empirical literature, Bahrini and Filfilan (2020) explored the impact of COVID-19 pandemic on the stock markets of Gulf Cooperation Council economies over the duration of April 1, 2020-June 26, 2020 through regression analysis and disclosed that total and new COVID-19 confirmed deaths negatively affected the stock market indices in the sample. On the other side, Al-Awadhi et al. (2020) explored the effect of total confirmed COVID-19 cases and deaths on the Chinese stock market over the duration of January 10- March 16 2020 through regression analysis and discovered a negative effect of both COVID-19 indicators on the stock market returns.

Zhang et al. (2020) also explored the interaction between COVID-19 pandemic and stock market risks in top 10 infected countries and reached that the COVID-19 pandemic globally raised the financial risk and uncertainty. On the other side, Liu et al. (2020) explored the effect of the COVID-19 pandemic on the stock market index in 21 major affected countries over the duration of February 21, 2019- March18, 2020 through event study analysis and disclosed a negative impact of the COVID-19 on the stock market returns.

Ashraf (2020) explored the effect of COVID-19 confirmed cases and deaths on the stock market returns in 64 countries over the duration of January 22, 2020-April 17, 2020 and discovered a negative effect of confirmed cases on the stock market returns. Singh et al. (2020) explored the impact of COVID-19 pandemic on the stock markets in Group 20 economies through event study and disclosed a negative impact of COVID-19 pandemic on the stock markets. Qing et al. (2020) explored the effect of COVID-19 on stock markets in China, France, Germany, Italy, Japan, South Korea, Spain and the United States of America and discovered that COVID-19 had a short negative effect on stock markets and a two-way spill-over effects between Asian economies and American and European economies. Anh and Gan (2020) explored the impact of the COVID-19 daily confirmed cases on the stock returns in Vietnam over

the duration of January 30-May 30 2020 through regression analysis and discovered a negative effect of COVID-19 pandemic on the stock market returns.

Zhang et al. (2021) analyzed the effect of COVID-19 pandemic on the volatility in stock markets of China and advanced countries and revealed that stock returns volatility in advanced countries had no significant impact on China stock market, but China stock market had a significant effect on the stock market volatility in Netherlands, Sweden, Switzerland, and the United Kingdom. Bora and Basistha (2021) explored the effect of COVID-19 on stock prices in India and revealed that the pandemic raised the volatility in Indian stock market. Uddin et al. (2021) explored the effect of COVID-19 pandemic on stock market volatility in 34 emerging and developed economies and reached that the pandemic raised the volatility.

Data and Econometric Methodology

The influence of COVID-19 pandemic on Borsa Istanbul stock market during the period March 13, 2020-April 30, 2021 was analzyed by way of Bayer and Hanck (2013) cointegration analysis through statistical packages of Eviews 11.0 and STATA 16.0. The COVID-19 was proxied by COVID-19 cases and Borsa Istanbul was proxied by Borsa Istanbul 100 index. The COVID-19 data was provided from World Health Organization (2021) and data of Borsa Istanbul 100 index was provided from the database of Borsa Istanbul.

Table 1: Dataset Description

Variable	Definition	Data Source
BIST	Borsa Istanbul 100 index	Borsa Istanbul (2021)
COVID	Number of new Covid cases	World Health Organization (2021)

The trend and descriptive statistics of the variables over time was presented in Chart 1 & Table 2.

Chart 1: Charts of BIST and COVID

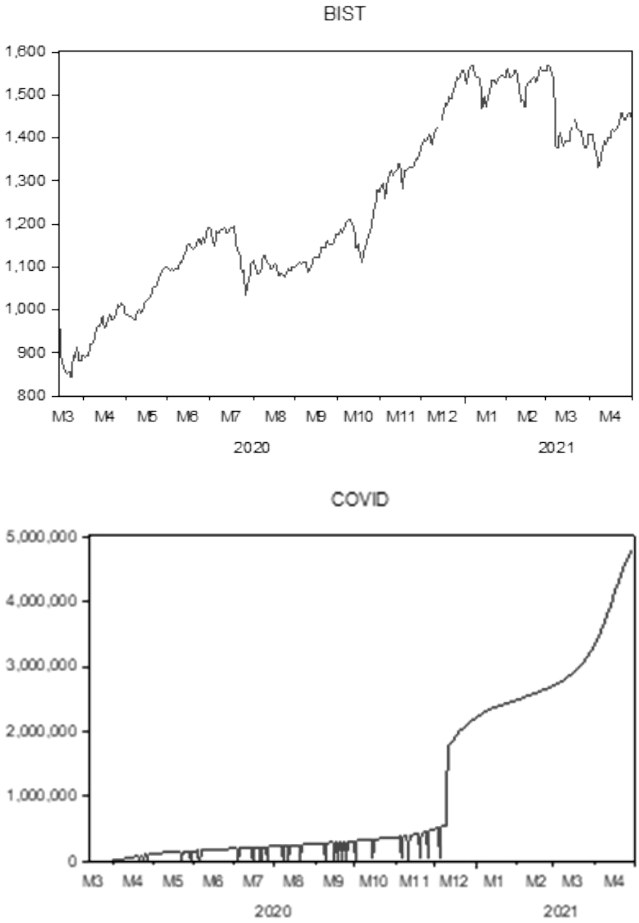

Table 2: Descriptive Statistics of BIST and COVID

Statistics	BIST	COVID
Mean	1241.390	1116714
Median	1187.493	316558
Maximum	1570.400	4820591
Minimum	842.4620	5.00
Std. Dev.	203.8398	1335251
Skewness	0.069141	1.028858
Kurtosis	1.821106	2.718753

In the econometric analysis, first the stationarity of the series was analyzed by ADF (Augmented Dickey-Fuller) unit root test of Dickey and Fuller (1981) PP (Phil-

lips-Perron) unit root test of Phillips and Perron (1988). Then the presence of cointegration relationship between two series was investigated by Bayer and Hanck (2013) cointegration test and the cointegration coefficients were estimated by way of FMOLS (Fully Modified Ordinary Least Squares) estimator. Lastly, the short-run interaction between two series was analyzed by vector error correction model.

Empirical Analysis

In the empirical analysis, the stationarity of the variables was firstly examined for both constant and constant+trend. The Hodrick–Prescott filter (Hodrick–Prescott decomposition) by Hodrick and Prescott (1980) in Eviews 10.0 software was used to eliminate the seasonality. The filter selects the components of trend and cyclical movement in a time series to minimize the following equation:

$$\sum_{t=1}^{T}(y_t-\tau_t)^2+\lambda\sum_{t=2}^{T-1}\left[(\tau_{t+1}-\tau_t)-(\tau_t-\tau_{t-1})\right]^2 \quad (1)$$

In the above equation, τ_t variable shows the trend component, λ shows the smoothing parameter in volatility at the trend. The λ parameter indicates the ratio of the observed volatility in the cyclical movement component to the volatility measured by the second difference of the trend component and represents the noise/signal ratio observed in the data. The λ value should be determined before applying the filter. The zero value of λ parameter indicates that there are no cyclical movements in the data, and a plus infinity value of the parameter indicates that there exists a trend component in the series that follows a linear movement over time (Hodrick and Prescott, 1980). In this study, λ=1600 was used, because our series were daily.

The stationarity of the two series was checked through ADF unit root test by Dickey and Fuller (1981) and PP unit root test of Phillips and Perron (1988) and the findings were displayed in Table 3. The unit root analysis revealed that two series were I(1).

Table 3: Results of ADF and PP Unit Root Tests

Variables	ADF		PP	
	Constant	Constant+Trend	Constant	Constant+Trend
BIST	-1.813(0.116)	-2.105(0.123)	-1.926(0.203)	-2.108(0.234)
d (BIST)	-6.831(0.000)*	-6.792(0.002)*	-7.873(0.000)*	-7.147(0.012)*
COVID	-1.699(0.240)	-1.987(0.225)	-1.844(0.257)	-2.044(0.269)
d(COVID)	-5.885(0.000)*	-5.993(0.000)*	-5.982(0.018)*	-6.168(0.001)*

* indicates that it is significant at 5% significance level

Note: The values in parentheses are probability values of the tests.

The optimal lag length was determined for the cointegration analysis and the findings were displayed in Table 4. We took the optimal lag length as two considering information criteria.

Tablo 4: Determination of Optimal Lag Length

Lag	LogL	LR	FPE	AIC	SC	HQ
0	0	-3787.253	NA	9.19e+08	26.31426	26.33969
1	1	-2754.455	2044.079	725106.5	19.16983	19.24614
2	**2**	**-2738.753**	**30.85796***	**668517.8***	**19.08857***	**19.21575***
3	3	-2735.240	6.855494	670790.1	19.09195	19.27001
4	4	-2734.581	1.278144	686546.8	19.11514	19.34408
5	5	-2731.344	6.225901	690219.5	19.12044	19.40025
6	6	-2728.945	4.582404	697967.5	19.13156	19.46224
7	7	-2727.492	2.753179	710473.3	19.14925	19.53081
8	8	-2725.996	2.815337	722998.0	19.16664	19.59907

The cointegration relationship between two series was analyzed by Bayer and Hanck (2013) cointegration test. The test is applied by considering the probability values of Engle-Granger (1987) single-equation, Johansen (1991) multi-equation test, Boswijk (1994) test based on error correction term, and Banerjee et al. (1998) test (Shahbaz, et al. 2013). Bayer and Hanck (2013) cointegration test combines the probability values through following the Fisher's chi-square value distribution formulae:

$$EG - JOH = -2[In\,(P_{EG}) + In\,(P_{JOH})] \tag{2}$$

$$EG-JOH-BO-BDM= -2\,[In\,(P_{EG})+In\,(P_{JOH})+In\,(P_{BO})+In\,(P_{BDM})] \tag{3}$$

P_{EG}, P_{JOH}, P_{BO} and P_{BDM} in 2 and 3 numbered equations respectively indicated the probability values of Engle-Granger (1987), Johansen (1988), Boswijk (1994), and Banerjee et al. (1998) cointegration tests. The null hypothesis of no significant cointegration among the series is declined in case the calculated test statistic is found to be higher than the critical value found by Bayer and Hanck (2013) and then a significant cointegration relationship among the series is accepted.

The cointegration relationship among BIST and COVID was analyzed by Bayer and Hanck (2013) cointegration test and the test results were displayed in Table 5. We concluded a significant cointegration relationship between BIST and COVID because two calculated Fisher test statistics were found to be higher than the critical values.

Table 5: Bayer and Hanck (2013) Cointegration Test Results

Model	EG-JOH	EG-JOH-BO-BDM
BIST=f(COVID)	16.824***	27.452**
Significant levels	**Critical Values**	**Critical Values**
1%	15.245	30.574
5%	13.784	25.229
10%	9.612	18.641

*** and ** respectively indicates there exists a significant cointegration relationship at 1% and 5% significance levels.

The cointegration coefficients were estimated by FMOLS (Fully Modified Ordinary Least Square) estimator and the findings were presented in Table 6. The cointegration coefficient revealed that COVID variable had a negative effect on the BIST variable and a 1% increase in COVID decreased the BIST by 9.4%.

Table 6: Cointegration Coefficients Estimation through FMOLS Estimator

Model	COVID
BIST=f(COVID)	-0.094*

* indicates that it is significant at 5% significance level.

The autocorrelation and heterokedasticity problems were eliminated through Newey-West method.

The cointegration analysis revealed a negative impact of COVID-19 new cases on Borsa Istanbul-100 index in compatible with the theoretical considerations and findings of limited number of studies. A 1% increase in COVID-19 new cases led a 9.4% decrease Borsa Istanbul 100 index.

The short run interaction between COVID and BIST was analyzed by VECM (Vector Error Correction Model) and the findings were displayed in Table 7. The error correction term was found to be negative and statistically significant. In other words, the error correction model works. 41.5% of the short-term deviations between the series that moved together in the long-term disappeared and the series converged to the long-term equilibrium value again.

Table 7: Results of Short Run Error Correction Model Estimation

Dependent Variable:$\Delta BIST_t$	Coefficient	Standard Error	t statistic	Probability Value
$\Delta COVID_t$	-0.112	0.019	-5.894	0.001*
ECT_{t-1}	-0.415	0.075	-5.533	0.000*
Constant	1.783	0.427	4.175	0.000*
Diagnostic tests: R^2 =0.597, *Adj.* R^2 =0.595, *F-Statistic*=28.89, *F-Statistic (P)*=0.000*, ***Breusch-Godfrey LM Test*** *(p)*= 0.122* ***White Test*** *(p)*=0.168* ***Ramsey RESET Test (p)***= 0.144* **JB test** (p)=0.295				

Note: * indicates that it is significant at 5% significance levvel.

JB indicates the probability value of Jarque-Bera normality test.

Furthermore, the error correction term was found to be significant and negative. In other words, it denoted that error correction mechanism worked and the 41.5% of the short run deviations between two series were eliminated and the series converged towards long term equilibrium values again. The short term coefficient was found to be higher than the long term coefficient. So, the impact of COVID-19 on Borsa Istanbul 100 index was revealed to be higher in the short term than the one of long term.

Conclusion

The COVID-19 pandemic has led many negative economic results for the nations. In this study, we analyzed the short and long run effect of the pandemic on the stock markets in sample of Borsa Istanbul through cointegration and vector error correction analyses. Both analyses revealed a negative impact of COVID-19 on Borsa Istanbul proxied by Borsa Istanbul 100 index in both short and long run and the findings were found to be compatible with the theoretical and empirical findings in the related literature, because a significant decreases in the profits of the firms were experienced due to the lockdowns and other measures in combat with the pandemic. Furthermore, the uncertainty about when the pandemic would be over also raised the aforementioned negative effect of the pandemic. In this sense, a rapid vaccination would play an important role in eliminating the negative economic effects of the COVID-19 pandemic through enhancing the economic activity and decreasing the uncertainty.

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Nevila Mehmetaj
University Luigj Gurakuqi, Shkoder, Albania
E-mail: nevila.mehmetaj@unishk.edu.al

PRIORS AND POSTERIOR COVID-19 MACROECONOMIC ANALYSES. ALBANIA CASE STUDY

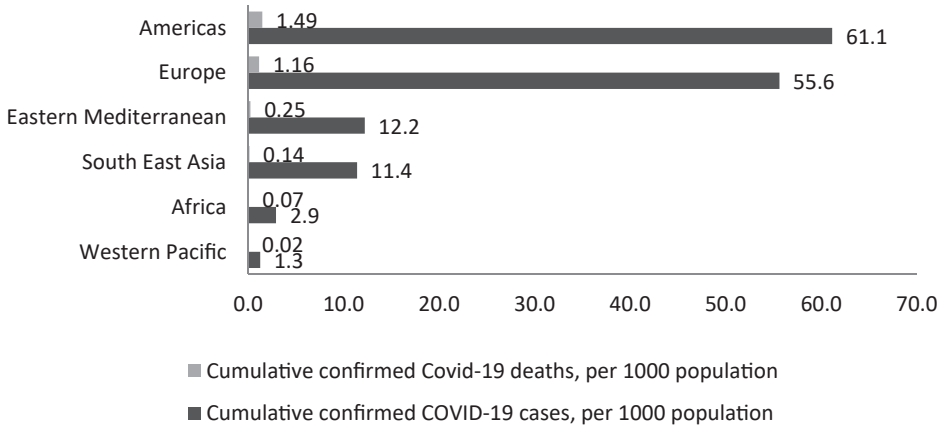
Abstract: Coronavirus pandemic (Covid-19), has spread rapidly around the world and shocked the world economies during the year 2020 and beginning of 2021. To prevent the life-threatening consequences of Covid-19, and the potential for medical systems to be overwhelmed as a result of the pandemic, extremely restrictive measures: such as city lock-downs, and closures of stores, factories, offices, schools, travel bans to places, etc. have been implemented in many countries. These measures have been effective in suppressing the spread of Covid-19 to a certain extent; however, they have had a significant negative impact on the economy. The output growth of the world in terms of real gross domestic product was 3.3% in 2020, declining from 2.8% in 2019. Albania like most the world countries has had dynamic macroeconomic changes in most of its economic sectors. The pandemic situation has changed the impact of the main economic sectors on the country's GDP. Therefore it is the objective of this study to analyze the effect of the pandemic situation on the relationship between the main economic sectors' macroeconomic variables on the country's GDP.

Keywords: Covid-19, GDP, macroeconomic variables.

Pandemic Effects

In December 2019, World Health Organization (WHO) was informed of cases of pneumonia of unknown cause in Wuhan city, China. At the end of January 2020, WHO declared the outbreak a public health emergency of international concern, the highest level of alarm. At the beginning of March 2020, the rapid increase of the number of cases in many countries reported over 40% of global countries, lead WHO to declare the situation of pandemic (WHO). The high contagious virus has been leading to mass people losses and socio-economic panic. Overall, the number of the declared infected cases is supposed to be higher than the declared and confirmed cases all around the world, this due to the mass infected people non-reporting occurrences.

Figure 1. Covid-19 world confirmed cases and deaths, per 1000 population (April 2021)

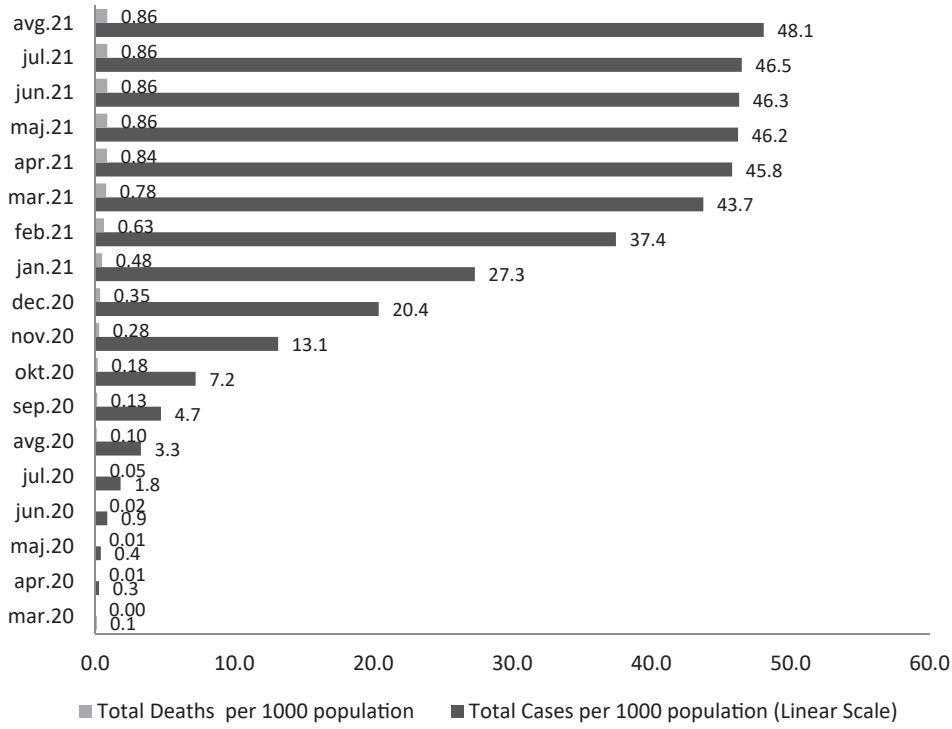


Source: World Health Statistics, Monitoring Health for the SDGs. WHO, 2021.

According to World Health Organization, out of 55,600 persons infected per million, in Europe are loosed 1160 lives because of the virus. The situation is more severe in American countries, out of 61,100 infected persons per million, the region has loosed 14,900 persons; while the situation is presented not so severe in Africa and Western Pacific countries.

In Albania, the infected cases have increased significantly during the year 2020, reaching the peak of 21 thousand cases in December 2020. Active cases continued increasing to high levels, also during the year 2021, reaching the peak of 29 thousand cases in February 2021. Nevertheless the reported numbers, the situation in Albania seemed to be to lower levels compare to the average of the reporting in European countries. In August 2021, Albania reported 48,100 infected persons per million and 900 loosed persons.

Figure 2. Covid-19 cases and deaths in Albania as of 2020-2021.



Source: Worldometer, Coronavirus Statistics, Albania. 2021

Over time, the contagious disease has been being present with other developed mutated forms, while high attention is being given to vaccination and health post remedies. However, considering the endurance of previous epidemics, it is not sure if the Covid-19 pandemic situation will be completely in control in the near time. Depending on the health pandemic dimension and its endurance in time, it is estimated that its economic effects would be multidimensionally affecting the country's economies.

Literature Review

The major objective of this study is to estimate the macroeconomic impact of the Covid-19 pandemic in different economic sectors that influence the gross domestic product in Albania. Due to recent experiences, it can be said that epidemics affect societies within a limited time frame.

Pandemics have had economic effects throughout history, but earlier pandemics have been not as measurable in economic terms as recent pandemic effects in economies. Last century macroeconomic crises caused by war and health disasters experiences were observed on countries GDP and consumption shock. It was found that the

Spanish Flu was the fourth economic shock on income and consumption following World War II, I, and the great depression and (Barro & Ursúa, 2008). Spanish Flu was defined as a cumulative decline in real per capita personal consumer expenditure of at least 10 percent loss. Regressions with annual information on "Spanish flu" deaths during 1918-1920 for 43 countries, implied flu generated economic declines of GDP and consumption. The decreases were respectively between the range limits of 6 and 8 percent. Barro and al. showed that there is also some evidence that higher flu death rates decreased real returns on short-term government bills, and real returns on stocks (Barro, Ursua, & Weng, 2020). In consumer research based on General Social Survey between 1918 and 2018, after the Spanish flu affected forthcoming generations negatively, it was observed that societal trust loss changed significantly consumption preferences (Aassve, Alfani, Gandolfi, & Le Moglie, 2020). Due to historical experiences, it can be said that epidemics affect societies within a limited time frame. But there are continuous cyclical health and other natural disasters affecting societies. The psycho-social impact of the epidemic most of the time leads to an economic breakdown.

Except for the impact of the Spanish flu, another event -the spring frosts in Norway caused big economic losses due to frosts. The negative effects were long-lasting in society till the end of the 1940s when technological progress neutralized the losses (Rao & Greve, 2018). The morality effect is a major reason for longer recovery after an epidemic. It was noted that people tend to change their decision behaviors and develop technological solutions for cyclical and natural disasters. Due to changing of overall aggregate demand and labor market composition during and after the epidemic, both the structure of individual industries' economic output and overall national output tends to decline. Nevertheless, there are specific sectors of the economy where its potential economic output might not be influenced, or in the better scenario might have slight increases.

While some earlier period diseases were limited geographically, they affected mostly the economy of the local infected area. With globalization and the growing services sector, the effects of these diseases were measured in a multidimensional way. Interaction between people, facilities of transportation, trade, etc. has been helping out the geographical spread of the epidemic between countries.

During the Sars-Cov disease, the demand for service-oriented sectors, as transportation and tourism, decreased significantly (Siu & Wong, 2004). In short term, consumption demand and foreign trade declined, and the economic downturn in these sectors resulted in lower national production output. From a macroeconomic perspective, the aggregate supply is directly attached to the aggregate demand, and a fall in the overall demand led to a decline in the overall supply (Lee & McKibbin, 2003). Up till now, Sars-Cov's impact was considered as a demand shock as the productivity in industrial sectors was not affected and the economic recovery did not take much

time. Potential economic effects and analyses of Sars-Cov indicated that taking ante precautions was more efficient and less costly, than posterior healthcare services in terms of loss of labour force and national income.

The Covid-19 shock spread quickly across countries causing a synchronized immense negative impact. The impact of the Covid-19 pandemic on world GDP growth is considerable. The global economy contracted by 3,5 percent in 2020, approximately a 7 percent loss relative to the 3.4 percent growth forecast back in October 2019 (IMF, 2021). Every country covered by the IMF posted negative growth in 2020, while the downturn was more emphasized in the poorest countries. The global recession is the deepest since the end of World War II. The Covid-19 pandemic macroeconomic crisis has so far been less about liquidity than it is about foregone growth opportunities and permanent fiscal losses (Yeyati & Filippini, 2021).

Covid-19 and economics in Albania

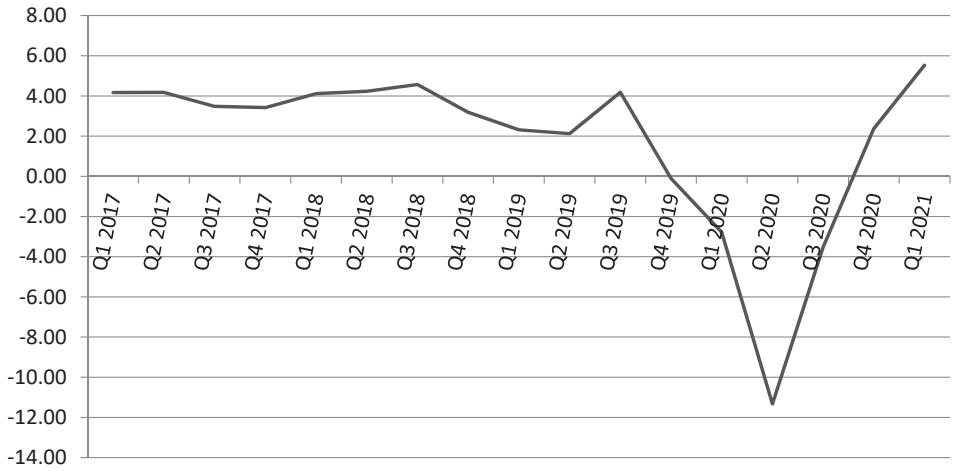
To prevent the life-threatening consequences of Covid-19, and the potential for medical systems to be overwhelmed as a result of the pandemic, the stay-at-home and businesses closure policies were adopted by most of the world countries. In the same way, extremely restrictive measures: such as city lock-downs, closure of educational institutions, airports, and borders, restrictions on domestic travel, restaurants, and shops, bans on large gatherings, and the statement of curfews, etc. have been implemented in Albania. The government in the second half of March 2020 announced these measures to suppress the spread of Covid-19 and to avoid the collapse of the health system in the country toward the increasing numbers of infected people. These measures to a certain extent had a significant negative impact on the economy. The output growth of the country in terms of real gross domestic product was -3.3% in 2020, declining from +2.2% in 2019 (WB).

In the 2-nd quarter of 2020, Albania experienced one of its greatest declines in GDP linked to the pandemic outbreak, and in the 3-rd quarter due to the Government support packages, the negative impact on GDP was being neutralized positively. The Government support packages have had an outstanding result in the economy-boosting the GDP growth in the 4-th quarter, achieving plus 3% growth (Instat, 2021).

The Government allocated a total of ALL 45 billion (2.8% of GDP) through two support packages for the population and the private sector affected by Covid-19, including budget spending, tax deferrals, and sovereign guarantees. On March 19th, 2020, the Government through a normative act announced the first package of support measures of ALL 23 billion. The second package was introduced on April 15th, 2020 at a total of ALL 22 billion. The packages included: minimum salaries supporting small businesses and self-employed that were forced to close; and allocation of funds for loan provision for working capital for all private companies; and funds for compa-

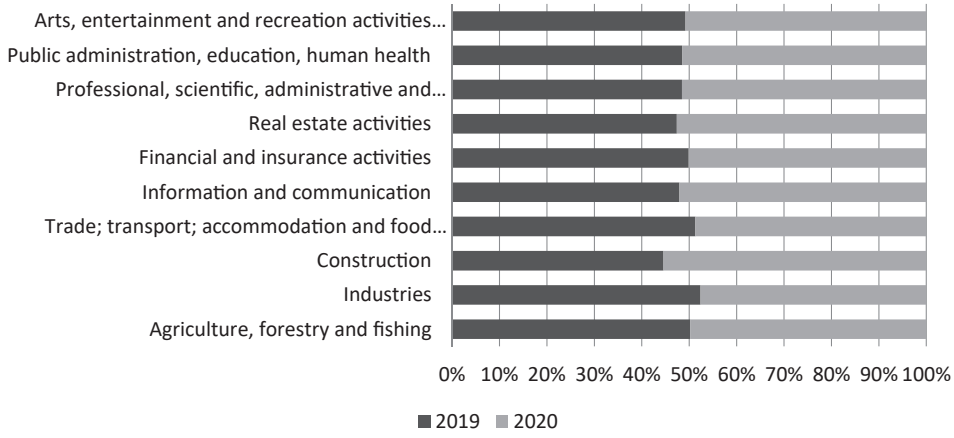
nies to access overdrafts for paying employee wages, the government paid the interest costs (Gjermeni & Lika, 2021).

Figure 3. Albania - Real GDP Growth (%) quarterly, 2017 – 2020



Due to the health pandemic shock associated with notable economic contraction, the contribution of the main branches of the economy to the country's gross domestic product changed significantly.

Figure 4. Evolution of the main branches of the economy in 2019 and 2020



Source: Instat, Quarterly Economic Growth, 2021.

Methodology

The methodology used to explore the relation of macroeconomic variables is based on a multiple regression analysis. The ordinary least square regression method with

quarterly data is applied in R software for analysis. The multiple regression model includes as independent variables the output of the main branches in the economy, and the dependent variable the gross domestic product. The regression equation:

$$y = x_1 + + x_2 + x_3 + x_4 + x_5 + x_6 + x_7 + x_8 + + x_9 + x_{10}$$

where:

y- Gross domestic product

x_1 Agriculture, forestry, and fishing

x_2 Industries sector

x_3 Construction sector

x_4 Wholesale retail trade; transportation; accommodation and food service activities

x_5 Information and communication

x_6 Financial and insurance activities

x_7 Real estate activities

x_8 Professional, scientific, and technical activities

x_9 Public administration, education, health, and social work activities

x_{10} Arts, entertainment and recreation activities, and other services

Results

The main branches of economic variables to the GDP relation: before the Covid-19:

$$y = 1.312x_1 + + 1.002x_2 + 1.097x_3 + 1.511x_4 + 1.371x_5 + 0.461x_6 + 0.377x_7 + 0.966x_8 + 1.176x_9 + 0.634x_{10}$$

After the Covid -19 country lockdown:

$$y = 1.250x_1 + 1.034x_2 + 1.174x_3 + 1.401x_4 + 1.366x_5 + 0.774x_6 + 0.787x_7 + 0.999x_8 + 1.076x_9 + 0.638x_{10}$$

The results show a strong effect of all the included variables in the model on the country GDP, R square 0.9988 is very high. At a 1% level of significance, financial and insurance activities do not have a significant effect on the GDP of the country before and after covid-19. Not being a very reasonable argument, real estate activities do not affect the country's GDP before the covid-19.

	After Covid-19				Before Covid-19			
	Estimate	Std. Error	t value	Pr(>|t|)	Estimate	Std. Error	t value	Pr(>|t|)
x_1	1.250e+00	1.627e-01	7.683	1.82e-09 ***	1.312e+00	1.742e-01	7.532	5.61e-09 ***
x_2	1.034e+00	8.105e-02	12.758	7.32e-16 ***	1.002e+00	8.913e-02	11.247	1.69e-13 ***
x_3	1.174e+00	1.115e-01	10.531	3.15e-13 ***	1.097e+00	1.302e-01	8.431	3.87e-10 ***
x_4	1.401e+00	1.179e-01	11.886	7.29e-15 ***	1.511e+00	1.639e-01	9.218	4.02e-11 ***
x_5	1.366e+00	4.048e-01	3.373	0.00163 **	1.371e+00	4.203e-01	3.261	0.002387 **
x_6	7.741e-01	4.541e-01	1.705	0.09583 .	4.611e-01	5.532e-01	0.833	0.409936
x_7	7.866e-01	3.625e-01	2.170	0.03586 *	3.769e-01	5.046e-01	0.747	0.459904
x_8	9.663e-01	1.684e-01	5.737	1.02e-06 ***	9.987e-01	1.796e-01	5.559	2.48e-06 ***
x_9	1.176e+00	2.691e-01	4.370	8.27e-05 ***	1.076e+00	2.931e-01	3.670	0.000761 ***
x_{10}	6.340e-01	3.062e-01	2.071	0.04474 *	6.382e-01	3.128e-01	2.040	0.048494*

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Multiple R-squared: 0.9988,	Multiple R-squared: 0.9988,
Adjusted R-squared: 0.9986	Adjusted R-squared: 0.9985
F-statistic: 3550, p-value: < 2.2e-16;	F-statistic: 3054, p-value: < 2.2e-16

From the model results it can be seen that all the main branches of the economy have a positive relationship to the country's gross domestic product, this due to the positive sign of all the coefficients in both models before and after Covid-19. Given that, the impact of the group of branches: Agriculture, forestry and fishing; Trade, transport, accommodation, and food service activities; Information and communication; Professional, scientific, administrative and support service; and Arts, entertainment and recreation activities and other services have had a stronger effect on country GDP before the Covid-19 pandemic situation compare to the presence of disease situation. The variables: Real estate activities, and Financial and insurance activities are not significant in the model, therefore they have no impact on the country's GDP before Covid-19.

While variables as the Industries sector; Construction sector; Financial and insurance activities; and Public administration, education, health, and social work activities have had a stronger effect on the country's GDP after the pandemic situation compare to the before economic situation. It can be emphasized that the variable Financial and insurance activities have the highest positive change effect on GDP, but this variable is significant at only 10 % probability in the model.

Conclusion

Epidemics affect societies within a limited time frame and have economic influence throughout the structure of the economic output. Overall, the economic impacts of COVID-19 vary across the countries, both within and across sectors. Accordingly, it can be concluded that the economic impact of the main branches of the economy varies ante and posterior to Covid-19 disease to the country GDP. The research study concludes the covid-19 pandemic situation has influenced in changing of the effect of the main economic branches on the domestic product of Albania. Main branches as Agriculture, forestry, and fishing; Trade, transport, accommodation, and food service activities; Information and communication; Professional, scientific, administrative, and support service; and Arts, entertainment and recreation activities and other services have had a stronger effect on country GDP before the Covid-19 pandemic situation compare to the presence of disease situation.

While variables as the Industries sector; the Construction sector; and Public administration, education, health, and social work activities have had stronger effect on the country GDP after the pandemic situation compare to the before economic situation.

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Alma Zisi
"Aleksander Moisiu" Durres University, Albania
E-mail: alma_zisi@yahoo.com

Bitila Shosha
"Aleksander Moisiu" Durres University, Albania

Flora Merko
"Aleksander Moisiu" Durres University, Albania

Armela Anamali
"Aleksander Moisiu" Durres University, Albania

IMPACT OF COVID-19 ON FOREIGN DIRECT INVESTMENT: ALBANIA CASE

Abstract: With the spread of the Corona virus (COVID-19) all country and the world quickly faced a health emergency. All countries knelt before this virus and no one knew exactly what consequences they would face. After a while, we all realized that the pandemic was affecting all economic sectors around the world. The impact of COVID-19 was estimated in a global world for foreign direct investment (FDI) according to a UNCTAD report, May 2020, the estimate of the total value of FDI globally for 2020 is revalued by 30% and 40% compared with previous years. The decline in foreign direct investment flows was reaching its lowest levels since the 2008 financial crisis.

Albania also faced the consequences of the Corona virus pandemic (COVID-19). Many sectors of the economy such as tourism, and other related sectors such as, hotel, transport, crafts, small businesses, faced significant declines and consequently lower profits. As a result of the pandemic, the FDI flow fell significantly during 2020. Referring to data from the Bank of Albania, for the period January - June 2020, there is a decrease of about 17% in FDI inflows, compared to a year ago. This paper will analyze the impact of the Corona virus (COVID-19) pandemic on FDI in Albania, the difficulties faced by investors and the prospects of foreign direct investment in the future.

Key words: *COVID-19, foreign direct investment, economic growth, Albania.*

Introduction

Health pandemics have always been associated with uncertainty and negative impacts on the economies of different countries. Even with the outbreak of the COVID-19 pandemic, all countries of the world were concerned about the impact that this pandemic would have both economically and socially. The rapid spread of the corona virus meant that the world would not only face a health emergency, but also profound lifestyle changes. Due to the lack of information on what the consequences of the COVID-19 pandemic would be, the prediction was very difficult, due to external fac-

tors such as: the extent and impact of interventions such as social isolation, progress in developing a vaccine, changes in human behavior etc. (World Bank, 2020).

The new reality that people had to face found them unprepared and their reactions were different. A large part of these reactions were reflected in economic aspects, leaving the world in the face of a real economic crisis. The fear that people began to feel greatly influenced their way of life, the products they sought in the market and the way they interacted with the market. Based on previous studies, it is observed that pandemics are likely to occur at intervals of 10-50 years and come as a result of biological changes of viruses which in themselves create their own subspecies (Potter, 2001). Risk mitigation decision making is a process based on risk assessment and exposure to it (Bruinen de Bruin et al., 2007). Socio-economic, epidemiological, health, political and technological aspects need to be considered simultaneously in order to establish rules for COVID -19 risk mitigation.

The COVID-19 pandemic would affect many sectors of the economy such as health, education, tourism, trade, etc. All countries would have to deal with economic recession, unemployment, lower savings, rising inequality, debt, and so on. According to the forecast of the International Monetary Fund (IMF), for 2020, the global economy would shrink by 4.4 percent. This is the largest decline since the Great Depression of 1930. Major advanced economies, which account for 60% of global economic activity, are projected to operate below their potential output by 2024, indicating economic prosperity, lower national and individual levels compared to pre-pandemic levels (Jackson et al., 2021).

Even in Albania, the COVID-19 pandemic would cause a major shock. Since the confirmation of the first case on March 9, 2020, the Albanian government declared a state of natural disaster until June 23. People who suffer from chronic diseases, those with disabilities, the elderly, women and victims of domestic violence, minorities, people affected by the earthquake are those who face the greatest risk of COVID-19 (Gjermeni and Lika 2021).

Its impact, the COVID-19 pandemic, was manifesting itself in all sectors of the economy, reflecting a decline in GDP. Market providers began to have problems with raw material supplies initially as a result of the isolation or closure of borders, which was practiced by the governments of many countries. Many states practiced the temporary closure of various businesses causing many businesses to face difficulties and consequently a good portion of people to lose their jobs. Some other businesses started operating from home (online) in order to minimize economic losses. The double shock, demand and supply, will be reflected in the decline of economic activity during 2020 and beyond (Djurovic, G. 2020).

The purpose of this study

COVID-19 will continue to have a strong impact in all economical und social indicators. Considering the fact that COVID-19 is now part of our life and we are learning to adapt with it, we have done this study having in focus the impact of the pandemic at FDI in Albania. The purpose of this study is to give general view of global pandemic impact of COVID-19 in FDI in Albania, the well-being of the economy, focusing on difficulties faced by investors and foreign direct investment prospects in the future.

The paper is organised as follows. Section 2 reviews the literature on the impacts caused by health pandemics on FDI. Section 3 presents methodology of the study. Section 4 presents and discuss the Impact of COVID-19 on Foreign Direct Investment in Albania. Section 5 concludes the study with key findings and implications.

Literature Review

Foreign direct investments occupy a large place in theoretical approaches as, with the potentials they have, FDI is seen as one of the key factors in economic development. According to Wang (2009) FDI has positive effects on the host economy, as it transfers advanced technology and influences best management practices of leading-administration. Moosa (2002) analyzes the effects of FDI in host countries, emphasizing that FDI has a positive impact on capital inflows, output growth, etc. Borenstein, De Gregorio & Lee (1995) addressed the link between FDI and human capital and concluded that FDI has a positive impact on economic growth only if countries possess a certain level of human capital. The relationship between FDI and human capital has been measured by Borenstein, De Gregorio & Lee (1998) empirically. Although there are objections regarding the positive impact of FDI on the economies of host countries (Saltz, 1992), it is generally agreed that FDI promotes job creation, innovation and the use of more advanced technologies influencing economic growth (OECD, 2020).

But 2020 was not a year like any other. The spread of the COVID-19 pandemic would cause major challenges both socially and economically. The effects of the pandemic would also be seen in foreign direct investment flows causing a significant decline. According to UNCTAD forecasts, the COVID-19 pandemic during 2020 would bring about a 40 percent reduction in foreign direct investment flows (UNCTAD, 2020a). More than two-thirds of multinational corporations (MNEs) reported the impact of COVID-19 on their business (ITM, UNCTAD 2020). The COVID-19 crisis was conveying a high level of uncertainty to investors, severely damaging their confidence (Saurav, et al., 2020).

Ho and Gan (2021) investigate the impacts of health pandemics on FDI net inflows using the new pandemic uncertainty measure WPUI in 142 economies from 1996

to 2019. The findings of this paper show that the behavior of international firms is significantly affected by pandemic uncertainty by reflecting declining FDI inflows to host countries. Even in their study Chaudhary et al., (2020) point out that the COVID-19 pandemic has affected the reduction of FDI inflows. Until 2019, FDI in Nepal was on the rise but the Covid-19 pandemic reduced FDI inflows and affected Nepal's economic development.

Leading economists have expressed in unanimity that the COVID-19 pandemic will bring about a greater recession than the 2008 financial crisis unless various measures are taken to better protect and cope with this situation. Most governments through support policies have sought to facilitate and recover the economy (Vaitilingam, 2020). The main supportive policies of governments for private sector recovery are: tax relief (including tax cuts, tax credits, and deferred payments) and financial support (low interest loans, grants, broad-based subsidies and loan guarantees) (Saurav, et al., 2020).

In their paper Alfaro and Chen (2012) addressed how multinational subsidiaries around the world responded to the crisis compared to local enterprises. The findings showed that foreign-owned subsidiaries, including small and medium-sized enterprises, can show greater resilience during crises thanks to their connections and access to the financial resources of their parent companies.

Methodology

The working methodology is the way of proceeding for the collection of data, the instruments used for the evaluation of this data in relation to the interests of our study. This study is based on certain stages which enabled the recognition of the context for the assessment and impact of the pandemic (COVID -19) of FDI in Albania, the difficulties faced by investors and the prospects of foreign direct investment in the future. The realization of this study begins with a review of the contemporary literature of foreign and domestic authors on this phenomenon. Based on the valuable work of all researchers who have analyzed and addressed the impact of COVID -19 on FDI as well as including the latest statistical data published in various reports, it was possible to determine the problems of the study.

The rest of the paper consists of a descriptive analysis of the Impact of COVID -19 on Foreign Direct Investment: Albania Case. Secondary data from sources such as the Bank of Albania, the Institute of Statistics, the World Bank, the OECD, etc. were used for the analysis. Through secondary research, researchers can identify and understand how their peers have previously approached the focus of the topic. Secondary data collection is recommended to reinforce the results of a study, making the findings more convincing. Secondary research also allows researchers to collect data in a shorter period and at a lower cost. In the end, conclusions are reached, which are

also compared with the bibliographic conclusions underlined at the beginning of the study. Our small contribution regarding the forecast, analysis but also conclusions for the future of FDI in pandemic conditions would be valuable for other studies.

Impact of Covid-19 on Foreign Direct Investment: Albania Case

Nowadays, developing countries pay a lot of attention to foreign direct investments, as these investments play an important role in economic development. Among the main advantages of FDI, in the host countries, we can mention the transfer of technology, the promotion of competition in the country, the creation of new jobs, the economic growth of the host countries, etc.

Foreign Direct Investment in Albania began to appear mainly after the 90s, but only after the 2000s began to grow significantly. The governments of our country have undertaken and implemented favorable policies to promote FDI such as improving the legal and institutional framework, stability and sustainable economic growth, infrastructure improvements, improvements in the business climate, etc. The Albanian Investment Development Agency in Albania (AIDA) estimates that some indicators such as geographical position, free market access, legal framework supporting FDI, competitive workforce favor the promotion of foreign investments in Albania.

But the spread of the COVID-19 pandemic would bring a second major shock to the entire country, as in November 2019 Albania was hit by a high magnitude earthquake. These shocks would have impacts on both health, social and economic aspects for all. As everywhere in the world, in Albania, the COVID-19 pandemic was accompanied by a significant decline in GDP. As can be seen from the figure below, during the second quarter of 2020, Albania experienced a large decline in GDP due to the effects of the pandemic. According to INSTAT, after the COVID-19 pandemic, GDP during 2020 fell by 3.31% compared to 2019.

The impact of the COVID-19 pandemic on domestic demand and supply caused economic activity to decline. The downturn in the economy was accompanied by a contraction in public and private investments, private and public consumption, and a sharp decline in exports of 35%. Important branches of the Albanian economy, such as trade, transport and hospitality services, fell by 27%. One of the sectors most affected by the pandemic was tourism due to the restriction of tourist movements. In July 2020, the number of foreign tourists had decreased by 61.5% compared to last year (OECD, 2020).

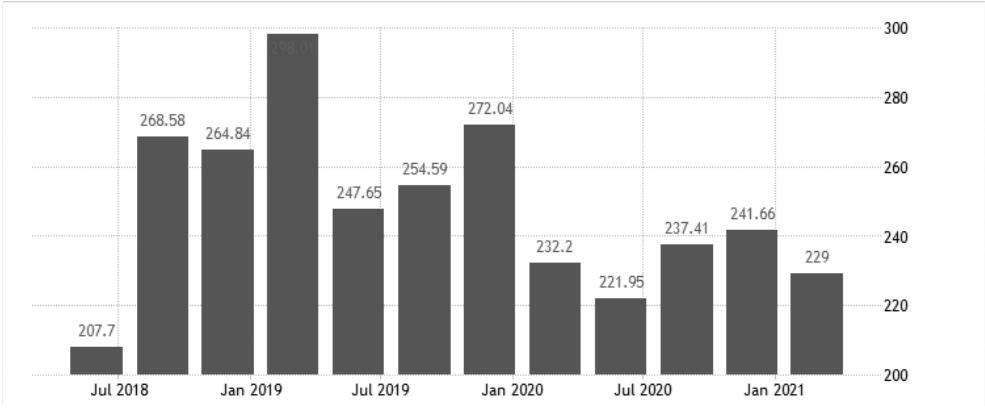
Figure 1: GDP Growth in Albania

Source: World Bank, 2021

Due to the impact of the COVID-19 pandemic, foreign direct investment flows declined. As seen in the figure below, for the second quarter of 2020, foreign direct investment flows fell by approximately 11% compared to the same period in 2019 (AIDA, 2021).

Foreign direct investments in Albania come mainly from Italy, Switzerland, Canada, Netherlands, Greece, Turkey, Austria, etc. The dependence of FDI on countries of origin means that FDI inflows will decline because these countries are severely affected by the COVID-19 pandemic. Since 2015, the stock of FDI in Albania has maintained an increasing trend until the fourth quarter of 2019. The impact of the COVID-19 pandemic can be seen in the figure below, where during the second quarter of 2020, investment flows. Foreign direct investment fell by approximately 11% compared to the same period in 2019. During the first quarter of 2021 there is a decrease in FDI inflows by 1.3% compared to a year ago, while the stock of FDI was increases by 14.7% (AIDA, 2021).

Figure 2: Flow of Foreign Direct Investment in Albania

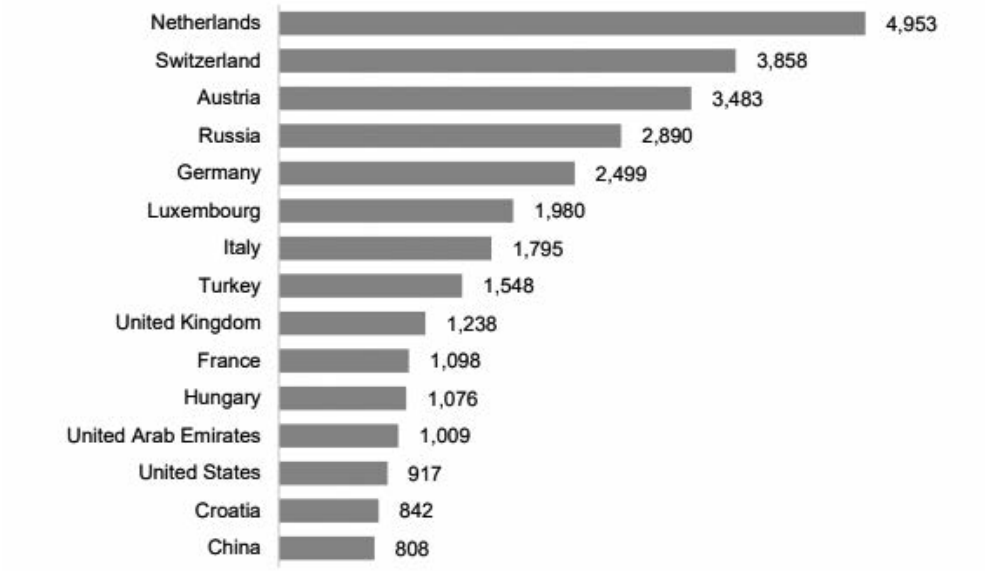


Source: TRADINGECONOMICS.COM / Bank of Albania, 2021

Regarding the main investment countries in Albania, we can say that they have changed over time. For example, Greece was the country with the most foreign direct investment in Albania, while in 2018 we see Switzerland with the highest stock of FDI. The stock of foreign direct investment, from Switzerland, has been increasing from 2014 to 2020 (Bank of Albania, 2020)

Currently, the main investment countries with the highest values of the direct investment stock, according to the Bank of Albania, are: Switzerland (with investments related to the Trans Adriatic Pipeline) and the Netherlands (Hydropower plants on the river Devoll).

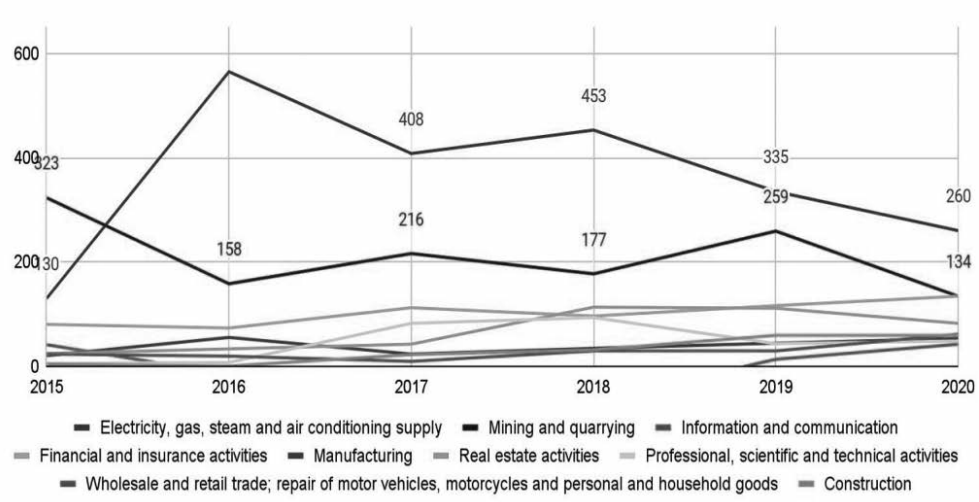
Figure 3: FDI inflows by country of origin (EUR million)



Source: wiiw FDI database, (2013-2019)

Foreign direct investment is mainly in the oil, metal or, infrastructure, construction and telecommunication sectors. The most attractive sectors for FDI remain Electricity, Mining and Quarrying Industries.

Figure 4: FDI flows according to economic activity



Source: AIC / Bank of Albania (2021)

It takes time for economic activity to return to normal, as this depends on the duration of the COVID-19 pandemic and the intensity with which new variants of the virus continue to emerge. In order to increase the levels of foreign direct investment in Albania, but not only, the security and trust of investors must be increased.

Conclusion

Foreign direct investments are support for the economic growth of countries because, with the potentials they have, FDI creates new jobs, brings innovation, transfers technology, etc. The contributions of Foreign Direct Investment (FDI) to the Albanian economy have been increasing in recent years, mainly in the energy sector and the processing industry. In order to attract as many investors as possible, special state agencies such as AIDA have been set up focused on facilitating and supporting foreign direct investment in Albania.

But the spread of the pandemic was accompanied by many uncertainties and many impacts on human health, social aspects and economic development of countries around the world. Although a year has passed since the spread of the COVID-19 pandemic, there are still many questions ahead: how long will the pandemic last, will new variants of the virus continue to appear, will vaccines be able to curb the spread of the virus?

In order to prevent the spread of the virus all countries applied various restrictive measures. The imposition of these restrictive measures, on one hand, slowed down the spread of the virus, but on the other hit hard the economies. Even in Albania, the COVID-19 pandemic would affect many sectors of the economy such as health, education, tourism, trade, etc. reflecting concern and insecurity. According to Bank of Albania data, foreign direct investment flows fell by 11%, although this decline was within the UNCTAD forecast.

As FDI is an important pillar for the country's economy, measures must be taken to recover foreign direct investment in Albania. For the country's recovery, after the spread of the COVID-19 pandemic, the European Union allocated to Albania 4 million Euros of immediate support for the health sector and 46.7 million Euros of support for social and economic recovery (Jovanović, et al., 2021).

Albania will continue to provide support to all foreign and domestic investors by encouraging investments in strategic sectors that will affect the country's economic development. Attracting and supporting foreign direct investment in key sectors such as tourism, manufacturing and energy will help increase the confidence of foreign investors and accelerate the country's economic growth.

An important conclusion relates to the measures taken to prevent the virus on the one hand and the negative effects they have on the level of FDI decline, thus leading to an economic depression. Although much of the restrictions imposed to prevent the spread of the COVID-19 pandemic have been minimized, consumer reluctance will continue to slow economic growth for much longer even after the end of the COVID-19 pandemic.

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Leonidas Vatikiotis
Open University of Cyprus
E-mail: leonidas.vatikiotis@gmail.com

Grigoris Zarotiadis
Aristotle's University of Thessaloniki, School of Economics, Greece.

PRIVATIZATION THROUGH CONCESSION AND THE PERIL TO PUBLIC INTEREST – THE CASE OF "EGNATIA MOTORWAY"

Abstract: The present paper focuses on the financial and developmental effects of privatization of public infrastructures through concession through the case study of 'Egnatia Motorway' connecting the western Greek port of Igoumenitsa till the Greek Turkish borders in Thrace.

Following an informative chronicle of the creation of the 'Egnatia Odos', in the second part of the manuscript we develop the theoretical framework of our analysis by studying the history and the effects of similar concession projects in Greece and abroad. Specifically, we make use of the Morandi Bridge in Genoa, the motorway around Strasbourg, the public roads in Croatia, as well as similar cases outside Europe and especially in Latin America.

In the main part of the study, we proceed with an in details analysis of the intended 35-years concession of 'Egnatia Odos' based on data from past years and official forecasts for the operation, maintenance and commercial exploitation of the specific public asset.

Our analysis reveals that avoiding the concession and sustaining the public management is in benefit of the public interest, the Greek society and economy. The data proves that public management will generate significantly higher profits for the State while keeping the toll charge at lower levels. At the same time, given the geo-economic significance of the motorway in the light of the collective management of the Balkans, controlling the specific asset is of exceptional national economic importance.

Keywords: Privatization vs Public Management, Concession of Public Infrastructures, Regional Development

Introductory remarks and the history of the specific infrastructure

Egnatia Motorway (EM) is the horizontal main road axis with a total length of 657 km that crosses Northern Greece from the port of Igoumenitsa to the main Greek-Turkish border in Kipoi. Constructions started in 1977 and it is completed since more than a decade, being a closed motorway of international standards, two traffic lanes and an emergency lane per direction separated by a median. This is an extremely important infrastructure investment, both for the development of the region it crosses as well as of transnational significance.

Given the directives of the EU in order to finance this ambitious project and the realization that this was the best way to overcome bureaucratic tie-ups of the Greek public sector, "Egnatia Odos S.A." (EO) belonging 100% to the Greek State % was established in 1995 in order to complete the construction and to undertake the operation and maintenance of the motorway. EO was superintended by the Ministry of Environmental, Planning and Public Works. Following the policies induced by the last financial crisis (from 2011 and onwards) the Hellenic Republic Asset Development Fund (HRADF, https://www.hradf.com/en/) was appointed from the Ministry of Finance to have the right to vote in the General Assembly of EO, in order to initiate and implement the concession of the operation, maintenance and exploitation of EM.

In total the budget for the completion of the main axis (including design, construction, expropriations, and administrative / operational costs) was approximately 5,6 billion € (excluding VAT). If we include the Vertical Axes connecting to the northern main border gates to South-Eastern Europe the number comes to approximately 7 billion €, co-financed by EU (2nd and 3rd Community Support Framework) and national resources, mainly with loans provided by the European Investment Bank (EIB) to the Greek State (Ministry of Finance), as well as by private Greek financial institutions to EO. EO recently repaid all the loans to the Greek banks,[1] while the debt to the EIB (total initial budget of 2.24 billion €) is still taking place today by the Ministry of Finance.[2]

The implications of EM are quite significant and already visible (http://observatory.egnatia.gr). Regarding the accessibility, there are direct benefits for the five main transit regions - Epirus, Western Macedonia, Central Macedonia, Eastern Macedonia & Thrace, Thessalia – with 10 border stations of four cross-national connections to Albania, North Macedonia, Bulgaria and Turkey. The main axis connects 11 Greek cities – Igoumenitsa, Ioannina, Metsovo, Grevena, Kozani, Veroia, Thessaloniki, Kavala, Xanthi, Komotini, Alezandroupoli and with four ports and six airports. Moreover transport link of 48 organized manufacturing zones (including industrial areas and parks, industrial business estates, steam power plants, logistics centers etc.) reveals also the economic importance of the motorway. Last but not least, with respect to the cultural effects, EM facilitates the access to 85 archaeological places, 75 museums, 78 places of distinct natural beauty, more than 250 traditional villages, resort and hosting areas of cultural events. Finally, road safety has been substantially improved as EM is 5 times safer than the alternative road network (old national roads). Comparing the years before with those after its operation (data till 2011), it appears that in

1 The repayment included all the claims of the banks, although there is still pending a legal dispute with them concerning the total amount of the debt.

2 Consider that despite the intended privatization (concession) of EM, the Greek State will continue the payback of the construction to the EIB, although the asset and its exploitation will be granted to the private sector.

the major road networks of Northern Greece there is a more than 70% reduction in accidents, while fatal injuries reduced also by 60%.

The present case study analyses exhaustively the financial and developmental aspects of the project and evaluates the implications of its concession to the public interest. For this reason, the authors sum up the detailed analysis in the report conducted in December 2020 with the support of the EO Employees' Association (https://syllogos-seteo.files.wordpress.com/2020/12/09dek2020_main_study_final.pdf).

Worldwide experiences from concessions of public interest infrastructures

Starting with the international experience, we have chosen four European and one Latin American case. The incidence of Morandi Bridge is perhaps one of the most familiar examples. The bridge did much more than simply connecting the eastern part with the western part of Genoa. It used to be an architectural asset of the city that hosts the largest commercial port of Italy, birthplace of Christopher Columbus. Ricardo Morandi built in the 1960s introducing thereby a multitude of aesthetic and construction innovations that made it one of the most beautiful bridges in Italy.

In 1999, the maintenance and exploitation of Morandi Bridge was transferred to the company Autostrade d' Italia, owned by Atlantia, which is owned by the holding company Edizione which in turn belongs to the well-known Benetton family. Along with Morandi Bridge, the same family took control of nearly half of the motorways of the whole country for a period till 2038. At that time this was considered to be the epitome of innovation and modern, brave entrepreneurial spirit. In the following years, the management of infrastructure and motorways became extremely important for the holding company: in 2019 42% of its total assets (14 billion €) came from this very activity, while the sale of clothing (in 5,000 shops around the world with 8,000 employees) contributed only 4%!

During the same period, in similar bridges, even in less wealthy countries than Italy, large scale works were carried out for maintenance and even reinforcing their structural capacity. In our case on the contrary, well-documented concerns were expressed publicly about the over-exploitation of infrastructure, including Morandi Bridge: for instance, Marco Pronti, Professor of Transport Economics at the Polytechnic University of Milan and adviser to the government highlighted in 2003 the issue of exorbitant increases in the tolls paid by the road users and stated that Autostrade is the second most profitable company in the world. He also denounced the motorway lobby blackmailing not to invest unless its demands for further toll increases were met. He concluded his interview by stressing that "concessions are an automatic mechanism of corruption" (La Repubblica, 2003).

Specific concerns about the Genoa Bridge have been raised and by other sources too. In late 2017 or early 2018, audits showed that the bridge had weakened from 10% to

20% on average, as stated by a Supervising Engineer from the local Ministry of Infrastructure and Transport (Glanz, 2018, New York Times). According to the same person, a scientific article had even been published by an engineer from the University of Genoa who suggested the replacement of the whole bridge! Additionally, a relevant question was raised in the Italian Parliament on 20 October 2015, addressed to the Ministry of Transport and Infrastructure, which stated that "the company Autostrade has the necessary financial resources alone from the increases in tariffs agreed in the approved concession in order to start the necessary works" (Senato de la Repubblica, 2015). Nevertheless, the concessionaire did not respond at all, even despite the constant protests of the residents around the motorway leading to Morandi Bridge, that the sound-proof panels were displaced by the strong winds causing accidents for drivers and pedestrians! The result was disastrous: on 14 August 2018 Genoa Bridge collapsed causing the death of 43 civilians in a pre-announced tragic accident.

Reasonably, the public reactions were extremely severe – high-ranking government officials argued for the revocation of the concession agreement and even to impose fines of hundreds of millions € for the criminal negligence of the concessionaire Autostrade per l' Italia (Kathimerini, 2018). Nonetheless, the license to Autostrade (Glanz, 2018) was renewed by the Parliament.

In case someone would argue that the case of Genoa Bridge may have been an extreme, yet unrepresentative example, there are also other similar cases:"*after cracks were observed in a tunnel northwest of Genoa that partially collapsed last year, Italy's Ministry of Transport ordered a thorough inspection of the region's elevated crossings and bridges. Almost all had safety problems and had to be repaired*" (Panigiani, 2020). The example of the Genoa Bridge, which is not unique, essentially contradicts the public interest nature of the conceding infrastructure of strategic public interest and in particular motorways. The same conclusion can be drawn if we consider three additional European cases. In England, a thorough investigation assessed the governmental promises that justified concessions. "*the government has justified its policy in two ways. First, the use of private financing, despite inherently higher costs, would provide the investment that the public sector could not afford. Secondly, it would maximize the (value for money), a concept that means lower lifetime costs, including the cost of transferring risk, compared to the conventional government procurement. The article presents the accounting and financial data to analyze the investment, costs including the cost of using private capital in order to assess the government's allegations. The conclusion was that the concessions were "proved to be more expensive than expected, thereby cancelling the cost advantage*". In addition, "*our analysis shows that the cost of risk transfer was very expensive*" (Shaoul, et. al., 2006).

In France, reactions were provoked, as an advanced motorway around Strasbourg is scheduled to be built using the concession method by the French multinational company "Vinci", which will operate it for 55 years. The project has met the unequivocal

reaction of local movements and environmental organizations, due to the damage it will cause to the environment, threatening the survival of rare and protected species, public health and climate (Counter-Balance, 2020).

In Croatia, in October 2014, an alliance of seven unions and seven civilian-society organizations was formed to collect the necessary number of signatures for a referendum in order to incorporate the following article in a law being under discussion at the parliament: "*public roads are of strategic interest and are prohibited to be offered to concessions*". The reason that led to this mobilization was the expressed willingness of the government to seek a concessionaire for 1.017 km of modern highways which were constructed in the early 2000s with a cost of 5,8 billion euro. Taking into account the draft-tender, the concession would be granted for 35-40 years and the bidding would start from 2,4 billion till 3,2 billion € (Milekic, 2014).

Outside Europe and especially in Latin America, where concessions begun in the 1970s and 1980s guided by the World Bank, bigger economic crimes have been recorded. An extreme but illustrative example is the bail out by the State of the concessionaire who took over the Mexico highways in the early 1990's. The estimate for concessionaire's rescue cost corresponds from 7 to 12 billion dollars, in other words 1% to 1,7% of the country's GDP (Guasch, et. al. 2007)! In conclusion, many examples around the world make it clear that concessions have been the foundation of high ephemeral profits to the detriment of the public and the citizens-users, leading at the same time to the technical downgrading and rapid devaluation of public infrastructures.

If we focus now in Greece, concession contracts are considered a subcategory of Public-Private Partnerships (PPPs) and fall into the category of purely conventional PPPs. Unlike other types of contracts where a company receives from the public a fixed fee for the implementation of a project or the provision of a service, in concessions the company's fee consists mainly in the concession of the management and operation of the project. The benefit they may bring to the public is related to the mobilization of private funds that complement public resources.

The form of the concession was chosen for the construction and management of highways, vehicle parking places, marinas and other infrastructure projects. The 1st generation of concession projects began in the 1990s and included Attiki Odos, Eleftherios Venizelos Airport and the Rio Antirrio Bridge. The 2nd generation include Olympia Road, Ionian Road, Central Road, Aegean Motorway and Morea Motorway and were signed in 2007-2008. Among the concessions of the 3rd generation are the concession of Marina Alimou, the extension of the contract of Eleftherios Venizelos Airport, a double extension of Attiki Odos, which were expected to be procured in the first half of 2021, the Kasteli Airport of Crete and other infrastructure projects under discussion.

The effect of the pandemic is an unprecedented recession, more intense than the one provoked by the recent financial and economic crisis. The successive waves of relief measures announced by the government did not prevent a massive wave of padlocks especially in small and medium enterprises (IME GSEVEE, 2020 – Institute of small enterprises - Hellenic Confederation of Professionals, Craftsmen & Merchants) nor the reduction of income of thousands of workers, since even those who joined aid programs (i.e. Co-Work) did not prevent the reduction of their salaries. An exception to the rule of generalized loss of income and even profits, proved once again the seven concessions that operate on the Greek highways. Specifically: Olympia Odos (Elefsina - Corinth - Kalamata), Rio - Antirrio Bridge, Aegean Motorway, Central Road, Nea Odos, Moreas (Corinth - Tripoli - Kalamata) and Attiki Odos. The highways, despite taking advantage of opportunities opened by the public to mitigate the effects of the lockdown, like any other company regardless of their financial size, are seeking compensation from the Greek Government, citing the loss of revenue recorded in relation to 2019.

The seven concessionaires demanded from the State the total amount of 83,41 million € (Lialios, 2020). These claims directly contradict the interest of Greek taxpayers – even if provided for in the concession agreements, they are equivalent to a moral scandal and cannot be compared to the aid given by the Greek Government to entrepreneurs. The difference is qualitative and quantitative, as in this case we are dealing with a reimbursement of profits, similarly to the case of the airline company Aegean.

Past experiences convince us that the claim for compensation of private road operators is not an exception to a regime of orderly, predictable and contractual relations – in fact, the current concessionaires' claims can be characterized as the fourth episode in the series of similar claims in the last 15 years. The first episode began immediately after the agreements were voted in the Greek Parliament in 2008. The reasons were the obligations, undertaken by the Greek Government to complete the archeological investigations and the expropriations in the provocatively short period of 1,5 years, which was completely impossible. Given that these phase lasted five years, the state paid hundreds of millions in compensation (Kathimerini, 2013). "*The projects on the five highways are proving to be 'undermined' from the beginning, with the 2007 contracts causing a confusion of responsibilities, from which Contractors, Banks and the State are rushing to take advantage, each trying to load the others with the blame*" (Tzanavara 2010).

Even before the extra episodes of appreciation for concessions unfolded, "*a European record of cost and precision overruns, characterizes specific Greek infrastructure projects, according to a Community report, exceeding of even 100% of the cost of Greek infrastructure projects are revealed. It is also estimated that in our country one kilometer of motorway is worth up to EUR 65 million, when the most expensive project in the other Community States is paid for by the State at most EUR 20 million per kilometer.*

On Attica Motorway from 9 million EUR per kilometer to the final 'bill' of 20 million per km" (Kadda, 2009).

The second episode of the revision of the concession agreements was during the Memorandum period, where the decrease in traffic led to a record drop in the income of the concessionaires and the banks, which entered a period of crisis and loan stagnation, reluctant to finance the major projects. "*The 'juice' behind this banking policy is the interest rates. The loan agreements that were signed in 2007 ranged from 1% -1.5% when today in the interbank market they are around 5%. They claim that the financial model went bankrupt within four years and demand changes, seeking to secure future profits from the first "deviation" and hiding that the contracts expire in 2037, when much will have changed*" (Tzanavara, 2011).

The third episode occurred in 2016, when the Greek government was accused of not paying the public share on time and for a long time (toxrima.gr, 2016). It was estimated that only the first three compensation episodes increasing the actual cost of the projects by 6 billion € (Lialios, 2017)! The successive increases in the cost of public works born by the concessions were criticized even by the European Court of Auditors: in their special report on Public-Private Partnerships they stated that "*as a result of the payment of the State to the concessionaires and the significant increase of the financial costs, the total cost of the Olympia Odos project per kilometer increased by 69%, from 7.7 to 13 million euros. Meanwhile, the length of the highway to be built was reduced by 45%. Similarly, in the case of the Central Greece highway, the total cost of the project per kilometer increased by 47%, from 13.7 to 20.2 million euros per kilometer, while the highway to be constructed shrank by 55%. Overall, due to the restart, the total cost of the three motorways increased by 36%, from € 9.1 million to € 12.4 million per kilometer, and the EU contribution to the total project cost per kilometer increased by 95%, from € 2.1 EUR million per kilometer to € 4.1 million per kilometer*" (European Court of Auditors, 2018).

Last but not least, there are certain scandalous financial aspects that can be drawn from concessionaires' published balance sheets. Our main observation relates to the revenues and their formation over time. In the examined period 2012 - 2019, the concession highways was the industry that not only protected its revenues but reported even an upward trend.

Obviously, the concessions did not reduce the costs for the Greek state and the taxpayers, nor for the user of the highways. On the contrary, concessions proved to be a source of easy super profits and "safe shelter" for the shrinking construction sector in Greece (metaforespress.gr, 2020), in a time of shrinking wages and pensions and extreme financial uncertainty. Interestingly, we see the same course in the announced cost, which raises questions, since on an operating road axis there should be no large differences in operating costs. A closer look reveals that the carried-out depreciations

were increased probably for accounting reasons.[3] Moreover, the construction and in many cases the operation of the highway has been subcontracted to corporate subsidiaries. It is obvious that the pricing of services does not fall under the obligations of the law on public tender procedures being freely formed by the two related parties.

Another interesting observation is with respect to the significant fluctuations in loan interest rates. Regarding the loans, which were restructured more than once, they are always accompanied by interest rate hedging agreements, i.e. protection from the increases of Euribor, Libor, ECB, etc. As a practice in a period of interest rate increases, it seems to be rational, even at potential cost. In our case, however, with a steady decline in interest rates for more than seven years, this is a wrong choice or even a case of mismanagement. This is even less justified when banks also participate in the shareholding structure of concessionaires.

Concluding, besides the transaction with related subcontractors and possible overpricing, EBITDA is consistently half of the sales in all concessions. From the € 1 offered by the user, 0,20 refers to VAT, 0,40 serves safety, operation and maintenance cost and the rest 0,40 € is for serving the concession contract and the profits of the concessionaire. It turns out that practices like that do not serve the public interest, while the user of the infrastructure receives services that could be charged at half cost.

Egnatia Motorway: the project, operation and maintenance

EM, as part of the Trans-European Road Network, is one of the most modern and high-tech road axes in Greece. Based on relevant estimates, the traffic load reaches more than 3 billion vehicle-kilometers travelled annually.

In total, EO manages the operation and maintenance of an extensive motorway network of 916 km (including the vertical connecting axes[4]), carried out through external Contractors, appointed through the foreseen public open tendering procedures, coordinated and supervised by EOs staff.

The scope of these contracts includes:

i. Road maintenance (daily inspections and surveillance, rehabilitation / repair and improvement works including rapid repairs of dangerous faults/damages, fault reporting / damages from drivers through the website: www.egnatia.eu, winter

3 Consider additionally that we speak of depreciation on fixed assets of the company acquired with government grants, loan funds with government collateral, operating income and minimum equity.

4 The whole network consists of motorway A2 "Egnatia Odos" 657 km, A25 "Lagadas – Serres – Promachonas" 96 km, A29 "Siatista – Kristallopigi" 70 km, A1 "Axios – Evzonoi" 60 km, A23 "Komotini – Nimfaia – Greek-Bulgarian border" 22 km and the immersed tunnel "Aktio – Preveza" with its accesses 4,7 km.

maintenance, conservation of 3.500 km of safety barriers, repainting of the road horizontal signing and the large or smaller information signs, restorations of inscriptions on walls and signs, restoration of cables and sabotage and cleaning services on the road, rest and parking areas.

ii. Road operation: 6 Traffic Control Centers in a 24-hour operation, 100 Electronic Variable Message Signs, 180 Variable Speed Limit Signs and 850 Electronic Traffic Lane Definition Signs, operating 800 SOS Telephones and 34 Weather Stations, 60 traffic measuring stations on the road network of Northern Greece and the traffic management system.

EO coordinates and supervises the already established contracts. Experts, engineers and technicians guide and assist the contractors, while in parallel develop and implement important innovative applications for traffic safety, unhindered movement of the vehicles, environmental policy, statistics and traffic data. [5]

In the 2019 financial statements of EO the acquisition value of fixed assets is 6,43 billion €, referring to the total net amount spent for the construction of the main and the vertical axes of EM up to 31/12/2019.[6] Not to mention that apart from construction, there are other costs related to the development of the motorway and of course the costs of the expropriations, borne by the "Ministry of Environment, Planning and Public Works" and handed over to EO.

Cumulative depreciation by 31/12/2019 had amounted to 676,27 million € (82,45 million in 2019 alone – keep in mind that as depreciation relates to the financial exploitation of the asset, in our case it actually started in 2010). As the depreciation period – being determined by the Ministry of Finance – has a maximum duration of 50 years, when the fixed asset is fully exploited, the annual depreciation will be at least 128,69 million € (divide 6,43 billion by 50).

Since concession is neither legally or institutionally required, nor its operations generate financial losses or any non-financial net burden for the public interest, it is absolutely reasonable to consider as a minimum price the net value of the asset to be sold. The acceptance of a smaller offer would be abnormal raising questions with respect to the seller's motives. In our case, the reasonable fair value for the concession

5 EO staff developed important systems for the centralized management of the motorway – for instance: Traffic Measurement System of Northern Greece, Management of the Traffic Model of Northern Greece, Road (RMS) and Bridge (BMS) Maintenance Management Systems, Geotechnical Monitoring System, Basic Maintenance Management System (RMMS) and Road Claims (RCMS), User Road Damage Reporting System (MDNS), Transit License Management System (VPMS) and Electricity Invoice Management System (NRG Management System), Management System for Fixed Electromechanical Equipment, Operation of a Network Monitoring Center, Observatory, Promotion of projects of Intelligent Transport Systems, and the content of the corporate Environmental Policy.

6 Nevertheless, EO, besides its main role, implements a number of other projects and offers services to other public bodies, either through assignments from the Greek State or through direct agreements with municipalities, prefectures, etc.

of EO's assets is derived from the non-depreciated value of the investment - which on 31/12/2019 has been 5,76 billion € (subtract cumulative depreciation from the acquisition value of fixed assets) – reduced by the non-depreciated value after the concession period (35 years in our case), when the motorway will return to the public interest. Given the above, this will be 1,26 billion € (calculated by deducting 128,69 million x 35 from the 5,76 billion). In other words, following the method of accounting valuation, the minimum price for the concession should be 4,50 billion €.

EO also constructed the vertical axes that connect to the neighboring Balkan countries. Due to the increased percentage of EC contribution (60%), in the first years of operation tolls were not allowed in the specific roads. This has temporarily changed as the Commission accepted the term that toll revenues from the vertical axes will be only used to serve the public debt of the country. Yet, this provisional arrangement is not foreseen in the concession agreement, which provides that all revenues will be collected only by the concessionaire.[7]

In fact, from 2016 till 2020 33,23 million € have been secured for debt repayment (keep in mind the strong decrease of traffic due to the pandemic in 2020). Given the following assumptions – (i) the initial traffic load in the concession period of 35 years to be at the level of the year 2019 with an annual increase of 1,5%; (ii) proportional charges, as foreseen in the concession contract, to rise from todays 0,024 up to 0,051 €/km (excluding VAT) and (iii) an initial reduction of traffic, due to increased tolls, by 10% – it turns out that only from the two vertical axes through Serres (A25) and West Siatista (A29) the estimated revenue which could contribute to the reduction of public debt is 1,47 billion €!

Chronology of the concession procedure of EM by HRADF and its paradoxical form

In June 2011, Egnatia Motorway and its three main vertical axes was included in the public property portfolio to be privatized (2012-2015), in order to contribute in the repayment of the country's public debt. At the end of the same year, the superintendence of EO passed to the newly established HRADF, to launch the concession of the operation, maintenance and exploitation of the road. In August 2012, the Interministerial Committee for Restructuring and Privatization (Government Gazette 2316B/10-8-2012) transferred the rights of EO to HRADF.

On 16/11/2017, HRADF proceeded to the "Invitation to submit an expression of interest for the award of a service concession agreement in relation to financing, operation, maintenance and exploitation of Egnatia Odos motorway and three vertical road axes". In the announcement of the relevant tender procedure, the duration of

7 Today, all toll stations on the vertical axes are in operation, although issues of charging length costs are still pending.

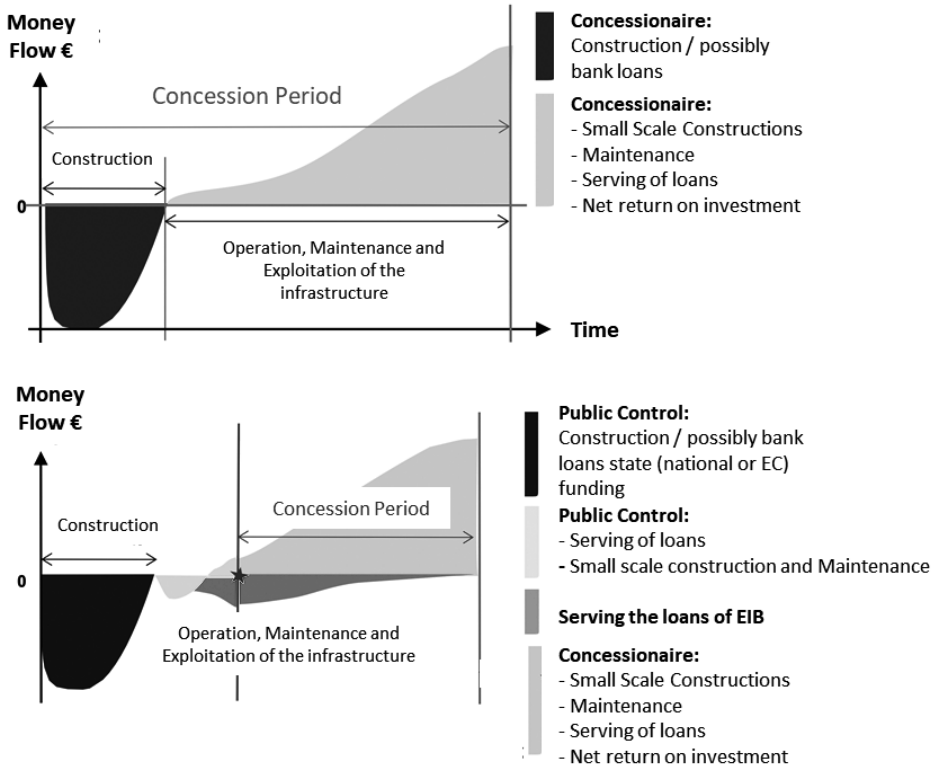
the concession was set up to 40 years. On 16/2/2018, applications from 9 investment schemes were received, out of which seven (7) pre-consortia have been pre-selected (16/5/2018) in order to submit binding offers. Large investment groups from abroad participate mainly in partnership with the largest Greek construction companies.

According to the directive 2014/23/EU, "*in order to avoid market segregation and restriction of competition*", the duration of the concession should be limited to the period in which the concessionaire can reasonably complete the amortization of its investment. Below is a typical cash flow chart of a motorway concession contract, where the concessionaire undertakes the financing and construction of the project in exchange for its exploitation for a sufficient period of time, as well as the corresponding chart for the "paradoxical-conflicting" form of the specific concession of EM.

It appears that the intended concession agreement for the specific Motorway differs significantly from a standard concession contract: it concerns an infrastructure that is already fully constructed with EU and national funds, with very small needs for new investments - the most important new investment will be the upgrade of the vertical axis Chalastra-Evzonoi with an estimated budget of no more than 290 million €, which cannot justify the need to seek for an investor to manage a fixed asset totaling 7 billion€ according to the provisions of the above-mentioned directive.

As already described, the concessionaire will receive an asset without pending issues and free of burdens. The concession coincides with the beginning of the strong profitability from the exploitation of the highway for 35 years. In that sense public interest could be only served if it receives a sufficient prepayment of future income in the form of a "concession fee". Moreover, this argument makes sense if the government had an urgent need to raise future revenues in financial terms, better than those of today's public borrowing. Yet, even that is this is not the case anymore, as government lending has currently very low interest rates.

Figure 1: Traditional model of Concession and the special case of EM



So, the main plausible reason why to proceed with the concession of EM is because of the Memorandum obligation since 2011 – Greek governments have failed to develop and submit to the "lenders" a well-documented, convincing, alternative plan, in order to prove that it will have better results, as we do in the present paper. At the same time, we have to say that construction groups, domestic and European, obviously exert very strong pressure to undertake this extremely profitable asset.

Additionally, the following issues arise: Egnatia Odos was EU funded and constructed as a development project for the regional areas of Northern Greece being among those with the lowest GDP p.c. in Europe. Raising tolls at the level foreseen in the draft concession contract, without this to be justified by future investments that need to be done, offsets its developmental character of the project. It is expected to reduce travel, especially for the economically weaker ones, pass on the increased costs to the users and motivate them to return to the old networks, degrading road safety.

The assessment of the value and the actual cost of the concession is extremely important for the financial interests of the Greek state. On the other hand , it is very tricky

to effectively assess the necessary repair and maintenance burden in the future. Candidates for the concession may overestimate artificially extensive relevant costs, in order to justify a longer duration and a lower price of the planned concession contract.

Respectively, the attempt to estimate for an extremely long period (35 years) the future traffic loads and therefore the revenue through tolls, contains an extremely high degree of uncertainty. It is a given that in the present circumstances anyone interested in the operation of EM, would present the worst possible scenario of future traffic loads as the main one.

In addition, for all the above very important issues, there is no publicity, open discussion or consultation – on the contrary, HRADF proceeds with secret pre-negotiations with the candidate concessionaires.

Finally, if we try the compare the other concession highways with the remaining public highway of Egnatia Motorway, we can mention that (i) the cost of transit for users of other highways in Greece is currently more than double compared to that of the EM (0,065 €/km compared to 0,03 €/km); (ii) operation and maintenance costs of the public EM are significantly lower than those appearing on the highways under concession contracts (a provocatively shocking example is Attiki Odos).

The finance of EM operation

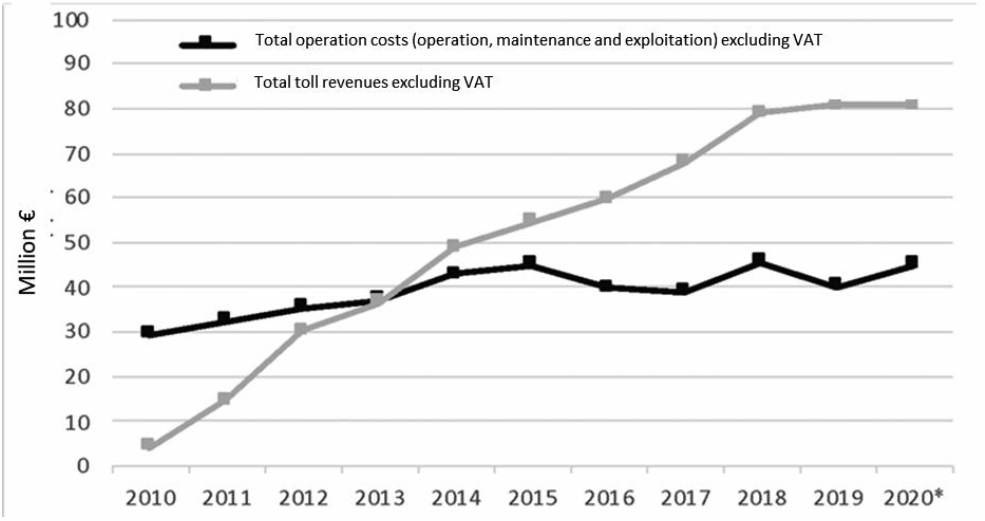
In the previous period of EM operation – 2010 till 2019 – annual operation, maintenance and exploitation costs of the road and tolls varied from 42 till 50 thousand of € per operating kilometer excluding VAT (estimation for 2020 was 47,821 €/km). Costs per kilometer were relatively stable with an average price of 47,500 €/km, despite the fact that in the same period operating kilometers raised from 620 up to 241 (due to the gradual completion of basic construction) and that, in addition, from 2018 began the execution of heavy road maintenance works.

On the other, the operation of toll stations started in 2010, after the completion of the construction of the entire main axis. Throughout the period, the relevant charges in EM were between 0,02 and 0,03 €/km (excluding VAT). A recent ministerial decision stabilized the toll costs for the users at 0,03 €/km – however, as we mentioned, the draft of the concession agreement foresees a very significant increase up to the level of the other privatized highways of the country (0,065 €/km). On an annual basis, toll revenues started in 2010 from 4 million € up to 81 million € with 16 toll stations in 2020 (estimation).

The following chart represents the annual evolution of revenues and total costs of the Egnatia Motorway and the Vertical Axes till 2020. From 2013 on, the year when 6 toll stations in 740 kilometers were in operation, toll revenues raised above the operating, maintenance and upgrading costs, despite the sufficiently low charging we mentioned before.

In accordance to the above, the Financial Statements of EO may report losses in the published balance sheets, yet these includes depreciation of the fixed asset. On the other, positive EBITDA since 2014 reaching 33,17 million € in 2019 indicate the viability of the operation, as well as the ability to liquidity for new investments (after repayment of loans) in the medium run. Similarly, from 2013 onwards, current assets surpassed current liabilities – in fact, current assets were more than ten times higher in 2019 (282,12 million € compared to the current liabilities that were only 22,16 million).

Figure 2: EM total operation costs and toll revenues till 2020



In fact, EDITDA may also increase further, since there are a number of Stations left to become operative even today and toll charges could be marginally increased.

It is therefore strange that the concession of EMs operation and maintenance is combined with the construction of the vertical road axis Chalastra - Evzonoi, tunnel upgrade projects, construction of Motorway Service - Rest stops and Parking Stops, etc., reducing thereby essentially the price requested for the concession by the public, although both funding and know-how can be easily and effectively covered by EO.

Detailed presentation of operation, maintenance and motorway upgrading costs

Operation and elementary/regular maintenance of the EM include all activities required to maintaining provided service at the optimum level: highway cleaning operations, safety barrier replacements, patrols, surveillance costs and emergency response teams, control centers, fire safety, maintenance of electromechanical equipment, road markings, local pavement restorations, instrumental monitoring of struc-

tures, geotechnical monitoring, snow removal, as well as the relevant payroll costs. It is obvious that the operating and regular maintenance costs are not fixed per kilometer, but depends on the geographical compartment, altitude, type and range of the specific part of the infrastructure.

The following table presents the costs of the above mentioned activities according to the relevant subcontracting tenders conducted by EO – overall more than 20 million € annually (excluding VAT) – for which it is important to mention that the resulting discounts are 60% on average.

Table 1: Contracts of operation and maintenance subcontracting 2015-2020

Year	Scope of the Contract	Duration	Tender budget without VAT	Average Discount	Contract price excluding VAT	Cost of operation and maintenance per year (excluding VAT)
2018	Operation & Maintenance and construction of toll stations 2018-2020: A	18 months	47.450.000 €	59,11%	19.401.536	26.6 million €
2018	Operation & Maintenance and construction of toll stations 2018-2020: B	18 months	49.455.000 €	58,21%	20.668.683	
2015	Operation & Maintenance 2015-2018 (1)	3 years	60.483.871 €	55,30%	27.488.723	18.3 million €
2015	Operation & Maintenance 2015-2018 (2)	3 years	60.483.871 €	55,18%	27.485.291	

Another important category of costs results from the electric lighting of crossroads and transport junctions, tunnels, sections of roads with frequent fog etc. With respect to this it is important to mention the possibility of heavy reduction of these costs by replacing new lower energy consumption lights (LEDs). (The specific project could be financed by the respective surpluses within 7 years.

Moving on, we need also to consider the costs for the operation of frontal and lateral toll stations including the electronic toll collection systems – personnel's wage costs, maintenance costs of systems, civil engineering and electromechanical works and electronic systems are the relevant expenses. Nevertheless, in this category we also have to consider that relevant costs can be substantially reduced if we assume the conversion of the toll system into a 'free flow' system.

Next to the operational costs (including regular maintenance) we have to take into account these for heavy maintenance and new constructions. The first Includes the replacement of asphalt layers, planned long-term maintenance or structural reinforcement of motorway structures (bridges, tunnels, support systems), replacement of safety barriers and vehicle intercept systems due to aging or changes of specifications, replacement of vertical signs and support bodies, restoration of embankments, repairing of culverts and other hydraulic works, inspections and repairing of damages of underground works, planned costs of replacing or modernizing electro-mechanical installations, restoration of existing landslides and new slope failures etc, plus the replacement of metallic safety barriers with new vehicle intercept systems.

The largest share of heavy maintenance expenditure concerns the restoration of road pavements. If we calculate this on the basis of current costs and historical data from the respective subcontracting contracts of EO in recent years it comes on average up to 190 thousand €/km excluding VAT (relevant discount rates reached 61%). The frequency of road remediation operations is based on the load of heavy vehicles. We estimated that the frequency of restoration has to be between 5 and 10 years and in parts of heavy truck traffic load, located mostly in the Prefecture of Thessaloniki, at 5 years.[8]

On the other, there are also new construction works planned within the next 5 years. These refers to new or upgraded existing motorway segments, the construction of new toll stations, Motorway Service - Rest and Parking Stops, the installation of a hybrid proportional tolling system in urban areas, the upgrading of tunnel systems, and the reinforcement of structures and the restoration of the stability of embankments. Of these, the most important expenditure concerns the upgrading of a 45 km motorway section of the Chalastra – Evzonoi axis. In our estimates we consider that the execution of the above new construction projects will be carried out with public tenders and the calculations were made based on data from previous relevant projects realized by EO, taking into account the average discount in the past.

Finally, we have to consider other expenses, including are management staff costs and various administrative expenses like project insurance and support for emergency reasons (Traffic Police, Fire Department, etc).

Based on the above assumptions and analysis, the estimated total annual costs of operation, maintenance and upgrade of the Egnatia Odos and the vertical axes during the 35 years period (2022-2056) vary from 56 million to 118 million €. In the first years total expenses will be higher, as the construction of new segments is foreseen,

8 Obviously, the forecast of heavy maintenance involves significant uncertainties and risks, which in the frame of the intended 35-year concession's very long-term forecasts have been exacerbated: during the period of the concession tender, according to information that have been leaked to the press (consider the unacceptable secrecy of relevant negotiations), heavy maintenance costs vary from 1 up to 6 billion €!

while at the same time period heavy maintenance works will take place. The average annual cost of operation, maintenance and upgrade amounts to 74 million €.

Analysis of future toll revenues

The revenues from the operation of EM and the vertical axes come almost exclusively from the charging of using the specific infrastructure. Tolls yield up to 98% of total revenues[9] – therefore it is important to discuss in details the billing assumptions and scenarios in the following sections.

According to the most recent joint ministerial decision, toll charging (including VAT) for the basic category of vehicles on EM will rise to 0,04 €/km within 2021 before the concession; following it will rise again to 0,05 €/km with the commencement of concession contract (assumingly in the beginning of 2022) reaching 0,064 €/km in 2024, similar to the rest concession contracts for the other motorways of the country. This projected increase of toll charges was made solely in order to raise even more attractiveness of the intended concession.

In the following we examine whether holding tolls at the current level of 0,003 €/km is economically viable, compared to three other alternative scenarios: (i) 0,04 €/km for 35 years, (ii) starting with 0,04 €/km and then, after the 2nd year rising up to 0,05 €/km and (iii) following the pre-mentioned ministerial schedule that increases charging up to 0,064 €/km. The basic scenario and the one with an average charging of 0,04 €/km is compatible with the case where the present status will not change and the intended concession will not proceed.

Analyzing the time series resulting from the specific scenarios provides us with the following conclusions:

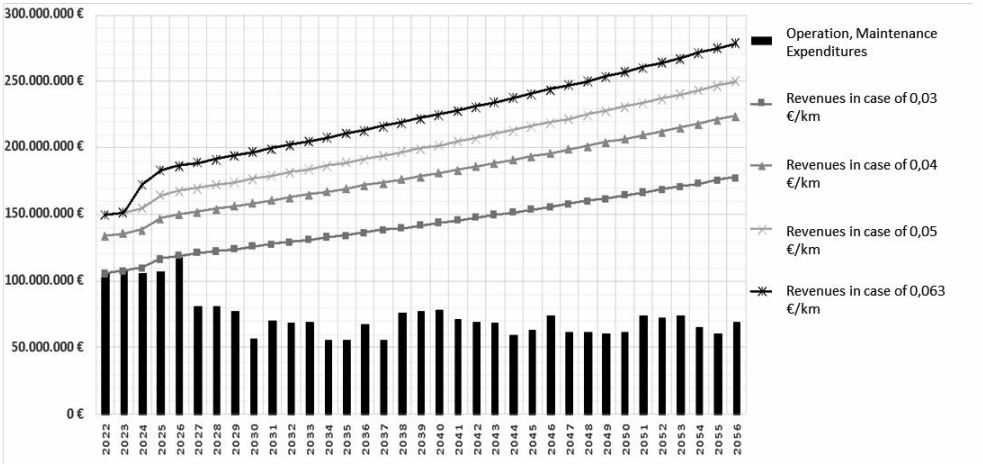
i. With the existing low charge of 0,03 €/km, the annual toll revenues range from 106 to 178 million €, while when the average toll rate rises to 0,04 €/km, the annual revenues range from 134 to 224 million €. The other two scenarios, with 0,05 €/km from 2022 and 0,064 €/km from 2024, provide annual revenues ranging from 149 to 250 million € and from 149 to € 278 million € respectively.
ii. Therefore, cumulative revenues for the 35 years period comes up to 4,99 billion € for the basic, existing charging and rises up to 6,28 billion € for the modest increase to 0,04 €/km, while in the other two scenarios extends to 7,01 and 7,78 billion € respectively.

9 Other courses of income are the Rest and Service Stations, the leasing of premises for the installation of mobile telephone network, as well as that of energy or telecommunication networks. Also, the compensation of the road administrator due to damages caused by third party liability (accidents) as well as the imposition of fines for non-payment of tolls.

Forecasting the future results of EMs operation and exploitation

The detailed data of costs and revenues were presented separately in the previous paragraphs. The following figure depicts the time series of annual total expenditures and revenues. It is obvious that when maintaining the current low charge of 0,03 €/km, revenues are slightly above expenditures during the first 5 years, where the execution of new construction and heavy maintenance works are foreseen. For the rest of the 35 years period, exploitation of EM is consistently profitable. As it is expected, the profitability is even stronger in the other three scenarios with increased toll charges and therefore total revenues.

Figure 3: Annual total operation and maintenance expenditures vs total revenues for a period of 35 years (excluding VAT)



In other words, losses do not appear in none of the studied cases. Even in the first five years of the low charges scenario, financial results are marginally above zero. In detail:

i. In case of 0,03 €/km tolls, annual profits range from 0 to 114 million €. Cumulative financial result over the whole 35 years period is estimated at 2,4 billion €.
ii. In case of 0,04 €/km tolls, annual profits range from 27 to 160 million €. Cumulative financial result over the whole 35 years period is estimated at 3,7 billion €.
iii. In case of 0,05 €/km tolls, annual profits range from 42 to 185 million €. Cumulative financial result over the whole 35 years period is estimated at 4,4 billion €.
iv. In case of 0,063 €/km tolls, annual profits range from 42 to 213 million €. Cumulative financial result over the whole 35 years period is estimated at 5,2 billion €.

In accordance to the relevant European Directive, it is important and interesting to calculate for EM the break-even point of toll charging (defined as the amount to be paid by the road user so that total operating, maintenance and upgrading costs will

be covered), something that unreasonably has not been carried out by the Greek State in any pf the national public roads. It turns out that for the entire 35 years the break-even charge for the basic category of vehicles (category 2) in the whole 35 years period is 0,0125 €/km (VAT excluded). Any additional charge contributes to the profitability of the highway operation.

Based on all the previous calculations we end up with the following table that compares the financial results of the two alternative management models of the EM and the Vertical Axes: the 1st model is when EO retains management and toll collection, while executes works and services with public (sub-)contracts with private entities (the currently operating scheme), the 2nd is the case of moving on with the concession, where toll collection and the execution of works and services will be managed by the concessionaire.

Starting from the intention to ensure sufficient comfort and the highest safety to users, as well as to combine socially acceptable operating costs (tolls) with attaining significant public financial benefits, the choice of a concession contract for an already constructed infrastructure project and for a long period of 35 years is extremely problematic: on the one hand it multiplies the costs to the users and on the other hand deprives the State of almost all future financial benefits receiving only a subset of them.

Sustaining the management under the control of EO with the present model of subcontracting can bring a total profit to the State between 3 billion and 6,15 billion €, depending on the toll charging scenario. In this case it is possible to keep the toll charges at lower levels and at the same time to generate significant profits for the State. Instead, in the concession model, given the assumptions we made according to the information leaked despite the practice of secret negotiation unacceptable to the public interest, the total public financial benefits can be estimated between € 1,23 billion and € 1,98 billion. Where a higher IRR or less favorable assumptions of revenue and expenditure are applied, the total profits are significantly limited.

In the low toll scenarios (0,03 €/km or 0,04 €/km), EO will even return/reinvest 85-125million € per year. If we consider the high toll charging scenarios (0,05 €/km and 0,063 €/km) this reinvestment may rise up to 150 – 175 million € per year, while the Concessionaire will return only 15 – 17 million € (7,5% of revenue) per year to the State! This is actually the main message from the economic comparison of the of the two alternative management models: if the present status will be sustained and depending on the amount of the tolls, the State will have for 35 years annual profits of up to 175 million €, while in the case of the concession will drops dramatically to 17 million €!

Table 2: Comparison of public (financial) benefits in the two alternatives of EMs management

		1st model: EO controls of EM (total annual average costs: 74 million €/km)	2nd model: Concession Contract	
			2.a: total annual average costs remain the same (74 million €/km)	2.b: increased total annual average costs: 110 million €/km
Low Tolls scenario: 0,03€/km	**Total Public Financial Benefit in 35 years**	**2.996.259.328 €**	-	-
Medium Tolls scenario: 0,04 €/km	**Total Public Financial Benefit in 35 years**	**4.450.603.127 €**	-	-
Tolls 0,05 €/km as the minimum charging foreseen in the frame of the intended concession	Public financial contribution (lump sum)	-	-60.000.000 €	-60.000.000 €
	Annual revenues – total at 35 years	5.268.671.514 €	529.283.240 €	529.283.240 €
	Concession fee in its commencement (lump sum) – IRR estimate ~8%	-	1.200.000.000 €	760.000.000 €
	Total Public Financial Benefit in 35 years	**5.268.671.514 €**	**1.669.283.240 €**	**1.229.283.240 €**
Tolls 0,0633 €/km as the minimum charging foreseen in the frame of the intended concession	Public financial contribution (lump sum)	-	-60.000.000 €	-60.000.000 €
	Annual revenues – total at 35 years	6.153.930.193 €	589.623.531 €	589.623.531 €
	Concession fee in its commencement (lump sum) – IRR estimate ~8%		1.450.000.000 €	920.000.000 €
	Total Public Financial Benefit in 35 years	**6.153.930.193 €**	**1.979.623.531 €**	**1.449.623.531 €**

Conclusions

Essentially, the specific model of the concession is only about the capitalization of future revenues, i.e. instead of providing 6 billion € over 35 years for the public finance, in the best case it will generate no more than 1,5 billion € concession fee in its commencement (lump sum). In fact, it is considered extremely likely that the fee

of the concession will be much lower, making a problematic concession model even provocative and scandalous.

In that sense, the concession contract of the fully constructed Egnatia Motorway is not a productive investment and will not bring additional benefits. It is rather a form of privatizing simply the tolls collection procedure, instead of these being collected by a public interest company (EO). The data shows that for the management of EM, including new upcoming construction works, there are no financing/investment needs to justify the need for private capital investment through a "formal" concession contract in accordance with the definitions and provisions of the directive 2014/23/EU (incorporated into national law 4413/2016).

Consider also that the construction companies participating in the consortia that expressed their interest for the specific concession also carry out public projects entrusted by the State following public tenders. In these projects the discounts offered by these companies currently amount to almost 50%. As we have already mentioned, in case these companies gain control through the concession, the way is opened for additional profitability by maintaining worse conditions in the technical works that they will implement, directly or indirectly.

By far, the best result for the economy and the society is achieved by maintaining the present mixed management model, where the heavy maintenance and extension projects are carried out by private construction companies subcontracted by the public interest EO and the tolls are publicly controlled. Thereby, besides to the execution of other public works in EM crossing areas and financing wider projects in the Regions of Northern Greece according to the relevant governmental planning of infrastructure, also the contribution to the reduction of the national debt will remain significant, as the depositing a percentage of profits into the Public Debt Servicing Account will continue and the repayment of EIB loans to the Ministry of Finance also.

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Flora Merko
Aleksander Moisiu University, Durrës, Albania
E-mail: floramerko@uamd.edu.al

Llambi Prendi
Aleksander Moisiu University, Durrës, Albania

Fatma Trumçi
Dealership Automotive Services, Economist, Durrës, Albania

Alvina Gucaj
Protik Innovation Center,Tirana, Albania

Florjon Merko
Ministry of Finance, General Directorate of Treasure, Tirana, Albania

UNEMPLOYMENT AND ECONOMIC DEVELOPMENT (ALBANIAN CASE)

Abstract: Unemployment is one of the main problems in countries` economies, especially in developing and underdeveloped countries. The need to be employed is a phenomenon that accompanies every person from the moment he reaches the age to have it. Why are unemployment figures so distressing in many countries? Why does Albania still suffer from double-digit unemployment? The Albanian government certainly must intervene with its policies to mitigate this economic phenomenon. Addressing this macroeconomic problem requires time and a sustainable development plan.

The paper analyses the performance of unemployment in Albania over the years, identifying the factors that have influenced unemployment, its impact on the economy, on the population living standards, and also the effects on poverty and economic inequality.

To carry out this work, the methodology used bases on theoretical economic analysis, to explore the relationship between unemployment, GDP, and poverty. Our research showed that unemployment in Albania is affected by many factors, including government policies undertaken over the years, informality in the economy, corruption, low wages, technological progress, etc. The data analysis results show that the high unemployment rate directly affects poverty and economic inequality, as well as the economy as a whole, and there is a strong relationship between these three indicators (Unemployment, GDP, and Poverty).

The conclusions and some recommendations conclude the paper, hoping to have contributed to finding the way for reducing the unemployment rate and emphasizing the role of government policies in increasing employment.

Keywords: Labor market; Macroeconomic Policy; Unemployment; Poverty; Economic Inequality.

Introduction

Employment and unemployment have been considered for many years as one of the biggest problems and challenges of any society. Since the late 1980s, the focus of macroeconomists has shifted specifically to the effects of Government Policies related to the long-run rate of economic growth. This difference is partly reflected in the recognition that the difference between prosperity and poverty for a country depends on how fast the economy grows over the long term. (Barro J. R., 1999).

Addressing unemployment and employment indicators is one of the challenges even in countries that are developed and have stable economies. The transition from a fully centralized economy to a free market, as well as the political changes that took place after the 1990s, have been accompanied by significant changes in the labor market for Albania. It tends to change at a fast and continuous pace, so its study and further information and orientation are considered important, especially for youth as an age group that suffers more from the high unemployment level in Albania. The empirical analysis also confirms that Government Efficiency and Rule of Law have a positive impact on GDP per capita growth (Avdulaj, Merko, and Muco 2021).

According to INSTAT (2021), the official unemployment rate in 2020, for the population aged 15 and over, is 11.7% and marks an increase of 0.2 percentage points compared to 2019. For men, the unemployment rate is 0.4 percentage points lower than for women. The unemployment rate for young people aged 15-24 is 26.5% (27.0% for males and 25.9% for females). Compared to the previous year, the youth unemployment rate fell by 0.7 percentage points.

Table 1: Unemployment rate in Albania (2016-2020)

Age group	Unemployment rate (%)				
	2016	2017	2018	2019	2020
Total					
15-29	28.9	25.9	23.1	21.5	20.9
30-64	11.8	10.8	9.2	8.7	9.2
15-64	15.6	14.1	12.8	12.0	12.2
15+	15.2	13.7	12.3	11.5	11.7
Male					
15-29	29.7	27.0	23.1	21.3	20.8
30-64	12.2	11.3	9.4	8.8	8.8
15-64	16.4	15.1	13.2	12.2	12.0
15+	15.9	14.6	12.7	11.6	11.5
Female					
15-29	27.8	24.0	23.1	21.7	21.1
30-64	11.2	10.1	9.0	8.5	9.6
15-64	14.6	12.8	12.3	11.8	12.4
15+	14.4	12.6	11.9	11.4	11.9

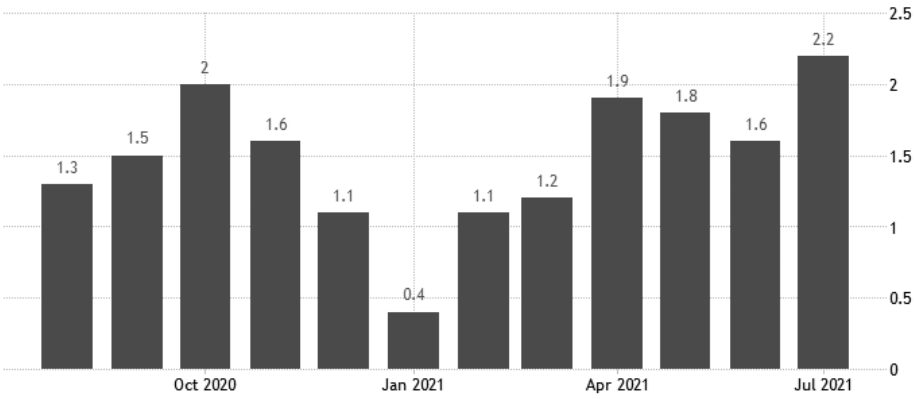
Source: Labor Force Surveys 2016-2020

Despite these generally downward trends, unemployment remains high at 11.7% for the year 2020. The unmanageable situation from COVID has increased unemployment levels (0.2%), and maybe this figure will continue to grow during the year 2021.

In Albania, in 2020, citizens live on $5.2, GDP per capita, (Montenegro $7.7; Bosnia & Herzegovina $6.0; Kosovo $4.3; North Macedonia $5.9), and since 2014, although there have been GDP growth, the government's lack of economic and financial policies has exacerbated poverty, unemployment, and school dropouts. In 2020, Albania had the lowest economic decline in the region, after Serbia, but during the pandemic, the number of "young poor" increased more than in any other country. According to World Bank experts, the cause of growing poverty is policies that have stimulated low wages and unproductive employment.

The situation created by Covid-19 gives effects also to the inflation rate. The annual inflation rate in Albania picked up to 2.2 percent in July of 2021 from 1.6 percent in the previous month. It was the highest inflation rate since August of 2018, mainly driven by prices of food & non-alcoholic beverages (4.1 percent vs 2.7 percent); transport (4.4 percent vs 2.5 percent); and housing & utilities (0.7 percent vs 0.5 percent). Every month, consumer prices went up 0.1 percent after a 0.8 percent drop in the prior month. (Trading Economics and INSTAT, 2021).

Graph. 1. Albania inflation rate by years



Source: Trading Economics and INSTAT

According to Wodon (1999), there is a reciprocal correlation between poverty and economic growth. Poverty affects growth and economic inequality and at the same time is affected by both of them. Economic inequality has consequences for economic growth in the long run. Relatively small changes in income redistribution have a much greater effect on poverty.

Another problem for Albanian economy is informality. Undeclared work is one of the main features of the hidden economy, which affects people within a variety of socio-economic conditions, which at the same time it is characterized by potential negative outcomes ranging from social problems, growing inequalities, and income gaps, as well as corruption and criminal activities (CRPM 2017). As in most Eastern European countries, the main focus of combating undeclared work in Albania, is to limit violations of Labor Law.

In this paper, we will try to give a complete overview of unemployment in Albania, analyze the rate of unemployment by addressing the direct and indirect factors that cause it. Also, will analyze the impact and the relation between GDP, unemployment, poverty, and economic inequality.

The main research questions of the paper are related to: What is the role of the government in reducing high unemployment? What are the policies that should be undertaken to reduce unemployment? What policies would favor the promotion of employment? What is the role of education in human capital formation? Does it have an impact on increasing the income of employment? What are the biggest difficulties in the labor market in Albania and what should be done to overcome them? The «shock» of the Albanian economy by COVID-19, will there be consequences in the labor market? Is there any relationship between unemployment, GDP, and poverty?

Methodology

The data on the variables used in this study are taken from the World Development Indicators, the database of World Bank; Institute of Statistics of Albania, reports, and statistics; Bank of Albania and International Labour Organization (ILO). The period of the data is from 2008 to 2018 (annual data), which means from the period when the World Economic crisis began (2008) until the beginning of the COVID-19 pandemic (2019). We tried to use the econometric methods to study the relationship and dependence between the variables for this period, but unfortunately for Albania, we couldn`t do it.

Tabela 2: GDP and Unemployment rate, years 2008-2018

Country	Year	GDP % GDP per capita growth (annual %)	GDP (million ALL)	Unemployment (%)
Albania	2008	8.328035999	1,080,675.93	13.06000042
Albania	2009	4.048888488	1,143,936.46	13.67399979
Albania	2010	4.223037747	1,239,644.58	14.08600044
Albania	2011	2.821557928	1,300,624.08	13.48099995
Albania	2012	1.585156475	1,332,810.99	13.37600040
Albania	2013	1.187203907	1,350,052.64	15.86600018
Albania	2014	1.985426103	1,395,304.63	17.48999977
Albania	2015	2.516852986	1,434,306.51	17.07999992
Albania	2016	3.480117005	1,472,479.13	15.22000027
Albania	2017	3.897710666	1,550,645.49	13.75000000
Albania	2018	4.328395578	1,636,731.32	12.34000015

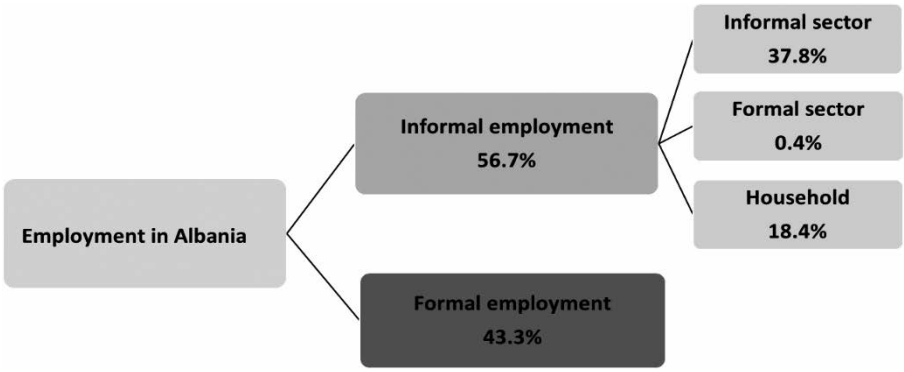
Source: World Bank and INSTAT

If we see the table, notice that even the GDP is grown year by year, the same thing has happened to unemployment for most years of the selected period (11 years).

Findings

Previous studies related to employment in Albania have shown that the Law of Okun in the Albanian economies did not work accurately, but approximately. Although referring to Garo (2018) it is seen that over the last 17 years, for every increase in real GDP by 1% we have a decrease in the unemployment rate by 1.3%. This result, although in a more dimensioned way, shows that to some extent in Albania the law of Okun (1962) is confirmed (Civici & al, 2020). But what we examined at the selected period the low is difficult to be confirmed. Informality is breaking the legality of linking these indicators (GDP, unemployment, and poverty). For the Albanian economy, the law can be implemented in certain sectors, but the lack of data prevents us from doing a sectoral analysis. Perhaps, this will remain the challenge of future studies. Even GDP is gone up, the unemployment rate has gone up too, for the period 2008-2016. Only the data on the last three years shows the opposite. In our opinion, this situation is related mainly to informality in the Albanian economy.

Graph 2. Share and composition of informal employment, total %



Source: ILO Labor force survey 2019

According to Labor Force Survey (ILO 2019), the informal employment in Albania is too high, 56,7%, of which in the informal sector 37,8%, in formal sector 0,4% and in household 18,4%.

To be noted in recent years is the decline in productivity, despite the increase in the number of employees. In 2019 compared to 2018, production fell by almost 1%. Probably, this phenomenon occurs for two reasons. First, most jobs are a formalization of existing ones and not new jobs, and this does not affect production. Second, the new employment stock for 2019 has occurred in those sectors that are characterized by low wages. The working-age population (15-64 years old) continues to decline in Albania and in most of the Western Balkan countries. In Albania for the period 2015-2019 has decreased by 0.6% the working-age population while, for the same period, the number of pensioners has increased by 12%. This is a trend driven by an aging population and the ever-increasing emigration. In 2019, 60,384 Albanians were granted first residence permits of an EU Member State, principally in Italy (35%), Greece (26%), and Germany (20%). The growing trend of emigration has negative effects on our country's economy reducing the labor force participating rate, and the labor supply because most of them are young people and students that will not be back again. This constant aging of the country's population has an impact on economic growth. On the other side, emigration looks to have a "positive" effect, by reducing the unemployment rate in the country.

Unemployment can have a devastating impact, both on family's life and on the overall economy. Loss of revenue has an immediate effect on reducing consumer spending.

The economic crisis as a result of COVID-19 brought major consequences on the level of unemployment, leaving many individuals unemployed. A high level of unemployment leads to increased poverty, thus quite well emphasizing the correlation between rising unemployment and the poverty it causes.

Conclusions and discussion

Even though the number of educated individuals is increasing there is a mismatch between supply and demand for well-educated human resources. The labor market in Albania is unstructured and not well segmented. In Albania having a job is very difficult which is related to the business environment that is dominated mainly by SMEs. The minimum wage in Albania is quite low compared not only to European countries but also to the Balkans.

GDP growth has had a very low impact on overall poverty reduction. Unemployed people are poor, and the impact of economic growth has not had a satisfactory impact on the population`s standard of living, given the difficulties of finding a job in our country. This better shows the correlation of economic growth, unemployment, and poverty in Albania

The economic crisis as a result of COVID-19 caused major consequences to the level of unemployment, by leaving a lot of individuals unemployed. A high level of unemployment leads to increasing poverty, thus highlighting quite well the direct relationship between rising unemployment and the poverty that comes from it.

Despite the difficult economic situation created not only in Albania by the COVID-19 pandemic, unemployment in our country is also expected to have a downward trend in the coming years. According to the Ministry of Finance and the WB, unemployment is expected to fall below 10% from the current level of 11.7%. This decline will come mainly from economic and continuous employment growth, from the slight reduction of the working-age population and, perhaps, also from the continuous increase in emigration and the fight against informality, which remains a challenge for all Western Balkans countries.

To promote a fully integrated approach, the Employment and Professional Training Strategy should not be limited to, but should also extend to social, educational, tax, enterprise, and regional policies. Government policies should support with funding local producers being able to measure the effects of business development, which lead to increased domestic production, employment, further economic growth, and macroeconomic stability of our country. Demographic developments are putting pressure on the region's economic models. Foreign experts suggest that in Albania is needed to increase learning skills as a basis for orienting towards the innovation economy.

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Arjeta Hallunovi
University Aleksander Moisiu Durres, Albania
E-mail: arjetahallunovi@yahoo.com

Lindita Mukli
University Aleksander Moisiu Durres, Albania

Fatmira Prodani
University Aleksander Moisiu Durres, Albania

Denisa Merhadi
University Aleksander Moisiu Durres, Albania

CAUSES OF THE INFORMAL ECONOMY IN ALBANIA

Abstract: The topic of informal economy and its accompanying phenomena personified in corruption, bribery and other distortions that accompany this destructive economic and social phenomenon are almost daily topics in the media, in professional and political debates and in everyday conversations between ordinary people. It is worth noting the paradox that consists in the fact that the more it is debated about the phenomenon in question, not only does not weaken and eliminate but on the contrary gains even greater intensity.

In recent years researchers have shown interest in studying the informal economy in many countries. This has come about as a result of the causes and implications of policies related to the informal economy. The informal economy is difficult to measure as in nature it is a hidden economy. The results show that the unemployment rate has a negative effect on the informal economy in Albania. This shows that the effect of unemployment income is greater than its replacement effect. In this study, the causes, factors and consequences of the informal economy are analyzed. It is shown that the informal economy has an impact on the distortion of a country's national statistics. After analyzing the tax system, informal employment and the informal economy over the years, some recommendations have been made to reduce the distorting impact of the informal economy.

Social, political and institutional factors play a major role in the economic development of the country and economic growth in developing countries but also in developed ones. Informality, which is a symptom of deep institutional weaknesses, is one of the factors responsible for reducing investment and expenditure, increasing income inequality, reducing foreign direct investment, and allocating resources. Informality poses a threat to a country's economic growth as it reduces efficiency in the private and public sectors. It is one of the most important factors affecting the reduction of economic growth in many countries of the world. This is a common occurrence today in many developing countries and arises as a result of their poverty. Informality is bad, not because money and benefits change manually or because of participants' motives, but because it privatizes particular aspects of public life by creating various debates and problems.

Key words: Albania, Corruption, Informal Sector, Informal Employment.

Introduction

The reasons that have influenced the development and growth of the informal economy in Albania are numerous: ineffective government policies in poverty reduction; high taxes, their complicated system and administrative abuses; widespread acceptance by the illegal labor society and informal economy; low probability of recording and punishing illegal work; lack of competencies and trust in official institutions; uncertainty in investments, etc. Detailed and reliable assessment of the size of the informal economy is a rather challenging exercise (Bernabè, 2002). The informal sector appears in both industrialized countries and those with developing economies (Bezemer, 2001). The main effects of the informal economy are on (Bass and Geoghegan, 2009):

Monetary indicators - Informal activities tend to be carried out in cash, increasing the demand for currency in circulation.

Labor market participation - As the number of employees in the informal sector increases, the rate of employees in the formal sector decreases. In the formal sector there are informal wage practices. Undeclared wages exist in all countries of the region and are mainly made in the form of so-called "wages in envelopes", where employers formally pay (so declare) their employees with the minimum wage, which is then compensated with an additional wage paid in cash (which is not declared). This practice has a significant impact on public finances and reduces the contribution to social security and taxes. Another impact is that by avoiding income tax, they lose social security benefits in the future.

Official statistics - Reliability decreases with the growth of the informal economy (Ahmed, Pasha and Rehman, 2016).

Economic growth - There are two opposing trends for the effect of the informal economy on economic growth. The first is that the decline of the informal economy affects economic growth, from tax collection. Second, the informal economy is more competitive and efficient compared to the formal sector, thus boosting economic growth. The high level of informality in the economy leads to tax increases to meet public spending needs. The main factors that influenced the growth and strengthening of the informal economy are: mass closure of jobs in the transition period; large demographic shifts towards plain areas mainly towards Tirana; high politicization of the state administration and pronounced interventions in economic decision-making; drafting new and constantly improving legislation, but leaving space for informality in the economy. Informal economy or fiscal evasion is one of the biggest challenges of the country in terms of economic development, the degree of informality according to estimates is 30-35% of gross domestic product, these data are alarming as the presence of this phenomenon causes damage comprehensive in the country's economy. The informal economy contributes to the creation of a large inequality in the

"market economy", uncertainty and unfair competition (Bandaogo, 2016). This type of economy causes budget losses, but also a lack of information about the number of employees (Agénor and Montiel, 2015). The fight against the informal economy must be a priority and a basic condition for economic development. Informality is not a problem of only one country, but of the whole region, in the countries of the "European Union" the level of informality is around 18% which is not statistically small considering the level of development and efficiency in these countries. Unless rapid and effective steps are taken in the fight against the "informal economy" it is impossible to create new jobs, the poverty rate cannot be reduced and at the same time severely damaged the state budget (Andrews, Sánchez and Johansson, 2011).

Literature review

The informal sector, also known as the undeclared economy or the shadow economy, is present in every country, however there is no consensus from studies on how to define it (Johnson, Kaufmann and Shleifer, 1997). Kanbur (2009) suggest that when estimating the size of the informal economy it is important to estimate the size of firms as this is highly related to informality. According to the international literature, to reduce informality it is suggested that three main principles be considered (Jarvis, 2000):

- Gradual approach to formalization through the preparation, discussion and implementation of an integrated strategy against informality;
- Pay attention to the order of measures taken. Strong rules should come after good rules have been applied. Fighting the informal economy with repression while having problems with law enforcement puts you at greater risk of damaging the economy and increasing unemployment.
- Social capital building. It is important to aim at increasing transparency and fighting corruption. Even good rules may not work if there is a low level of social capital and weak institutions.

According to Kiani, Ahmed and Zaman (2015) there are two opposing views about informal labor markets. First, according to one view, the informal sector mostly serves the function of absorbing the surplus of labor force. Consequently, the rise of informality is interpreted as economic failure and informal employment is considered as imposed on the individual. Proponents of the other perspective insist that the informal sector should be seen as a dynamic sector that aids economic development. In this case the growth of this sector is seen as a sign of economic success and informal employment is voluntarily chosen as an opportunity for higher pros. According to the authors, both attitudes can be correct and can be applied in the same state.

According to Ruer and Knight (2007) unemployment in less developed countries increases poverty to the extent that workers in these countries simply can no longer

remain unemployed, and consequently have to accept employment in the informal sector. As extensive as the informality literature is, so are the factors that have been identified as determining the decision of the worker or employer to operate in the gray economy. First, there are a number of authors who suggest that the level of taxes, as well as barriers related to bureaucracy and employment regulations, play a very important role in determining businesses to operate informally (Putniņš and Sauka, 2015).

Based on empirical research, Torgler, Schneider and Schaltegger (2010), for example, conclude that employment regulations and the tax burden have the greatest effect on the size of a state's informal sector. The degree of informality also depends on the skill level and demographics. Skills level is measured by education or engagement in industry (Schneider, 2012). Intuitively, the low-skilled workforce is expected to act more informally by considering compensation and other factors (Schneider, 2002).

While academics focus heavily on creating the conceptual framework for measuring informality, there are studies that focus on the more practical challenges posed by informality (Horodnic, 2016). Still, there is a division between the authors who see informality as an obstacle that needs to be eliminated as soon as possible, and others, who say that informality is a phenomenon that can be used for economic growth in the long run (Henry and Sills, 2006).

Reducing the weight of informality

- To identify the degree and reasons for the use of "cash" in the Albanian economy, the impact of its use as a means of payment in the expansion of the informal economy and to present the development of the payment system as a means to reduce the use of cash in the economy.
- Strengthen fiscal discipline, full implementation of the law for all economic activities.
- Reduction of administrative barriers and fiscal burden, expansion of information services and other services in favor of business which in addition to the effects on economic development will bring a reduction in the degree of informality in the economy.
- Real study and verification, photographing the situation regarding the construction of the tourist area, with priority given to the development of tourism. Unlock, formalize investments operating in the private sector.
- Reduction of legalization fee for informal buildings. This encourages business registration and increases tax collection. Enterprises in the informal economy face numerous barriers, such as infrastructure and institutional issues (Abdixhiku, Pugh and Hashi, 2013).

The main objective of the state is to minimize undeclared work that will be achieved through several directions (Feige, 1989):

- strengthening the partnership relations with other actors of the labor market, mainly with the social ones
- institutional development and improvement of the labor inspection service
- creation of a unique and modern system of work services at the regional level through the improvement and development of the working method at the regional level through the improvement and development of the working method and managerial capacities of the staff and the ability of the employees.

The realization of these competencies is realized by:

- improving the legal framework and management methods;
- increasing the degree of professionalism;
- organization of national actions as well as state policies to promote employment;
- consolidation of control bodies and cooperation with social partners.

Old and new views on the informal economy

In recent years, in various countries it has been done work to expand the concept and definition of the "informal sector" to include different types of informal employment that were not included in the previous concept and definition (Yasmin and Rauf, 2003).

Table 1. Old and new views on the informal economy

OLD VIEWS	NEW VIEWS
The informal economy exists detached from the formal economy.	The informal economy is related to the formal economy - it produces for it, distributes for it and provides services to the formal economy.
It represents a reserve pit of labor surplus.	Most of the increase in employment in the informal sector has been due to the decline in employment in the formal sector.
Work in the informal economy is mainly composed of survival activities and thus it is not subject to economic policies.	Informal enterprises include not only survival activities but also sustainable enterprises and dynamically growing businesses. While informal employment includes not only the self-employed but also others.

Source: Authors

The informal economy contributes to the creation of a large inequality in the "market economy", uncertainty and unfair competition (Williams and Schneider, 2013). This type of economy causes budget losses, but also a lack of information about the

number of employees. The fight against the informal economy must be a priority and a basic condition for economic development.

The fight against informality is an important precondition for a country that aims to (Chen, 2004):

- increase the efficiency and competitiveness of its economy;
- improve the investment climate;
- ensure the implementation of balanced tax policies;
- ensure sustainable economic growth in the long run;
- fulfill the obligations arising from the framework of the Agreements with the EU.

Conclusion and Recommendations

In the case of informality, more attention should be paid to the causes of the disease than to its cure. Regarding the reduction of informality, it should be understood in the first place what this phenomenon is, why it is caused and if there is a possibility in preventing this phenomenon. So, not only measures that condemn informality should be taken, but also preventive measures.

The informal economy is a complex phenomenon present in every period. This phenomenon is present in almost every state sector, or private business. This phenomenon is present in every country, not only in Albania. It is found everywhere, regardless of the stage of economic development of a country. It is not enough just the preventive measures of the government to reduce the degree of informality, it should be emphasized the civic awareness, the awareness of every individual to work with dignity and effectiveness. Of course, it will never be possible to reduce it 100%, it is enough for its level to be minimal, and not to increase further. To reduce informality, it is not enough just to take measures, draft laws to fight against it, but it must and readiness and punctuality in respecting what was drafted.

Our country is part of the world economy, so it is worth noting that the increase of informality of other countries significantly promotes the increase of informality in our country. Factors that promote the informal economy are: informal employment, tax system, corruption, CASH economy. To all these factors are added other elements that are: unemployment, lack of income, lack of information of citizens on the use of non-cash methods, lack of technology, etc.

Low tax countries tend to have a low level of informal economy. But, the reduction of taxes only stabilizes the informal economy, therefore it is thought that there are possibilities for adjustments of the tax system, making them simpler in content, more logical for the citizens and more applicable in the conditions of our country. This will encourage businesses to move towards the formal. The informal economy in Albania will decline if the state were stronger and more efficient. Fighting corruption

is understood as strengthening and consolidating state institutions, increasing civic responsibility, strengthening and modernizing public administration.

The degree of impact of cash on Albania's economic informality is very large. The main lever of reducing the use of cash as a means of payment is the development of the payment system. The electronic payment system is at a low level compared to western countries. Their use is related to a developed infrastructure that our economy lacks. To increase trust in banks, ie to create relationships between banks and businesses.

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Odysseas Kopsidas
Aristotle University of Thessaloniki, Greece
E-mail: odykopsi@yahoo.gr

SOCIOECONOMIC EVALUATION OF THE WILLINGNESS TO PAY THE TAX OBLIGATION FOR ENVIRONMENTAL REHABILITATION PROJECTS IN THREE CITIES IN GREECE

Abstract: The purpose of this study is to determine the willingness to fulfill the tax obligation (Willingness to pay - WTP) of the inhabitants of the coastal areas for the restoration of the marine environment as a function of a series of forecast variables and the construction of appropriate models for each case in three coastal cities: Thessaloniki, Volos and Piraeus. To investigate the willingness of citizens to pay (Willingness to pay - WTP), three random samples are taken from each city (Thessaloniki, Volos, Piraeus), where respondents were asked to fill out questionnaires. The samples are random passers-by in the respective coastal zones and the questionnaire was distributed on the spot on printed paper, enabling the respondent to fill in closed and open-ended answers at the facilitator's discretion. This study, which examines three coastal areas of Greece, could be part of a broader environmental protection plan, which should be supported by every citizen, as well as by the public administration and local authorities.

Keywords: willingness to pay, WTP, Thessaloniki, Volos, Piraeus, environment, seaside

Introduction

The purpose of this study is to determine the willingness to fulfill the tax obligation (Willingness to pay - WTP) of the inhabitants of the coastal areas for the restoration of the marine environment as a function of a series of forecast variables and the construction of appropriate models for each case in three coastal cities: Thessaloniki, Volos and Piraeus (Batzias and Marcoulaki, 2002). This point presents the assessment of the environmental status of an area by the CVM (Horowitz and McConnell, 2003). The modification of the *Contingent Valuation Method* leads to the research question: '*Willingness to pay – WTP*', i.e. the maximum amount available to each respondent to be paid in the form of a refundable tax in order to carry out environmental marine upgrading projects of *Thermaikos, Pagasitikos and Saronic* Gulf respective (Hanemann, 1991).

Methodology

To investigate the willingness of citizens to pay (Willingness to pay - WTP), three random samples are taken from each city (Thessaloniki, Volos, Piraeus), where re-

spondents were asked to fill out questionnaires (Bateman et al., 1997). The samples are random passers-by in the respective coastal zones and the questionnaire was distributed on the spot on printed paper, enabling the respondent to fill in closed and open-ended answers at the facilitator's discretion. Eighty (80) people from all age groups, of different educational levels and of both sexes from each city were asked to fill in the respective questionnaires.

The main question asked to each respondent is the amount of money they are willing to pay each month to fund projects to restore their city's marine environment. They were also asked about the condition of the nearby beach, the sea and their distance from the coastal zone. Specifically, the assessment of the situation in the area of Thermaikos Gulf is presented by residents of the area, who responded to a questionnaire. The questionnaire is presented in an annex. The statistical processing of the answers is presented below.

In the statistical analysis, question 11 (maximum amount of WTP) is considered as a dependent variable and all the others as independent. The total sample of respondents is 80 for Question 11, i.e. for WTP (continuous dependent variable).

Table 1: Question 11 (WTP)

N Valid	80
N Missing	0

Findings

An immediate assessment is that respondents in Volos are willing to pay more for the environmental recovery of their area, while respondents in Thessaloniki are less willing to pay for the environmental rehabilitation of the sea. Three models of multiple linear regression are used taking into account the independent variable 'Willingness to pay – WTP' as a dependent variable and all other variables as independent. In each case (bay) an equation is modeled.

Descriptive Statistical Analysis: By simple statistical processing in *SPSS-Statistics*, the descriptive indices of central tendency (central tendency) and dispersion (dispersion) were calculated and relate to all the positive observations of the *willingness to pay* for the improvement of Thermaikos Gulf.

Table 2: Descriptive Statistics

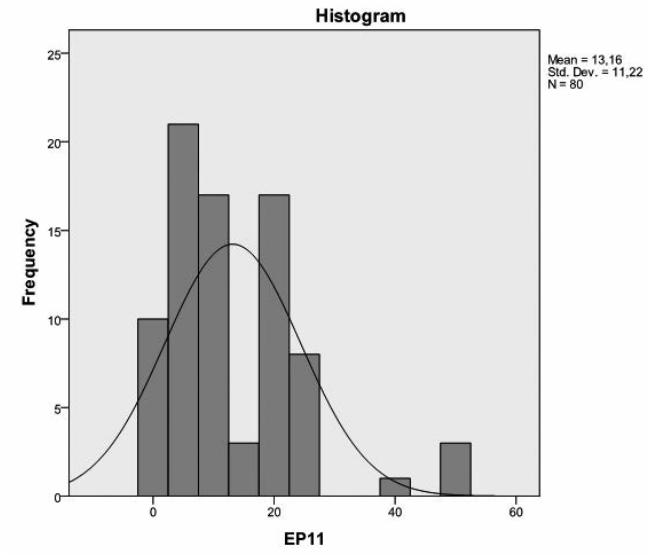
Indexes	WTBT (€)
N	80
Mean	13.16
Std. Error of Mean	1.254
Median	10.00
Mode	5
Std. Deviation	11.220
Min	0
Max	50

From the above table it seems that for the environmental improvement of the sea of Thermaikos, the estimated average annual contribution for all the respondents amounts to approximately 13 € (median 10 €), while the amount of 5 € is the most common offer.

Non-Parametric Statistical Analysis: The above quantitative results of the financial contribution of the sample were obtained after a simple statistical processing, with the assumption that the sample follows a normal distribution.

In any case, regularity is a basic prerequisite and therefore an important condition for the research data, which should be considered significantly before applying parametric statistical criteria.

Figure 1: WTP



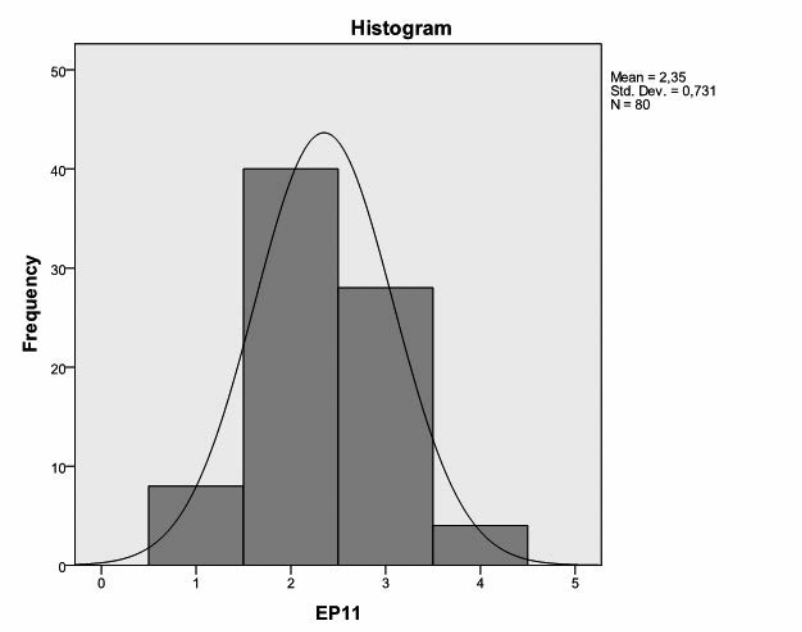
According to the frequency histogram of the sample financial contribution (WTP), the distribution of amounts is characterized as asymmetric right (positive skewed). This means that there is a price deficit on the right, compared to the left, so the distribution is not normal.

To address the problem of irregularity, the amount of the financial contribution (WTBT) was determined, after classifying the data into classes. Specifically:

Table 3: WTP - parts

Part 1	0 €
Part 2	1-10 €
Part 3	11-25 €
Part 4	26-50 €

Figure 2: Histogram of the sample financial contribution (WTP)



According to the Frequency Histogram of the sample financial contribution (WTP), the data follow the normal distribution.

Table 4: Descriptive statistical analysis for Question 11, i.e. for WTP (dependent discrete variable after classification of data)

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
0	8	10.0	10.0	10.0
1-10	40	50.0	50.0	60.0
11-25	28	35.0	35.0	95.0
26-50	4	5.0	5.0	100.0
Total	80	100.0	100.0	

Linear Regression: Linear Regression Analysis to correlate question 11 (amount of *WTBT* in classes - dependent variable) and all other questions (independent variables).

The Tolerance value for a value indicates the percentage variance of the variable explained by the other independent variables in the model. More specifically, this percentage is equal to (1-Tolerance) %. Tolerance values below 0.5 are an indication of the problem.

From the table of coefficients we see the variables X_{17} and X_{22} have *VIF* over 2 so there is multicollinearity. Therefore, to deal with the problem of multicollinearity we need to subtract one of the two variables. After processing we conclude that by removing the variable X_{17} the model fits better. The following is the *Linear Regression Analysis* for the correlation of the variable X_{11} and all other independent variables except the variable X_{17}.

In the table extracted from *SPSS-Statistics*, i.e. in the table with the coefficients of determination (Model Summary), in the first column is calculated the correlation coefficient (takes values between -1 and 1) of the explanatory variables with the dependent one. The large percentages are interesting. In essence, the overall correlation between the explanatory and the dependent is calculated. In the third column, the coefficient of determination is calculated (it takes values from 0 to 1) which shows the percentage of variance explained by the model. It is good that this percentage is large (over 60%).

Residual independence is calculated using the *Durbin-Watson* measure. For values very close to 2 it means that there is independence, while values that deviate quite a bit from 2 independences do not apply. It seems that the value of the *Durbin-Watson* index is close to 2, specifically it is 1.885. So there is independence between the residues.

One of the tables exported by *SPSS* for linear regression is that of *AN.O.VA*. The table below uses the *F - test*, which checks the good fit of the model to the data or if the p - value <0.05 then our model is statistically significant. Small p-value values and large F-Statistic values are sought.

The Case of the Pagasitic Gulf: corresponding to the Thermaikos Gulf is the statistical analysis of the case of the Pagasitic Gulf based on a corresponding questionnaire that was circulated to passers-by on the beach of Volos. The Case of the *Saronic Gulf*: As in the cases of *Thermaikos* and *Pagasitikos Gulf*, a similar questionnaire was distributed to passers-by in the coastal zone of Piraeus in order to determine the maximum amount of *WTBT* available to respondents to contribute in return for the project of the environmental restoration of the Saronic Gulf.

Table 5: Descriptive Statistics

	Mean	Std. Deviation	N
EP_{11}	1.99	0.772	90
EP_{1A}	1.63	0.880	90
EP_{1B}	1.77	1.594	90
EP_{2}	3.09	1.834	90
EP_{3}	3.41	0.634	90
EP_{4A}	2.36	0.812	90
EP_{4B}	1.82	0.646	90
$EP_{4Γ}$	1.82	0.869	90
EP_{5}	2.62	1.329	90
EP_{6}	2.60	0.493	90
EP_{7}	1.97	0.181	90
EP_{9}	1.10	0.337	90
EP_{10}	2.07	1.026	90
EP_{12}	2.26	0.966	90
EP_{13}	1.88	0.557	90
EP_{14}	1.61	0.490	90
EP_{15}	1.34	0.603	90
EP_{16}	1.63	0.485	90
EP_{17}	2.60	0.969	90
EP_{19}	1.91	0.286	90
EP_{20}	1.82	0.384	90
EP_{22}	1.54	1.238	90
EP_{23}	1.92	0.269	90
EP_{24}	1.58	0.497	90
EP_{26}	3.86	0.978	90
EP_{27}	2.11	0.484	90
EP_{28}	1.28	0.561	90

Table 6: Descriptive Statistics

N	**Valid**	**90**
	Missing	**0**
Mean		10.14
Std. Error of Mean		1.707
Median		5.00
Mode		10
Std. Deviation		16.195
Variance		262.282
Skewness		4.214
Std. Error of Skewness		0.254
Kurtosis		20.619
Std. Error of Kurtosis		0.503
Range		100
Minimum		0
Maximum		100
Sum		913

Conclusion

One conclusion is that the continuing deterioration of the environmental situation of the three major maritime regions of Greece cannot be ignored. Respondents living by the sea say they will pay higher for the restoration of the environment. The different parameters that affect the willingness of the respondents to pay in each case reflect the very different situation and the different living conditions in each city, resulting in different needs for the local population. Even the errors are independent of each other and not self-correlated as checked with the Durbin-Watson Statistics statistic, while multicollinearity does not appear, i.e. there is no high correlation between the independent variables. The data follow the normal distribution. This study, which examines three coastal areas of Greece, could be part of a broader environmental protection plan, which should be supported by every citizen, as well as by the public administration and local authorities.

The present study examines the natural environment as a public - environmental good and the environmental burden as an external economy - negative externality, where the pricing mechanism fails to internalize it. In the above three cases (Thermaikos, Pagasitic, Saronic) corresponding to three case studies and corresponding field investigations were carried out, the estimation of the estimation of this external cost was carried out by the *Contingent Valuation Method* for tax contributions of respondents. Currency variables are the external economies created by the pollution of the natural environment according to the answers of the respondents. Respondents

responded without being able to know what the environment was like in its original state and without waiting for it to return to its original form. The initial state of the environment is unknown and undefined, as no respondent has seen it. Thus the assessment of the initial environment by the respondents strongly involves the element of subjectivity. Also, the natural environment is in a dynamic state and its original image can hardly be determined.

The quality of the environment and therefore the assessment of the external costs (external burden) caused by the pollution was done with subjective criteria and the personal assessment of the value of this public - environmental good. Human activities create the anthropogenic environment and therefore new values are created in the region and therefore external economies can only be valued on the basis of the expected quality of the environment and that which has not completely disappeared. Tax policy, that is, subsidies, taxation and the value of land use are calculated solely on the basis of the expected landscape image.

Therefore, optimization of the Pareto socio-economic function is determined according to the new form of the natural environment that will emerge after the regeneration of the areas and not according to the methodologically defined initial state of the natural environment. Also, according to Kaldor, compensation should be decided on the basis of the economic value of public-environmental goods for people, who judge based on expectations rather than the history of the property in question. The expected result that will occur in the natural environment varies from respondent to respondent and his approach to issues of evaluation and maximization of social well-being can be achieved only through alternative - beautiful (optimistic) and manipulative (pessimistic) - methodological tools.

In each case, they have seized it, despite obstacles we can scarcely imagine. History has shown that the financial burden due to pollution assessed by society varies according to the socio-economic situation of each respondent. In the present study, the respondents who consider that they are close to the average income of the inhabitants of their respective area are strongly willing to contribute more financially for the environmental regeneration of the maritime zone, followed by those who consider that their income exceeds that of the average income of their relevant area and the last available financial contribution category of respondents is the one that considers that it is below the income average of their relevant area. Respondents with lower incomes are more resilient to the loss of the natural environment than those who are more economically well-off. Whether or not there is this relative flexibility in respondents' answers, the natural environment and the pollution that devalues it are measurable quantities for all categories of respondents and this is something that was perceived by all respondents during the field research.

An important category of external costs is the environmental burden caused by the transport of ballast on ships. Along with the ballast, organisms and microorganisms

foreign to the familiar natural environments are transported to the ships' tanks and are often aggressive towards the existing - native organisms. The cost of this environmental burden is not internalized in the cost of transporting the ship (operating costs that are a function of the production units) and is a negative external economy of the productive activity of shipping, which must be internalized by the taxation of this productive activity in order to system in excellent socio-economic condition. Thus, the failure of the private initiative and the market pricing mechanism to internalize the external economic - environmental costs is corrected by the appropriate government intervention - regulatory policy, i.e. by imposing a special indirect tax according to Pigou on the production units in question activity.

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Arjeta Hallunovi
University Aleksander Moisiu Durres, Albania
E-mail: arjetahallunovi@yahoo.com

INNOVATION IN BUSINESSES

Abstract: Albania faces a different reality in terms of innovation compared to developed countries. Research in the field of innovation in Albania is difficult and often the efforts invested in this aspect have been experimental and do not go deep into the problem. Innovation has been treated as the new industrial revolution and as an alternative way to set in motion economies that are experiencing a slowdown in their growth. It represents the new paradigm according to which the use of existing technologies in different ways and the engagement of new technologies enable the creation of a new economy and new opportunities for development. The study confirms the positive relationship between innovation and performance, so innovative firms actually have better performance. The overall market orientation process takes place in parallel with organizational learning and capacity building. Responsibilities, as components of market orientation, prove to be good determinants of innovation and strong performance, despite the weaker effect it has on innovation rather than performance. In other words, it means the ability to recognize market information from consumers, competitors and other operators is responding properly by giving them new products and services. Also, it is noted that although it is not a new phenomenon, it has only received due attention in recent years. It was noticed that in recent years there has been an increase in socio-scientific publications focused on innovation.

Countries like Albania have an urgent need to adapt to innovative policies and promote them in order to diversify economically, increase productivity and compete in the market.

Another systemic problem that the Albanian economy has to do with macro-level expenditures related to R&D, only 0.4% of gross domestic product goes to that purpose, when the European reference is 3%. It should be noted that poor cooperation between private, public and academic partnerships indicates weak institutional relationships and a lack of system and vision. Therefore, the main question raised in this study is what are the barriers to innovation in Albanian businesses?

Keywords: Innovation, Process, Phenomenon, Performance, Technology

Introduction

In the 1960s began to appear for the first time studies related to innovation, they came from a special field of research and distanced themselves from universities. Studies in this field did not focus only on socio-economic studies and research, but also on the notions used to characterize change. The first center to study this field was established in 1965, the Science Policy Research Unit (Weill and Vitale, 2001). The first studies conducted by this institution were the basis of the components of inno-

vation that precede further success (Wirtz, Pistoia, Ullrich and Göttel, 2016). In the following decades the number of departments and research centers that focused on studying the role that innovation played in economic and social change grew rapidly (Acs, Anselin and Varga, 2002). Further the need to study innovation was extended to different perspectives by taking an interdisciplinary orientation which shows that to study this field there is not a single discipline that studies all aspects of innovation, therefore to obtain more complete knowledge for innovation the need arises to acquire knowledge from different disciplines such as, for example, sociology, organizational sciences, management and business studies (Acs and Audretsch, 1987). Innovation in economic terms performs several functions Acemoglu, Akcigit and Celik, 2013):

- First, it is a key factor of an economy to compete in global markets. Logically, no global market will accept you unless you bring something better, cheaper, or faster.
- Second, innovation affects the improvement of living conditions.
- Third, through innovation firms, individuals, economies and systems improve their productivity. This brings competition between firms and makes it possible for each firm to bring something new to the consumer.

The effects of innovation depend on the type of innovation and will be different on the performance of a firm and the type of industry (Zott, Amit and Massa, 2011). Abrahamson (1991) argue that the effects of innovation on a firm's performance are also influenced by the size of the organization, elaborating that new and small firms have more visible effects on innovation performance than large firms, well-structured.

Today, Albania is significantly behind other Western Balkan countries and European Union countries in terms of research and innovation capacity. Referring to The Global Innovation Index (2020) the country has the lowest innovation index in the region and is rated at 27.12 points while the index in the countries of the region is respectively Bulgaria 39.98, Greece 36.79, Macedonia 33.43, Serbia 34.33, Bosnia 28.99 points. This performance is closely related to poor infrastructure, lack of market sophistication, human resources, poor quality products and services, cooperation between industry and universities and lack of engagement of interest groups, where what is observed is the lack of private sector involvement.

Literature review

Referring to Abernathy and Utterback (1978), in the process of innovation they have highlighted three main aspects that promoted the occurrence of an innovation: The first was the inherent uncertainty in all innovation projects. The second was the need to move fast before anyone else did, the fastest way had to be found to innovate. This

innovation according to him included leadership and vision, two qualities that he associates with entrepreneurship. The third was the prevalence of "resistance to new ways" - or to inertia. Two other equally important definitions come in the last decade following research into the measurement of innovation and the effort of research institutions to formulate a measurement instrument and a methodological structure. As a start, the OECD Oslo manual not only provides guidance on the collection and interpretation of data related to innovation but also provides a detailed definition.

Strategic behavior is a key determinant of innovation (Abernathy and Rosenbloom, 1969). The strategy that an organization chooses by being proactive, aggressive or risk-taking directly affects innovation in terms of how the organization chooses to stand out from its competitors (Acs and Audretsch, 1991). Although the literature argues that organizations must consider all elements of the external or internal environment in order to deliver innovative products or services in order to achieve higher organizational performance (Zieba and Zieba, 2014). Adams, Tranfield and Denyer (2008) have argued that market orientation and especially consumer orientation is not often the determining factor of innovative products or services as the consumer often does not know what they are looking for, and as long as the organization focuses on meeting current customer demands, competition has moved forward and it will not be innovative thus losing its competitive advantage.

Innovation or copy ?!

Organizational structure theories in the adoption of innovation recognize three main sources: imitation, acquisition and incubation (Brea-Solís, Casadesus-Masanell and Grifell-Tatjé, 2015). Imitation is the predisposition that firms have to copy or imitate innovations inside or outside their market (Christensen, Bartman and Van Bever, 2016). Acquisition reflects the willingness to assume the cost of a development by another firm through the acquisition, licensing, or merger of operators (Zaltman and Dubois, 1971). While incubation as a source of innovation expresses the predisposition of the firm to develop its innovations through internal processes whether these are research - development or partnerships. The difference between sources of innovation is important in terms of decision-making and managerial time, how much, how and where a manager would place the emphasis to get the most out of the potential source (Zhou and Li, 2007). In addition to the managerial importance it has in time and attention, the distinction between sources of innovation is necessary in the range of policies that go beyond the organizational level of firms, ie at the macro level Zhou and Li, 2012). When the organization chooses, forced or not, the source of innovation that it will use, it consequently conditions the size and speed of adaptation of innovation within its structures. This is because the effectiveness of the chosen resource will be optimal in combination with the practices and organizational structure of the firm itself (Kortmann and Piller, 2016).

Discussion

Barriers to Innovation - According to the results of the distributed questionnaire, for the analysis of innovation barriers, it is noted that cost factors are seen as the main factors that affect the firm's ability to innovate, where the high cost of innovation is what is estimated as the main hindrance (28% of firms). Market factors with elements such as market dominance by existing businesses and uncertain demand for innovative products or services are the second most important factors as barriers to innovation, with 22% and 10%, respectively. While lack of knowledge about technology or markets is not a barrier, the data show that only 3% of companies claim that lack of information about technology is a barrier, while 54% see it as a low impact factor.

Problems in human resources - Developing countries like Albania operate significantly below the "technological frontier" and with low levels of human resources. It may happen that individuals do not have the right knowledge to create the right context and to make it possible for the new knowledge gained to be understood in order to capitalize on it (Zehir and Özşahin, 2008). According to the answers to the questionnaire, it is noticed that 54% of the firms that have internal research and development operations, or special departments, have more opportunities and abilities to use the information from the market in an optimal way. However, another way to create and gather knowledge within the organization is also from its activities (Winter, 1987).

Strategic orientation - As businesses constantly face challenges and pressures that come from an ever-changing environment, strategic orientation takes on great importance (Wiklund and Shepherd, 2005). Having said that, firms are constantly under constant pressure if they are properly prepared and organized. In the literature, strategic orientation is considered as one of the main elements which influences the performance of a firm (Wernerfelt, 1984). In transition economies, firms face various problems strategic which are not simply related to the development of new products or markets but also to the transformation of the current organizational structure, management system and human resource development (West and Altink, 1996).

Recommendations

1. Business companies need to set up structures and properly plan the financial aspect of the R&D. Firms that do not have such capacities should benefit from open innovation which is massively in the market at a cost of almost 0, as well as be organized to create synergies which reduce the costs of research and development of products and services in the market.
2. Knowledge institutions such as: state agencies, state institutions and above all universities should work on creating a strategy for cooperation with business. Compared to other countries, there is no lack of cooperation between universities and

business in the respective fields. The large market space which needs knowledge services and related studies is almost totally uncovered. Also, universities should be massively oriented towards market needs and above all practicality or applicable principles.

3. Rules and procedures, improved or newly created (organizational innovation) are necessary in terms of innovation in the firm and its well-functioning. The analysis shows that they are positive in terms of benefits and naturally as a recommendation for businesses there is a need to better regulate organizational procedures, improve them in relation to time changes, and above all deepen them in the managerial organization of work.
4. Albanian companies in the knowledge economy should pay more attention to innovation by investing in people above all (human capital) and turning investment into a well-controlled, orderly and sustainable process.
5. The Albanian state must formulate a well-thought-out innovation strategy. First, solid foundations must be laid for what academia and developed countries recognize as "National Innovation Systems." Second, the 7-year planning innovation strategy needs to be recomposed to reflect not only the latest developments, but also to be serious, professionally credible and reality-related. Third, given that the key to innovation and creativity are the university education systems and especially pre-university, there is a need to review the approach of both systems and their position in front of the market and society. The university education system has undergone the greatest distortion of a decade now, bringing to this apparent friction inconsistency with the needs of market and industry-specific businesses. Large Albanian companies have set up training academies to meet the needs they have for employees and who can not get them from the public system, not to consider it private at all. Industries such as banking, telecommunications, media and mining processing have created parallel educational institutions which re-qualify, and re-educate staff according to their standards and requirements, ie the market. So, a function that should have been fulfilled by the state and educational institutions to justify their existence, is being fulfilled by the businesses themselves. Therefore, an emergency reflection and an operationalization of some concrete steps in this direction is recommended.
6. Companies should pay more attention to strategic aspects of business organization. Longer decision-making horizons affect the degree of innovation and business performance.
7. Firms should pay special attention to the generation of market information and should have more sophisticated tools for data processing. Informality of information gathering makes businesses even more unsustainable or significantly increases the risk of decision-making based on such information. If the generation of information were from more reliable sources and stable and reliable data then the investment horizons would be different. Furthermore, firms need to sophisticate all three stages of market orientation such as information generation, dissemina-

tion to organizations through all media and response to that information after proper processing. Companies need to be more market-oriented, however they should not lose the balance of the modern economy when they also need to create a market.

8. Given the lack of R&D structures and departments in Albanian organizations, the implication seems reasonable. Firms need to invest more accumulated knowledge by training employees, as well as documenting the firm's capacity as an institution in terms of "learning by doing".

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Yilmaz Bayar
Bandirma Onyedi Eylul University, Turkey
Email: yilmazbayar@yahoo.com

Funda H. Sezgin
Istanbul University-Cerrahpaşa, Turkey

THE IMPACT OF COVID-19 PANDEMIC ON TOURISM SECTOR: EVIDENCE FROM BORSA ISTANBUL TOURISM SECTOR INDEX

Abstract: The COVID-19 pandemic has many social and economic costs for the societies. In this context, tourism sector is one of the sectors in the economy mostly affected by the continuing pandemic. This study explored the impact of COVID-19 pandemic on tourism sector in sample of tourism firms listed on of Borsa Istanbul through Johansen cointegration test. The cointegration analysis disclosed a significant short and long run negative effects of the COVID-19 pandemic on Borsa Istanbul tourism sector index.

Keywords: COVID-19 Pandemic, Tourism Sector, Borsa Istanbul Tourism Sector Index, Time Series Analysis

Introduction

Tourism sector is one of the main economic sectors in the world and accounted for 7% of international trade and the third largest item in the global export in 2019 (UNWTO (World Tourism Organization), 2020). However, the COVID-19 pandemic has almost brought economic activities to a standstill, because the countries have generally imposed lockdowns, closed all businesses except the ones meeting the basic living needs, and heavily restricted the international flights to combat with the pandemic. Therefore, tourism sector has been among the most seriously affected sectors by the aforementioned measures. The international tourist arrivals decreased by 84% between March and December 2020 when compared with the same period in 2019 (UNCTAD- United Nations Conference on Trade and Development, 2021). The contraction in tourism caused considerable losses in international revenues of tourism dependent economies.

In the study, the influence of COVID-19 on tourism sector was analyzed in sample of Turkish tourism sector. Tourism sector is an important item of international revenue for Turkey and Turkey earned about USD 34.5 billion from tourism in 2019 as seen in Table 1. However, total tourism revenue decreased to USD 12 billion in 2020 due to the continuing COVID-19 pandemic.

Table 1: Tourism Income in Turkey (2003 – 2021)

Year	Total Tourism Income (000 $)
2003	13 854 866
2004	17 076 606
2005	20 322 112
2006	18 593 951
2007	20 942 500
2008	25 415 067
2009	25 064 482
2010	24 930 997
2011	28 115 692
2012	29 007 003
2013	32 308 991
2014	34 305 904
2015	31 464 777
2016	22 107 440
2017	26 283 656
2018	29 512 926
2019	34 520 332
2020*	12 059 320
2021**	5 455 841

* Annual data for 2020 include the data for 1st, 3rd and 4th quarters.

** Annual data for 2021 include the data for 1st and 2nd quarters.

Source: Turkish Statistical Institute, 2021

In the study, the impact of COVID-19 on Turkish tourism sector proxied by Borsa Istanbul tourism sector index during the period March 13, 2020-April 30, 2021 was analyzed through Johansen cointegration test. The next section summarized the related limited literature, then data and method were described. Section 4 presented the empirical analyses and the study was concluded with the Conclusions.

Literature Review

The COVID-19 has caused many negative economic consequences at country and global levels. In the study, we focused on the influence of COVID-19 on tourism sector, because tourism and travel firms have been the ones most affected by COVID-19 pandemic. The limited related literature has revealed that COVID-19 pandemic has negatively affected tourism sector (e.g. see Jaipuria et al., 2020; Uğur and Akbıyık, 2020; Skare et al., 2021).

Bouarar et al. (2020) explored the effect of COVID-19 pandemic on the tourism sector and reached that the countries highly economically dependent on tourism rev-

enues were mostly affected by the pandemic. On the other side, Uğur and Akbıyık (2020) explored the of travelers during the COVID-19 pandemic over the duration of December 30, 2019–March 15, 2020 through text mining technique in the world and discovered that travelers immediately cancelled or delayed their trips and in turn tourism sector was swiftly affected by the pandemic. Purba et al. (2021) analyzed the effect of COVID-19 pandemic on tourism sector in Indonesia and disclosed that the COVID-19 pandemic negatively affected the Indonesian economy and tourism.

Jaipuria et al. (2021) explored the effect of COVID-19 on tourism sector for the period of 30th April 1989 to 31st March 2020 with monthly data in India through artificial neural network model and predicted that India would experience considerable losses in foreign exchange revenue if the tourism policies were not restructured given the pandemic. On the other side, Chandel et al. (2021) also researched the effect of COVID-19 on tourism sector in Rajasthan from India through geospatial technology and predicted that the region would experience significant losses in tourism revenues due to the pandemic.

Data and Econometric Methodology

The influence of COVID-19 pandemic on tourism sector during the period March 13, 2020-April 30, 2021 was analyzed with Johansen) cointegration analysis through statistical packages of Eviews 11.0 and Stata 16.0. The COVID-19 was proxied by new COVID-19 cases and tourism sector was proxied by Borsa Istanbul tourism sector index. The COVID-19 data was provided from World Health Organization (2021) and data of Borsa Istanbul tourism sector index was provided from the database of Borsa Istanbul. The logarithmic forms of the variables were used in the analyses to eliminate the possible seasonality.

Table 2: Dataset Description

Variable	Definition	Data Source
BIST_TRZ	Borsa Istanbul tourism sector index	Borsa Istanbul (2021)
COVID	Number of new COVID-19 cases	World Health Organization (2021)

The trend and descriptive statistics of the variables over time was presented in Chart 1 & Table 3.

Chart 1: Charts of BIST_TRZ and COVID

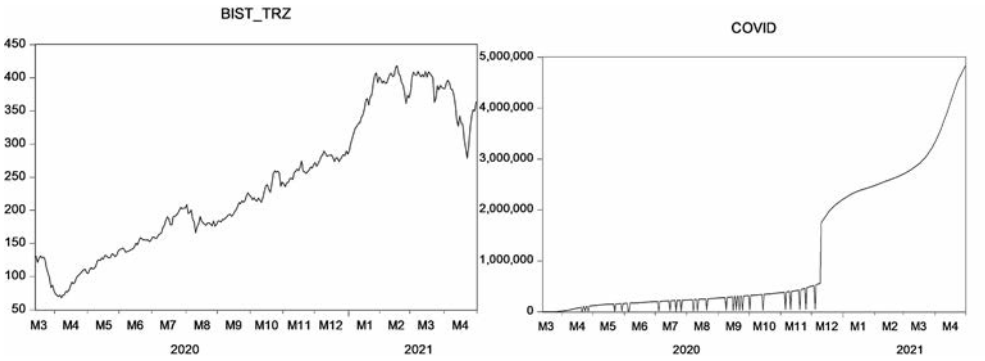

Table 3: Descriptive Statistics of BIST_TRZ and COVID

Statistics	BIST_TRZ	COVID
Mean	238.7967	1116714
Median	218.9600	316558
Maximum	417.7400	4820591
Minimum	68.40000	5.00
Std. Dev.	101.6734	1335251
Skewness	0.258758	1.028858
Kurtosis	1.870959	2.718753

In the econometric analysis, first the presence of the unit root at two series was analyzed by ADF (Augmented Dickey-Fuller) unit root test of Dickey and Fuller (1981), PP (Phillips-Perron) unit root test of Phillips and Perron (1988). Then the presence of cointegration relationship between two series was investigated by Johansen cointegration test developed by Johansen (1988, 1991), Johansen and Juselius (1990), because both series were I(1).

Empirical Analysis

In the empirical analysis, the stationarity of the variables was firstly examined for both constant and constant+trend. The stationarity of the two series was checked through ADF unit root test by Dickey and Fuller (1981) and PP unit root test of Phillips and Perron (1988) and the findings were displayed in Table 4. The unit root analysis revealed that two series were I(1).

Table 4: Results of ADF and PP Unit Root Tests

Variables	ADF		PP	
	Constant	Constant+ Trend	Constant	Constant+Trend
BIST_TRZ	-0.928(0.094)	-1.216(0.108)	-1.126(0.154)	-1.233(0.173)
d(BIST_TRZ)	-7.453(0.000)*	-7.807(0.000)*	-8.554(0.000)*	-8.912(0.000)*
COVID	-1.263(0.131)	-1.296(0.142)	-1.217(0.140)	-1.218(0.184)
d(COVID)	-5.908(0.002)*	-6.044(0.000)*	-7.305(0.011)*	-7.693(0.000)*

* indicates that it is significant at 5% significance level

Note: The values in parentheses are probability values.

The optimal lag length was determined for the cointegration analysis through unrestricted VAR model and the findings were displayed in Table 5. We took the optimal lag length as two considering information criteria.

Table 5: Determination of Optimal Lag Length

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-3787.253	NA	9.19e+08	26.31426	26.33969	26.32445
1	-2754.455	2044.079	725106.5	19.16983	19.24614	19.20041
2	**-2738.753**	**30.85796***	**668517.8***	**19.08857***	**19.21575***	**19.13953***
3	-2735.240	6.855494	670790.1	19.09195	19.27001	19.16330
4	-2734.581	1.278144	686546.8	19.11514	19.34408	19.20689
5	-2731.344	6.225901	690219.5	19.12044	19.40025	19.23258
6	-2728.945	4.582404	697967.5	19.13156	19.46224	19.26408
7	-2727.492	2.753179	710473.3	19.14925	19.53081	19.30216
8	-2725.996	2.815337	722998.0	19.16664	19.59907	19.33993

* indicates the optimal lag length. LR (sequential modified LR test statistic), FPE (final prediction error), AIC (Akaike information criterion), SC (Schwarz information criterion), HQ (Hannan-Quinn information criterion)

The autocorrelation problem was checked by LM test and the heteroskedasticity problem was checked by Breusch-Pagan-Godfrey test in the model and no problems of autocorrelation and the heteroskedasticity were discovered in the model. Then, the cointegration relationship among BIST_TRZ and COVID was analyzed by Johansen cointegration test and the test results were displayed in Table 6. The calculated trace and max-eigenvalue statistics were found to be higher than the critical values. Therefore, we revealed a cointegration relationship at 5% significance level.

Table 6: Johansen Cointegration Test Results

Unrestricted Cointegration Rank Test (Trace)				
Hypotheses	**Eigenvalue**	**Trace Statistic**	**5% Critical Values**	**Probability Values**
None *	0.077901	26.07796	15.49471	0.0009
At most 1	0.008476	2.477063	3.841466	0.1155
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypotheses	**Eigenvalue**	**Max-Eigenvalue Statistic**	**5% Critical Values**	**Probability Values**
None *	0.077901	23.60090	14.26460	0.0013
At most 1	0.008476	2.477063	3.841466	0.1155

*** and ** respectively indicates there exists a significant cointegration relationship at 1% and 5% significance levels.

The cointegration coefficients were given by normalized equation coefficients in Table 7. The cointegration coefficient revealed that COVID variable had a negative effect on the BIST_TRZ variable and a 1% increase in COVID decreased the BIST_TRX by 6.31%.

Table 7: Normalized Cointegration Coefficients

BIST_TRZ	LogFCOVID
1.000000	-0.0631*(0.018)

*It is significant at 5% and the value in paranthesis indicates the standard error.

The cointegration analysis revealed a negative impact of COVID-19 new cases on Borsa Istanbul tourism sector index in compatible with the theoretical considerations and findings of limited number of studies (Uğur and Akbıyık, 2020; Purba et al., 2021; Jaipuria et al., 2021; Chandel et al., 2021).

The short run interaction between COVID and BIST_TRZ was analyzed by VECM (Vector Error Correction Model) and the findings were displayed in Table 8. The error correction term was found to be negative and statistically significant. In other words, the error correction model works. 48.4% of the short-term deviations between the series that moved together in the long-term disappeared and the series converged to the long-term equilibrium value again. In other works, the effect of a shock to the system would be eliminated in 1/0.484=2.06 days later.

Table 8: Results of Short Run Error Correction Model Estimation

Dependent variable: $LBIST\_TRZ_t$	Coefficient	Standard Error	t statistic	Probability Values
$\Delta LFCOVID_t$	-0.107	0.028	-3.839	0.000*
ECT_{t-1}	-0.484	0.053	-9.132	0.000*
Constant	0.973	0.144	6.756	0.004*
Diagnostic tests: R^2 =0.577, *Adj.* R^2 =0.572, *F-Statistic*=34.09, *F-Statistic (P)*=0.000*, ***Breusch-Godfrey LM Test*** *(p)*= 0.148* ***White Test*** *(p)*=0.139* ***Ramsey RESET Test*** *(p)*= 0.103* **JB test** (p)=0.235				

Note: * indicates that it is significant at 5% significance level.

JB indicates the probability value of Jarque-Bera normality test.

The short-term coefficient was found to be higher than the long-term coefficient. So, the impact of COVID-19 on Borsa Istanbul tourism sector index was revealed to be higher in the short term than the one of long term.

Conclusion

Tourism sector has been one of the economic sectors most severely affected from the COVID-19 pandemic. We analyze the effect of the pandemic on Turkish tourism sector proxied by Borsa Istanbul tourism sector index through Johansen cointegration test. The cointegration analysis revealed a negative impact of COVID-19 on Borsa Istanbul tourism sector index in both short and long run in compatible with theoretical and empirical findings. In this sense, a global vaccination plan is very important for the quick recovery of the tourism sector. Furthermore, employment of travel insurance can be useful to minimize the negative effects of the contraction in tourism sector in a crisis situation. The tourism sector also should be among the first sectors to be supported by governments for its survival.

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Thomai Mpaltzi
Aristotle University of Thessaloniki, Greece
Email: tmpaltzi@jour.auth.gr

Thomai Voulgari
Aristotle University of Thessaloniki, Greece

Antonis Skamnakis
Aristotle University of Thessaloniki, Greece

FORMS OF ALTERNATIVE TOURISM IN GREECE IN A POST-COVID-19 ERA AND EXPOSURE THROUGH SOCIAL MEDIA: ANALYSIS OF FACEBOOK REACTIONS THROUGH NEWS MEDIA PAGES

Abstract: Greece's tourism industry has been hit hard by COVID-19 pandemic and restrictions on movement. While all forms of tourism have dramatically interrupted, at the same time tourism sector globally experiencing a significant transformation (Higgins-Desbiolles, 2018b). According to the World Travel & Tourism Council's (WTTC's) annual Economic Impact Report (EIR) for 2020, the Greek tourism sector's contribution to Gross domestic product (GDP) decreased a shockigly 61.1%.Coronavirus pandemic has been described as "infodemic" emerging fields of research and causing political distinction between the political parties. Social media are acknowledged as a critical factor in the development of positive attitudes by showing COVID Free and safest travel destinations.

The fast expansion of the web and social media ecosystem give the opportunity for a tourist destination to increase awareness. As noted by Gosling et al. (2011), behavioral views of personality are formed and affected by symbolic interactions from online social networks.

The purpose of this study is to analyze data collected from Facebook posts and their reactions related to publications of Greek tourist destinations by international news media. Tian et al. (2017) observed that Facebook reactions and comments provide the opportunity for analyzing social factors that influence behaviour. Specifically, we examine Facebook pages of internationally recognized for their media coverage sites such as the Reuters and the Euronews during the period of July 2021, which is considered to be the peak season for tourism in Greece.

In particular, our research focuses on social giant Facebook and reactions of public as it allows us to understand in which ways tourists became aware of changes taking place in the tourism market place in the post-COVID era (Cohen, 2020). According to our findings, social media affecting aspects of personality and play a crucial role firstly in the development of tourist travel sector and then in the tourism information ecosystem.

Keywords: Forms of alternative tourism, Greece, facebook reactions, COVID-19, impact of social media platforms

Introduction

The emergence of the Covid-19 pandemic, which spread rapidly around the world, has resulted in sweeping economies, societies, cultures, attitudes and human relationships. The current economic situation in the world is catastrophic without precedent (Hall et al. 2020 Sheresheva 2020, Gössling et al. 2021). "For many years, "tourism" has experienced continued growth to become one of the growing fastest growing economic sectors in the world, accounting for the largest proportion of GDP of each country". (UNWTO, 2020). However, the COVID-19 reaction policies have had the effect of putting the tourism economy into a form of forced hibernation (Bausch et al., 2020), resulting in the closure of borders, travel bans, closure of the entire hospitality industry, accommodation, catering and contacts which led the tourism industry, as we know it today, to a deep and perhaps long-term crisis (Alonso et.al, 2020).

According to the United Nations World Tourism Organization, international tourism in 2020 will decrease by 80% (UNWTO, 2020). Specifically in Europe, the decline reached -68%, while the reopening of international borders recorded relatively smaller reductions in July with -72% and in August with -69% (UNWTO, 2020). The transition created as a result of tourism itself from "overtourism" to "undertourism" is expected to reverse the whole form of the tourism industry (Hall & Gossling, 2013).

Obviously, global travel restrictions have affected the entire tourism system, resulting in a redistribution of the tourism product (Brouder, 2020). This is evident when one looks at the fact that domestic travel can be a substitute for international travel (Gossling, Scott, & Hall, 2020). According to Benjamin, the simultaneous global mobility restriction from all countries has led to the emergence of the problems of overtourism that has arisen in recent years (2020). After the redistribution of the tourist product, many people have lost their jobs, several shops have closed and many "destinations" are in an effort to recover, because with the onset of the pandemic they ceased to be "destinations" (Bhati et al., 2021). The culture of mass/excess consumption now seems to be not only a healthy economic system but it is also detrimental to individual and public health (Renaud, 2020).

According to Conde Nast Traveler, the sharp decline in mass tourism consumption is largely due to the media and social networks (2020). Mass tourist destinations are portrayed in blogs, newspaper articles and social media (Facebook, Instagram) as insecure and high-risk destinations in transmitting the virus, presenting the pre-covid-19 era and the post-covid-19 era (2020). Undoubtedly the role played by the media and the '(mis)info-demic' is critical for shaping public opinion and individuals' risk perception (Chemli, Toanoglu & Valeri, 2020, Williams, Wassler & Ferdinand, 2020). It is argued that this is because mass media "often tends to exaggerate the risk of a situation by selectively emphasizing certain aspects while ignoring others" (Neuberger & Egger, 2020: 3).

So in the context of the continuing spread of the COVID-19 pandemic and the need for new recovery strategies for the tourism industry, the purpose of this article is to explore the transformation that the tourism sector is undergoing during the Covid-19 era, the role of social networks in spreading the fear of mass tourism by creating a new environment and the transition from "overtourism" to "undertourism" and finally the development of a new tourism industry based on sustainability and sustainability. The next section describes the approach adopted for the purpose of the current research, with a case study of Facebook carried out by the Guardian and the BBC, with the aim of analyzing their posts on new tourist destinations.

Literature review

The transformation of the tourist product in the covid era

Demand for travel by the end of 2020 was largely sluggish and uncertain. According to a group of UNWTO experts, the projected recovery is coming around the third quarter of 2021, while at the same time a 20% believe that the recovery will occur entering 2022 (2020). Benjamin considers the tourism industry today to be a major pillar of transmitting the virus, reducing overtourism to having a highly damaging effect in the light of COVID-19 (2020). According to Assaf & Scuderi, the liquidity of overtourism created by overtourism does not provide a solid ground for a short recovery, because the development of the tourism industry will depend on boosting confidence in travelling and lessening the perception of risk involved. Two elements that are missing from the totality of overtourism. Specifically, Benjamin states that "We can't return to normal, because the normal that we had was precisely the problem" (2020).

Undoubtedly, we can place the Covid-19 pandemic as a time when we can reconsider the over-consumption tourism model that had been created (Everingham, 2020). The Global Pandemic Alarm Bell clearly states that the global tourism industry is creating dependencies that are unsustainable and do not build an economy based on the long-term prosperity of a society (TAAF, 2020). Gossling contrasts the crisis with a unique opportunity to transform the tourism product, which will be established and developed in terms of sustainability and vigilance (2021). According to Dodds & Butler, 2019 and Seraphin, 2018, these particular enforced mitigation measures on the tourist influx, which for many researchers has created a transition from "overtourism" to "non-tourism", are the only hope and opportunity for a sustainable transformation (Porter, 2011).

The "COVID-19 break" implies stopping the expansion of a tourism standardized and homogenized by the forces of capitalism, what Hollinshead (2007) calls World-making (Renaud, 2020). Characterized by a hegemonic imposition -conscious or unconscious of an ideological narrative framework supported by the actors of trans-

national tourism, Worldmaking marginalizes local stakeholders. (Renaud, 2020). Emphasizing the above, the Ferreira distinction, which is placed between mobility and immobility, between overtourism and non (tourism), makes possible the transition from full and unrestrained mobility that prevails globally and at the same time reflects an economic mobility, in a sustainable and local mobility that relies more on the carrying capacity of the destination and less on the financial convenience of the potential visitor (Ferreira et al., 2017). Only this transition should be exploited quickly because this transition window of opportunity is closing quickly (Fletcher, 2011), as evidenced by the actions of global stakeholders to the full reintegration of tourism mobility (Fletcher et al., 2020).

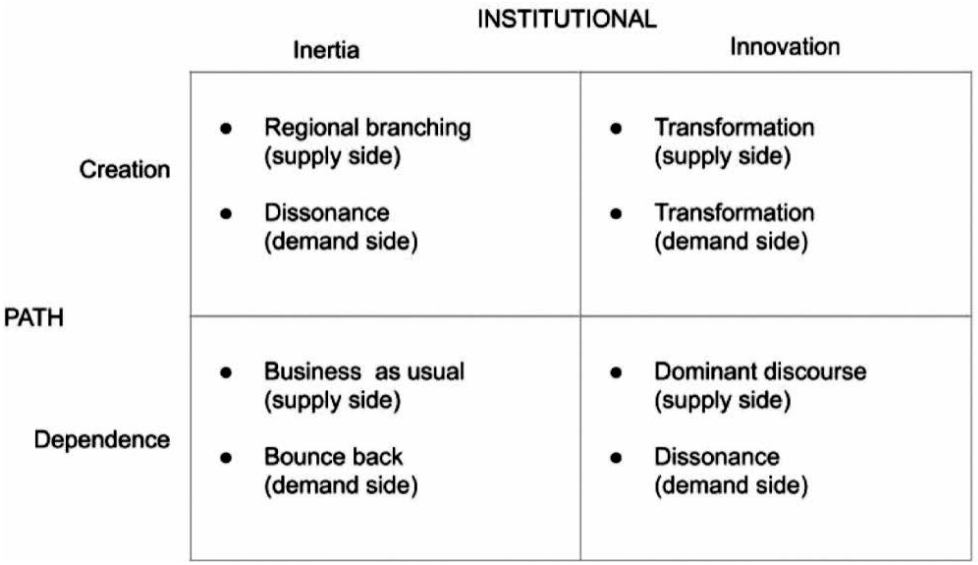
It is therefore understandable that the transformations like restarting, reorganizing, and assimilating the tourism industry according to the latest standards and rules are required to revive the industry (Lew, 2020). These new standards should be based on a sustainable and equitable tourism industry (Benjamin et al., 2020), which will open the doors to small-scale local tourism (Maria-Irina, 2019).

According to P. Brouder, there is a great need for the birth of a "community-centered tourism framework" with responsible approaches to reset, redescribe, and refamiliarize the tourism industry in the interest of local communities (2020). A deeper understanding of remote communities' challenges and acts may help transform the sector (Tremblay-Huet, 2020). Such an example can be observed in developed countries which are considering the possibility of domestic tourism or "proximity tourism" based on local thought (Brouder, 2020. & Francesc Romagosa, 2020).

In other words, there may be an institutional account of tourism demand in the covid-19 era, as transformation requires almost simultaneously both institutional and supply (in a given destination) and demand (which is outside the destination) (Brouder et al., 2020). The global and multifaceted spread of COVID-19, both in economic and in everyday life in much of the world, presents a rare and unique alignment, which opens up an opportunity for the restoration and transformation of tourism (Renaud, 2020). Thus, the tourism sector may need to reconcile with more local and environmental tourism models focusing on ecotourism and sustainability (Brouder, 2020).

The table suggests that transformation in tourism is possible (upper right quarter) when there is institutional innovation both on the demand side and on the local community side.

Figure 1. Matrix of potential evolutionary pathways towards tourism transformation (Brouder, P., 2020)



The role of mass media through social media in the transformation of tourism

The media can play a substantial role in the projection of a site (Thirumaran et al., 2021). Media reporting can positively or negatively shape a tourist destination's image. (Govers, Go, & Kumar, 2016, La et al., 2020, Wang, Irwin, Cooper, & Srivastava, 2015). Moreover, media reporting can also strongly influence the perception of prospective tourists (Crouch, Jackson, & Thompson, 2005, Santic, Bevanda, & Bijaksic, 2016). Several studies have shown that Facebook accounts for the preference of ⅔ of the travellers during the pre-travel experience and the post-travel experience (Zouganeli et.all, 2011). According to Chiappa, social media exert great influence in generating the idea of travelling, on the actual planning process, and during the post-travel phase (2011). The influence on the way visitors set up, imagine and organize their holidays is great (Sigala, 2009).

It is evident that in such a pandemic crisis as that of Covid-19, recent studies have analyzed the implications of media portrayals on the destination's image in times of sustained crisis (Glyptou, 2020, Kislali, Kavaratzis, & Saren, 2019). The role of social networks can have a fundamental impact on the development of a crisis, either positively or negatively (Huang et al., 2018). Both traditional and new social media platforms, for example, with the constant exposure of epidemic effects, are vulnerable to an "infodemic" situation (Zarocostas, 2020), a phenomenon that at the beginning of the pandemic was quite common (2020). This, as a result, significantly increased

the anxiety and fear in people, marginalizing the idea of travel and transportation (Benjamin, 2020). According to Guanghui Qiao, when the media largely portray the impact of negative situations (2021), negative information may elevate the viewer's anxiety and negative emotions towards the threat (Bae & Chang, 2021).

Tourist perception of destination safety is a multidimensional construct (Promsivapallop & Kannaovakun, 2017) composed of functional, financial, health, physical, political, psychological, satisfaction, social, terrorism, and time factors (Mizrachi & Fuchs, 2016, Mohammed & Tarik, 2020) and emphasizes the importance and the need for proper information. Proper information will enhance public awareness of crisis that promote realistic estimates of potential risks without creating stress (Boin & McConnell,. ed. 2007). The tide of information that has been circulating on social media about covid-19 has led people to be skeptical of the idea of a tourist destination and in particular a mass tourist destination (Benjamin, 2020).

Both newspapers and social networks are directly accessible to the public and rely on the instantaneous dissemination of information La et al., 2020. As Kaitatzi-Whitlock reports, a message of specific news value brings the recipient personalized information that helps make a decision (2003: 33-35). Thus organic, induced and autonomous sources of information as secondary images affect the destination image formation and the visitor's formation of the destination image (Frias, Rodriguez, Castaneda, & Buhalis, 2012, Phelps, 1986). One of the best-known examples is the Ebola epidemic, which after the media coverage, the influx of tourists to West Africa dramatically decreased (Mizrachi & Fuchs, 2016). Health risk perceptions are one of the most fundamental detriments to the reputation of any destination (Jonas, Mansfeld, Paz, & Potasman, 2011). It is understandable that shaping public perceptions of health risks can be managed through communication and information channels (Beirman, 2003).

Recent studies have shown that reports made on social media networks strongly influence the perception of potential visitors (Cummings, J. N & Kraut, R 2002, Sandic, Bevanda, & Bijaksic, 2016). According to Chiappa (2011), social media either create or shape the idea of travelling, on the actual planning process, and during the post-travel phase. Undoubtedly, through social networks they can create and shape a new tourism product (Zouganeli, S, et al.,2011), which will be part of the new situation in a post-pandemic era (Chen wt al., 2020). The tourist behavior is flexible and diverse (Tsironis, 2020). It is based on emotional and imaginative hedonism factors that are created through "gaze"; (Urry, 2001). As J. Urry mentions in his book "The tourist Gaze" (2001), the selection of a potential place to visit is made after research from sources such as friends and relatives, travel guidebooks, television travel channels, the Internet, and print and digital newspapers (Chiang, Manthiou, Tang, Shin, & Morrison, 2014, Ho, Lin, Yuan, & Chen, 2016, Yeoman & McMahon-Beattie, 2006).

The power of social media on travel decisions

Social media platforms play an important role as they are not only being used to develop opinions and attitudes, but they also influence our choices (Goldzweig, Lupion & Meyer-Resende, 2019). Social media is a communication channel as platforms including Twitter, Facebook, Instagram, YouTube provide the opportunity for all users to engage in a real-time dialogue and therefore exchange ideas and information, as well as share their travel experiences (Chung & Buhalis, 2008; Sigala, 2009).

As Buhalis & Law, 2008; Xiang & Gretzel, 2010 noted: "*Internet has vitally redesigned the way tourism information is disseminated and the way people consume travel*". Social media sites have a direct impact and they can be addictive on travel decision-making. Social media platforms and particularly Facebook is a powerful tool to interact and engage users and tourists as they attracted by audiovisual content through digital environment. Facebook is considered to be one of the most effective networks on the tourism industry because of its popularity (Weidemann,2019). During COVID-19 restrictions, people try to find out accurate health-related information via this platform, stay connected with immediate family and discuss about the pandemic in an online community. In October 2016, the platform of Facebook launched travel recommendations feature that easily allow users to give recommendations about a destination and planning vacation a bit easier.

Facebook reactions during the coronavirus pandemic

Emojis are used regularly on social media networks and mostly on Facebook posts or Instagram stories giving the opportunity to express emotions. Facebook Reactions range from like to angry (Moreau, 2021).

Fig.2: Emojis in Facebook Reactions

During coronavirus pandemic social media giant, Facebook, created a new heart-warming reaction in an attempt to make people happier. Head of the Facebook application, Fidji Simo claimed that: In the COVID-19 crisis "*There is no doubt that people need more compassion and more support*" (Slater,2020). Every Facebook post shows the number of users who have reacted to a publication, as well as a collection of reactions. As Rosenquist, Fowler, and Christakis (2011) found out a person's emotions (such as anger, care, sadness, love, surprised) differ from each other in terms of the degree of their affection on other people. In another study Vepsäläinen et al., 2017 looked into the way that Facebook reactions can be used to forecast even election results.

Social Media influence in COVID-19 Health Crisis

During COVID-19 pandemic social media platforms became main sources of information. In the process of major crises, people rely more often on communication tools and social media channels. Media play a particularly important role in raising awareness and informing people in which ways they can protect themselves from viruses. More precisely, social networks have the potential to exert a wide range of influences (Kelman,2017).

Reasearchers concluded that the usage of them has become *"a welcome relief in the health disaster and global crisis"*(Lebni,2020). In recent cases, rumors have been circulating in the real world, causing confusion and fear among Internet users. Coronavirus media coverage is the first digital "infodemic" as misleading content and conspiracy theories were spread rapidly on social media, threatening public health, as they may accelerate the spread of the virus. The term "infodemic" was firstly used in February 2020, by the World Health Organization. It refers to the "avalanche" of false news, conspiracy theories, misleading advertisements that spread through the web after Coronavirus disease (COVID-19). As World Health Organization emphasizes *''It leads to mistrust in health authorities and undermines the public health response"* (World Health Organization,2021). During the evolution of COVID-19 pandemic, massive amounts of information created confusion in the public and as a result groups of the population accepted and indiscriminately adopted opinions that leaked on the Web even from anonymous sources (Howard, 2020). In this sense, the public's dependence in media was strengthened.

Methodology

In this paper we present an analysis using examples of Facebook pages of globally recognized for their media coverage sites, the Reuters and the Euronews in the summer 2021. Most of the collecting information was undertaken between July and August 2021.It is important to say that this period is considered to be the peak season for tourism in Greece.

Particularly, our research focuses on Facebook reactions and how they reflect on social media users' mood. We investigate the ways that public became aware of changes taking place in the tourism market place in the post-COVID era (Cohen, 2020).

Criteria decision analysis

For each article, we took into consideration the following criteria: article publication date, article title, if is relevant to answering the research questions, the content of the abstract, the number and the content of Facebook posts the article was shared onto, as well as the number of click-based reactions of each category. *Measuring the Diver-*

sity of Facebook Reactions to Research .Our final dataset included 58 articles shared onto Facebook posts, all of which received a total of 12.850 click-based reactions.

Study of the Reuters news agency-Sample of articles and facebook reactions'

In a report came to light on July 14th 2021 entitled: ***"Tourism not contributing to surge of COVID-19 infections in Greece"*** the editor underlines that Greece relies on tourism for a fifth of its economy (MacSwan,2021). Due to the editor, Greek government introduced again local restrictions in order to save the summer season 2021 and *clarifies that: ""Tourism is not to blame for a surge of COVID-19 infections in Greece"*. According to the article, Minister of Tourism of Greece , Harry Theocharis, cleans that there is no problem in Greece with the opening of its borders while he accuses deniers of science for the rise of COVID-19 cases in Greece.

Facebook reaction

(Source: facebook.com)

Link: https://www.facebook.com/Reuters/posts/4644739405546379

This facebook post is characterized by almost all reactions being "Like"(442), The second cluster has a significant number of "Haha"s (49), but also some "Cry"s (15). Regarding the users' comments on the post there is a perception that COVID-19 does not spread mainly by vaccinated folks while other comment refers that: *"You can get covid and you can still spread it..you just wont die ..but to die you must be over 70+ with alot of other problems"*. Another facebook user underlines that *"even if you vaccinated you can still get Covid"*. Other users accuse the Greek Minister of Tourism of not being an infectious disease expert.

Another article which published on July 18th 2021 titled**: *"Mykonos, Greece's famed party island, falls silent under new COVID rules"*** (Fronista,2021), local authorities enforced a week-long nighttime curfew and ban on music after *"a worrying local outbreak"*. As a result, tourists cancelled summer vacation in the middle of its peak tourist season while caused disappointment to the business owners. The writer give support to the government for mandating the vaccination of healthcare workers and nursing home staff taking into account the coronavirus infections which had been rising in Greece that period.

Facebook reaction

(Source: facebook.com)

Link: https://www.facebook.com/Reuters/posts/4656719071015079

This facebook post has totally 1.200 reactions and is identified by almost half of the reactions being "Like"(673), The second cluster has a crucial number of "Cry"s (310), but also many ''Angry"s (115) and some Surprised ''Wow" (58). Regarding the users' comments on the post it is a risk if you decide to go on holidays during a global pandemic while others characterize is as "stupidity". Another facebook user believes that lockdown is not surprising because of alarming increase in COVID-19 cases and deaths worldwide .

Another article on 29th July, 2021 entitled: *"EU health body warns against visiting popular Greek islands over COVID-19"*(Tagaris,2021) established that south Aegean islands were marked as "dark red" on the European Centre for Disease Prevention and Control's COVID-19 map because of a very worrying" rise in infections which affect tourist arrivals. It is clearly mentioned in the article the lack of mistrust that had plagued the tourism industry since Greece depends heavily on it.

Facebook reaction

(Source: facebook.com)

Link: https://www.facebook.com/Reuters/posts/4692590000761319

This facebook post includes almost two hundred reactions being ”Like”(196), The second cluster has a smaller number of “Cry”s (56), but less reactions of surprise (35). Taking into account the users’ comments on this post, Greece is not supposed to be a tourist-friendly country. In other comments, migrants in Greece are accused of contributing to the spread of the virus. On the contrast, there is a belief from other users that the pandemic has increased xenophobic behaviors and discrimination.

Study of the international news channel Euronews- Sample of articles and facebook reactions’

In the heart of summer season, an article *“Sluggish start to tourism season in Greece”* (Touchtidou ,2021), underlines that the pandemic has kept tourists away from the historic city center of Athens as there are many factors that make the tourists thinking much more carefully and stay away from summer holidays in Greece. According to the article, the main reason is the instability of what might happen and how covid restrictions affect them. The editor claims that “*Vaccination is the key to saving the season*”, while The Greek Ministry of Tourism refuses the claim that the rise of new coronavirus cases in Greece is connected with the increase of tourist arrivals.

Facebook reaction

(Source: facebook.com)

Link: https://www.facebook.com/euronews/posts/10158801348593110

One main characteristic of this facebook post is that almost all reactions being "Like"(46), The second cluster has a significant number of "Haha"s (15), but also some "Cry"s (11). According to the users' comments on the post, there is a perception that it's not the virus turning tourists away but the government and *"People realised that are protesting against measures killing their businesses",* while other users support the opinion that the limiting factor is that holidays in Greece are *"crazy expensive"*. Other users accuse the Greek Minister of Tourism of not being an infectious disease expert. Other users protest against COVID-19 the restrictions that have been held across the country and asking get back to a pre-pandemic normal life:*"We all got the vaccine, stop this covid fearmongering! Once we're all vaccined, who dies dies, we can't stop the world forever"*.

In terms of another article titled: ***"Greece extends mandatory regular testing for unvaccinated tourism"*** on 29th July, 2021 is emphasized the necessity of *regular COVID-19 tests* that *"All unvaccinated staff tourism workers must undergo"* owing to a high number of coronavirus infections. On the grounds that the spread of the more contagious Delta variant, Greece was led to follow strict restrictions in an effort to save summer season.

To sum up, after having analyzed the content of articles and the proportions of each of the six Reactions for all posts (For instance, a post can collect 60% "Like", 30% "Wow", 5% "Haha", 5% "Love", and 0% of "Angry" or "Sad"). In terms of reactions we found out that "Like", being the default reaction, is unexpectedly the most frequent.

The frequency of the other fie reactions can rank as “Cry”, then “Wow” ,“Angry”, Haha” and last is “Sad”.

Covid tourism, as a new sustainable tourism?

The COVID-19 pandemic crisis may offer a rare and invaluable opportunity to rethink and reset tourism toward a better pathway for the future (Friedman, 2020, Roy, 2020, Brauder, 2020). It is considered to have provided a rare and invaluable opportunity to review and rehabilitate tourism towards a better course for the future (Burkle, 2006, Higging-Desbioles, 2020). According to Arundhati Roy, the Indian novelist “Historically, pandemics have forced humans to break with the past and imagine their world anew. This is no different. It is a portal, a gateway between one world and the next”, (2020). For many researchers, this pathway should have opened long before the pandemic in the tourism industry (Higging-Desbioles, 2020).

Covid-19 elaborated on the problems of the existing tourism system, which was based on unsustainable practices. Large-scale tourism, mass tourism and dependence of local communities on the tourism industry led to the abrupt and rapid collapse of the system (Renaud, 2020). Now, there is an essential need to adopt a sustainable and stable model (Higgins-Desbiolles, 2020). The ongoing impermanent process of deglobalization has presented the tourism industry with a unique opportunity to recreate sustainability by leaving aside the “dark sides” of recent years, such as environmental deprivation, economic abuse, or congestion (Niewiadomski, 2020). The virus has offered an opportunity to the tourism industry to recreate and contribute to society’s welfare rather than an economic system (Benjamin et al., 2020).

According to Brouder, local communities will be the “transformational centers” of the tourism industry during Covid-19 (2020). He believes that there is a need for community-centered tourism system based on responsible approaches that redefine and familiarize the tourism industry. A deeper understanding of the challenges and actions by remote communities can help transform the sector (Tremblay-Huet, 2020). Some research studies consider these times as a defining moment for resetting the industry of tourism (Higgins-Desbiolles, 2020).

Undoubtedly, the liquidity of the system in combination with the terrorism that existed worldwide due to the crisis, shifted the tourist preferences. According to Fan et al. the strong coverage of the effects of the pandemic by the media strongly influenced their motivations and behaviors as travelers (Kantar, 2020, Kristiansen et al., 2009). Visitors no longer travel with the same frequency, nor choose a place depending on popularity (Higgins-Desbiolles, 2020). Chassagne believes that tourism will be reduced locally and to small-scale standards that will provide control and security (2020). Travelers will be motivated by nature, environment, experience and locality (Chassagne, 2019). Pardo believes that the time of “rural tourism” has come and that it is now a need for survival (2020).

This is what governments and other key actors and policy makers are beginning to realize, so that there can be a sustainable recovery of tourism (Freidman, 2020). The reconstruction and stimulation of the system is necessary to create mutual trust between the visitors and the reception places (Chassagne, 2020). To accelerate the recovery of tourism according to Benjamin et al., Governments must take advantage of the timeliness of a sustainable and equitable tourism industry (2020).

The covid-19 pandemic will completely and unexpectedly transform tourism behavior by radically changing global travel standards, something that is strongly featured in the media and social media (Irwin, 2020). The strong promotion of both terrorism (Zarocostas, 2020) and alternative forms of tourism shifted a large part of the tourism product in this direction (Chassahne, 2020). (On the other hand, the tourism industry has returned in the same form over and over again, demonstrating remarkable resilience (Novelli et al., 2018 Papatheodorou et al., 2010).

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