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THE ROLE OF THE AMERICAN DOLLAR IN THE INTERNATIONAL MONETARY SYSTEM AND CHANGES IN ITS STRUCTURE

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ABSTRACT

The US dollar plays a crucial role as the most utilized currency in global markets, services, and international financial institutions. This paper examines the structural changes within the international monetary system in a world marked by economic bipolarity and diverse geographical monetary systems. It analyzes shifts in both new and existing monetary frameworks, changes in the functions of money itself, and the role played by international organizations in facilitating these transformations. This analysis centers on discussions among numerous specialists regarding the future role of the US dollar as an international currency over the next decade. It delves into the potential relationships it may establish with digital payment systems and monetary assets, and particularly explores the potential impact on so-called developing countries like China and India of introducing an international currency into the market that could challenge the dollar's dominant position. The study includes a historical exploration of currency dominance as a medium of international payment, tracing from the Dutch Florin to the English Sterling and ultimately to the American Dollar, while analyzing shifts in the international order. The authors attempt to analyze the process by which a currency transitions into an international medium of exchange and reserve currency, as well as how it may eventually relinquish its role to other currencies.

They seek to demonstrate that prior to the Second World War, these transitions often occurred through military means aimed at bolstering market influence. In contrast, contemporary dynamics driven by technological advancements, international economic organizations, globalization, and varied developmental conditions prompt efforts to establish new balances. Over the next decade, a gradual decline in the international utilization of the dollar is anticipated, both as a medium of exchange and as a foreign exchange reserve. The paper theoretically supports the assessment put forth by the US Congressional Budget Office that the dollar will not be surpassed by its closest rivals, namely the euro or the Chinese renminbi. Despite potential restructuring within the market, the dollar is expected to maintain its leadership position.

Keywords: *"Restructuring of the economy", International Reserve, International Currency, "Accelerators of monetary systems", Credit policies, etc.*

Introduction

Ray Dalio opens his book "Changing World Order: Why Nations Succeed or Fail" which is the last prophecy for the economy of the future, with the words: "The times that await us will be completely different from those that we lived, but I learned in 50 years as an investor, that these events had never happened during my lifetime, but had happened several times in the last 500 years of human history. That's how I realized that to predict the future, we have to learn the past because history repeats itself even though the generations in their individual lives do not live these cycles." (*Ray Dalio 2021*). Leaving antiquity aside - from the Roman Empire to the European Renaissance when the world order has changed repeatedly - in the last 500 years the economic cycles have always been repeated with the same symptoms and the same changes. By this we do not mean the economic cycles of short-term crises, but those cycles of domination of a world order that last an average of 200 years and have a period of changes that often exceed 20 years. (*Ray Dalio 2021*)

It is reasonable for everyone to inquire: What defines a world order? Without venturing into a legal analysis of the concept, we can understand "order" in the legal sense and "system" in the economic sense as the framework that regulates relations among individuals within a country, typically established through its constitution. On the other hand, the term "world system" (World Order) refers to the treaties and international structures that govern relations between states. Therefore, when a system undergoes change within a country - whether through violent upheavals, such as the transformations in Tsarist Russia in 1917, or through relatively peaceful means, as seen in the same country in 1990 - it fundamentally alters human relations within that nation. Much more significant are the shifts in world systems throughout human history, particularly those of the last 500 years, which have often been characterized by violence and profound consequences for global economic functioning. Changes in world order or economic systems typically occur based on "the law of the strongest" which establishes international rules and treaties, and whose currency serves as a global reserve currency. Both of these elements are safeguarded by formidable military capabilities, deterring any challenges to their dominance. However, in the current era of digitalization and artificial intelligence, will changes in world order or economic systems continue to be marked by violence? Is there a possibility for the restructuring of the world economy to occur without military conflict but rather through market dynamics? What form might this change take? These questions warrant closer examination.

A brief overview

When Holland emerged victorious after a 30-year war against Spain and Austria, which had formed the Habsburg empire, a new world order was established. How did this transformation occur? Setting aside religious conflicts, three fundamental factors strongly influenced the Dutch economy: astute rulers who established a power structure built on institutions, the establishment of a robust education system, and consequently, an unprecedented surge in technological advancements. During

that era, one-quarter of the world's technological discoveries were attributed to the Dutch. Among the most historically significant innovations of that time was the development of transoceanic ships capable of transporting vast amounts of wealth across long distances. The Netherlands ascended to become the world's foremost colonial and commercial power, as well as one of the leading producers globally, owing to its commitment to innovation and the high level of education among its population. With extensive imports and exports spanning the globe, the Netherlands maintained the economic security of its fleet by developing formidable naval military prowess, effectively deterring any threats. Consequently, it exerted significant influence over world trade, establishing its currency as an international medium of exchange. This circumstance provided the Netherlands with the opportunity to expand its financial markets and attract savings from across Europe to invest in its national currency. During this period, its currency not only served as an international medium of exchange but also emerged as a preferred currency reserve for numerous countries, extending beyond just colonial territories. It's worth noting that the Dutch pioneered the establishment of the first joint-stock company globally, enabling this legal entity to attract capital from various corners of the world. As a result, Amsterdam flourished as the world's financial hub.

Later on, the English emulated the Dutch model and established the East India joint-stock company. This entity, besides private investors, received state intervention in the form of exclusive privileges and protection from the British military fleet. Concurrently, the Industrial Revolution was reshaping the English economy, while the Dutch began losing their competitive edge in the market and, notably, their naval supremacy. Following the decisive defeat inflicted by the British Navy upon the Dutch Navy, the global balance of power shifted. Holland relinquished its status as the dominant naval power, and its economy lost its competitive footing. England assumed this role, reaping the associated benefits. Over the next two centuries, England experienced unprecedented prosperity, emerging as the preeminent colonial power of its time. Its economy surged to become the world's most formidable, its colonies expanded significantly, and its currency gained status as an international medium of exchange and reserve. Consequently, London evolved into the epicenter of global transactions. History repeated itself but it took a 200-year cycle where the Netherlands ruled the world economically, militarily and technologically.

After World War II, Europe faced immense losses in human and financial resources, leading to widespread devastation and economic ruin. The continent was sharply divided into two blocs, each representing distinct political and economic ideologies. The USSR, above being one of the most ravaged countries, struggled with an economic system that failed to unleash its full potential for development. Meanwhile, post-war England saw a decline in its global influence, losing its colonial empire and primacy in the world economy due to the immense costs of the war. Consequently, London's status as a financial center diminished, reflecting profound shifts in the post-war global order.

The United States, relatively untouched by the physical devastation of World War II except for the attack on Pearl Harbor, had already rebounded from the Great Depression of 1929-1933. During the war, it spearheaded an unparalleled military-industrial complex, harnessing the talents of the world's leading scientists and driving forward remarkable technological advancements. As the war drew to a close, the stage was set for a rewriting of history and the establishment of a new world order, accompanied by the creation of a fresh economic system. The Bretton Woods agreements represent a compromise between two plans, in which the White plan had more weight. These agreements included: the creation of the International Monetary Fund (IMF), which was accompanied by the creation of the International Bank for Reconstruction and Development. But the most important event was that the American dollar finally became the currency of international payments and consequently the currency of monetary reserves of almost all capitalist countries. Further on, the United States made it clear to its allies that the payments for the development of Europe after the war (Marshall Plan) would not be paid back in gold but in dollars. During this conference, Western leaders reached a consensus that to settle their debts with the United States for war supplies, they would need to tie their currencies to the US dollar, effectively severing the link to the gold standard. Despite this agreement, the United States continued to honor the convertibility of the dollar into gold until 1971. Then, in a dramatic turn of events, President Richard Nixon announced in a televised address to the nation that the US would no longer exchange dollars for gold. This unexpected announcement perplexed many, as evidenced by the surprising reaction of the stock market, which, instead of plummeting as anticipated, surged by more than 10% the following day. To this day, researchers remain puzzled by this seemingly paradoxical response.

In conclusion of this short historical overview, it's crucial to recognize the significance of a currency as the anchor currency in global transactions and, especially, as the primary currency held in foreign reserves by countries worldwide. It's worth noting that since the 1990s, China, despite having significantly lower per capita income compared to the United States, gradually started to accumulate the dollar as a reserve currency. With the detachment from the gold standard, the US gained the ability to issue currency not just for its own use but for the entire world.

Summary of literature and study methodology

Dollar assets, like U.S. Treasury securities, comprise the majority of foreign reserves held by central banks globally. The dollar serves as the primary transnational currency for setting trade prices and delineating financial assets. Additionally, the balance sheets of central banks indicate that the dollar continues to be the predominant anchor currency utilized by these institutions (Daniel Fried 2023). The post-crisis period of 2009 showed that although purchases of dollar reserves by central banks slowed during the crisis itself (to a large extent the increase in reserves at that time reflected changes in the valuation of these assets), purchases of dollar reserves returned to their pre-crisis trend immediately thereafter (Dominguez,

Hashimoto, and Ito (2012). The euro and the renminbi are the two currencies most likely to "replace" the dollar as the main international currency, but neither is expected to surpass it in the next decade. (Bertaut, von Beschwitz, and Curcuru 2021).

Let's delve deeper into the concept of a global reserve currency. Typically, currencies issued by robust and stable economies with well-established and liquid financial markets, underpinned by strong legal frameworks, are prime candidates to serve as foreign exchange reserves. In order to strengthen their possible status in the future as international monetary reserve currencies, they should exhibit the following characteristics in time:

- The currency is perceived to be a reliable store of wealth for consumers and private investors, for central banks both in the issuing country and in the wider world economy.
- Currency is usually used as a unit of account, including the price of physical goods traded on international exchanges. So, in this currency, the prices of goods quoted in the stock market are expressed and have a comparative and long-term value.
- The currency is widely used as a medium of exchange in cross-border and international trade invoicing and payments.

In assessing these criteria, size and stability emerge as crucial factors. While many currencies may meet one or even two of these criteria, only the United States, with the dollar, currently fulfills them all. The status of the dollar, alongside the strength of U.S. financial markets, remains unparalleled. (Luc de la Durantaye, Éric Morin, & Michael Sager 2020).

Another crucial factor influencing a country's ability to issue an international currency is the price stability within that country. Price stability, represented by a currency, safeguards its purchasing power and consequently, enhances the economic power of the issuing country. This stability fosters confidence in using the currency as a store of value and medium of exchange. Price stability entails consistent prices for domestic goods and services, minimal fluctuations in currency exchange rates, and the preservation of the value of the country's currency for financial assets conducted abroad. High internal inflation rates, significant fluctuations in financial market values denominated in the currency, and challenges in refinancing sovereign debt are all indicators that diminish the feasibility of using a currency as an international reserve currency. For this reason, Monetary reliability plays a crucial role in the decision-making processes of foreign businesses, local investors, and other entities considering investments in a country.

Methodologically, this study employs theoretical analysis, logical deductions, and statistical analysis using long-term data. Deduction and analysis serve as the primary tools for drawing conclusions. Additionally, factorial analysis is utilized to identify factors that may influence the overall findings of the study. The data processing in this study relies on certified primary sources, ensuring the reliability of the results, which have been corroborated in numerous other similar studies.

Discussions

Referring to insights from various experts, Christopher Waller, a member of the Board of Governors of the Federal Reserve, stands out. Waller predicts that the US dollar will maintain its dominant status for the foreseeable future. "Recent remarks cautioning about a potential decline in the US dollar's status are, in fact, raising unwarranted anxieties," Waller stated. The Federal Reserve governor clarified that contrary to some assertions, the US dollar is not poised to decline. "I don't anticipate the US dollar losing its status as the world's reserve currency in the near future," he remarked. "We also don't foresee a substantial erosion of its leadership in trade and finance," he added. Waller highlighted that despite challenges posed by emerging economies like the BRICS nations to the US dollar, it still accounts for approximately 60% of global trade. "With nearly 60% of global reserves as of 2022, the US dollar will remain the predominant reserve currency for the foreseeable future. The primary contenders to the dollar include the Euro, Renminbi, and Gold." In addition to the official statements, we are trying to list some facts that show the positioning of the US dollar in the coming years, based on its current functions:

1. Indeed, the US dollar maintains its status as the primary global reserve currency held by central banks of developed countries. Despite a trend towards diversification, with central banks increasing their holdings of assets denominated in euros and renminbi, the dominance of the dollar remains unchallenged. Even factors such as higher interest rates in China have not significantly impacted the dollar's role as the preferred reserve currency. Figures 1 and 2 provide clear evidence of this phenomenon. Both figures illustrate the ongoing preference for the dollar as a currency reserve among central banks (Luc de la Durantaye, 2020).
2. In all global exchanges, including oil, gas, and gold, the price of these products remains in dollars, regardless of Russia's efforts to create the obligation of oil payments in local currency. This also exists for the mineral market and many other products.
3. The American monetary policy, even during periods of substantial interest rate reductions, has consistently maintained controlled inflation and implemented austerity measures to prevent overheating of the economy. Following the crises of 2009 and 2020, the American economy did not experience inflation levels as high as predicted by specialists.

Figure 1. The trend of the amount of the USD as a foreign exchange reserve

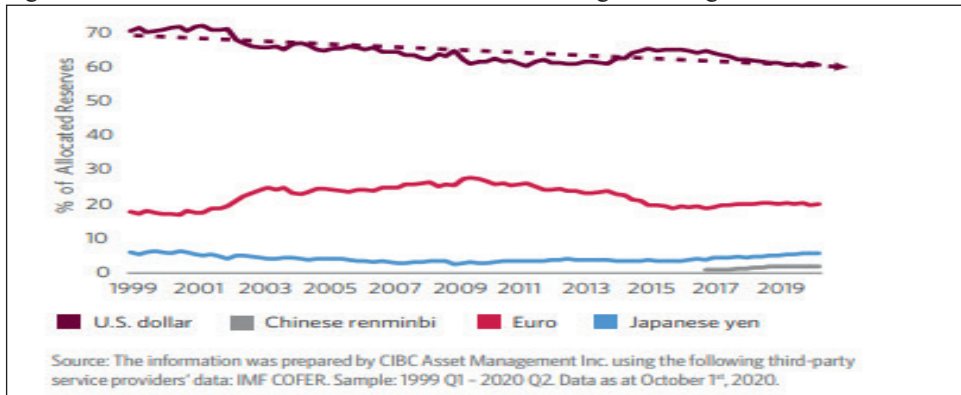


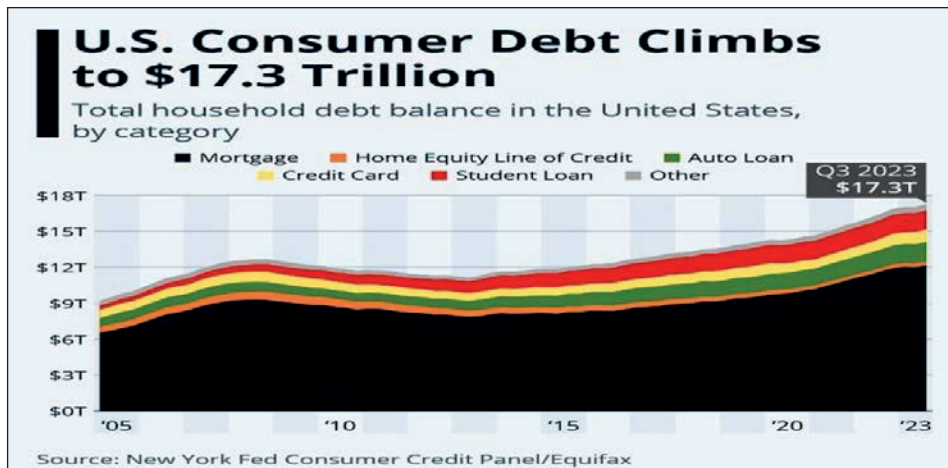
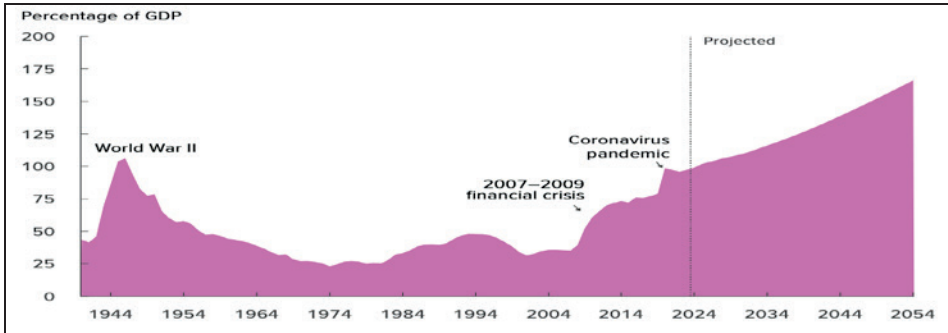
Figure 2. Trend of interest rates



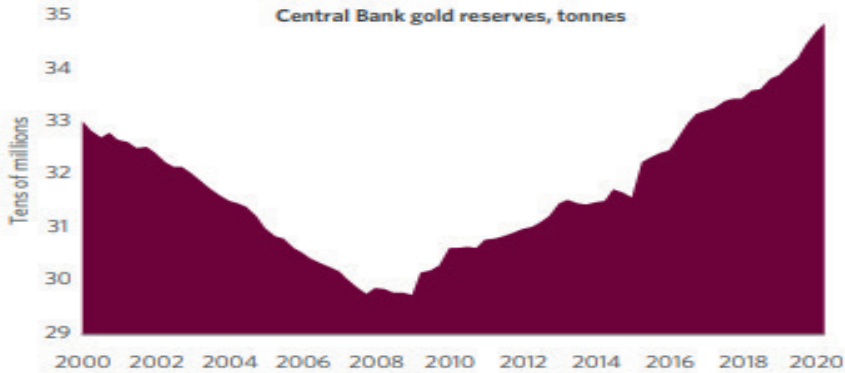
Meanwhile, researchers are analyzing the factors that could lead to a reversal of the dominance of the American dollar in the world economy, first as a means of payment and later as a currency held as reserves by central banks.

Let's explore the factors that risk the dominance of the American dollar in a more distant stage. We will focus on some main factors and two currencies, the Euro and the Renminbi, both associated with the role of Gold as the oldest currency in the world.

1. One of the concerns for international investors is the unprecedented rise in US public debt, both in relation to GDP and in absolute numbers. Additionally, the alarming increase in debt among American households is noteworthy, particularly as it no longer reflects the structure of luxury spending seen two decades ago, but rather encompasses elements once considered essential to the American dream. The graphs below vividly illustrate these trends (Milano Finanza 2023).



2. China is constantly increasing its weight in the world economy, and regardless of restrictions and protectionist policies, its expansion continues. The increase in Chinese exports has caused many countries to pay their imports not in dollars but in local or Chinese currencies, something that slightly affects the hegemonic role of the dollar
3. China, in addition to its very aggressive policy with exports, is also trying to create human capital to rival the U.S. in the creation of new technologies to remove the obstacles that the West is putting in this direction.
4. The most intriguing aspect is that despite China's efforts for a new world order, the Renminbi has been unable to establish itself as a reserve currency in central banks, leaving the space vacated by the dollar to be filled by the Euro and Gold. This is evidenced by the continual rise in the price of gold and the increase in its reserves across almost all central banks, both in developed and developing countries. The graph below vividly illustrates this trend (Luc de la Durantaye, 2020).



Source: The information was prepared by CIBC Asset Management Inc. using the following third-party service providers' data: World Gold Council. Data as at September 30th, 2020.

Conclusions

1. The US dollar has had an exceptionally good run and its longevity as the dominant currency at the center of global finance is unprecedented in the history of the world economy. For some scholars, the status of the dollar is under threat, from inside and outside the USA. Some others seem more reliable and do not see this as an immediate issue. They are more of the opinion that the Euro, Renminbi, and gold seem likely to form an amalgam that, together with the dollar, creates a multi-currency reserve system. They think this could happen gradually over the next decade.

2. The diminishing status of the dollar carries profound implications for both the global financial system and the economic cycle, as it directly impacts the growth trajectories of economies, including that of the United States. It also bears significant immediate and long-term consequences for investors, encompassing those with investments in global assets, others with currency exposure, and those engaged in speculative activities involving currencies against the dollar.

Both of the above conclusions determine the current status of the dollar, which both as an investor and as a speculator does not offer a high margin of action to attack its position in the world market.

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TOWARDS A GREENER FUTURE: ANALYZING ENVIRONMENTAL AND ECONOMIC TRENDS IN THE WESTERN BALKANS

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ABSTRACT

This study conducts an extensive investigation into the multifaceted relationship between sustainability and economic development across Western Balkan countries, leveraging the wealth of data available in the OECD Green Growth database. Employing a rigorous methodology, the study employs 16 carefully selected indicators, guided by well-defined criteria and the OECD's conceptual framework. The objective is to provide a nuanced understanding of each country's performance in the realm of green growth and sustainable development. Drawing inspiration from the index method proposed by Prendi et al. (2023), this research enables a thorough comparative analysis, taking into account the positive or negative impact of variables on green growth or sustainable development.

Among the key findings, Albania emerges as a standout performer, showcasing a commendable commitment to sustainable practices. Despite facing challenges in non-energy material productivity and real GDP per capita, Albania demonstrates noteworthy achievements, particularly in reduced mortality rates from PM2.5 exposure and lower economic costs associated with premature mortalities. Greece closely follows, emphasizing environmental conservation and sustainable economic development. Notably, Greece exhibits high forest resource stocks and a robust coefficient of performance, reflecting its dedication to green growth.

Conversely, North Macedonia and Serbia confront challenges, signaling the need for targeted strategies. While both countries exhibit lower coefficients of performance, they present opportunities for focused interventions to enhance their environmental and economic performances. Specific indicators, such as the development of environment-related technologies and forest resource stocks, offer tailored insights for policymakers. Albania, despite excelling in certain areas, faces challenges in technological innovation and forest conservation. These nuances provide a roadmap for strategic interventions and policies that address the unique needs and opportunities within each country. The coefficient of performance further emphasizes Albania's exemplary position, underscoring the necessity for a multifaceted approach to sustainability that balances economic growth with environmental responsibility. Serving as a comprehensive reference for policymakers, researchers, and stakeholders, this study advocates for context-

specific interventions that recognize the diversity of challenges and opportunities in the pursuit of a sustainable and resilient global community.

By expanding the study's scope to encompass three additional Southeast European countries, a more comprehensive regional analysis emerges. The inclusion of 16 indicators, up from the original eight used by Prendi et al. (2023), allows for a more detailed exploration of various aspects of green growth. This expanded perspective enriches our understanding of sustainability in the region, facilitating the identification of common challenges, best practices, and potential collaborative opportunities. The detailed methodology presented in this manuscript contributes valuable insights for researchers, policymakers, and stakeholders navigating the intricate dynamics of green growth and sustainable development. It provides a robust framework for assessing the effectiveness of policies, identifying areas for improvement, and tracking progress over time. As global efforts intensify towards transitioning to sustainable and resource-efficient economies, the study offers a timely and insightful contribution to the ongoing discourse on fostering environmentally friendly practices and promoting sustainable development.

Keywords: *Green Growth, Sustainable Development, Environmental Indicators, Economic Performance, Western Balkans*

Introduction

The concept of green growth has garnered significant attention from international organizations, including the OECD, UNEP, and the World Bank. The term "green economy" was first introduced in 1989 in the report "Blueprint for a Green Economy," commissioned by the UK Government. The United Nations Conference on Environment and Development (UNCED), also known as the Rio Conference or Earth Summit, in 1992, emphasized the integration of environment and development, resulting in key outcomes such as Agenda 21, the Climate Change Convention, and the Convention on Biological Diversity.

In 2002, the Earth Summit 2002 (Rio+10) in Johannesburg, South Africa, acknowledged sustainable development as a central goal. The United Nations Conference on Sustainable Development (UNCSD), also known as Rio 2012 (Rio+20 or Earth Summit 2012), convened in Rio de Janeiro, Brazil, in June 2012. The primary outcome, "The Future We Want," endorsed by participating governments, advocated for a sustainable future and an inclusive green economy.

The concept of green growth emerged during the Fifth Ministerial Conference on Environment and Development (MCED) in Seoul in 2005, where stakeholders committed to transitioning towards green growth. The OECD formulated key principles and strategies, including the Green Growth Strategy and OECD Indicators.

In October 2020, the Sofia Declaration on the Green Agenda for the Western Balkans (GAWB) and the GAWB Action Plan were endorsed during the 2021 Brdo Summit. Western Balkan countries, including Albania, have established regulatory frameworks, policies, initiatives, projects, and programs for implementing the green

economy (Matlievska et al., 2022). However, the execution of specific activities in these nations remains at a nascent stage (Knez et al., 2022). Albania has enacted several laws aimed at integrating sustainable development principles and addressing gaps in the environmental sector (Ongari, 2016).

This study focuses on analyzing and monitoring the progress toward green growth, specifically in Albania. To achieve this, 16 indicators from the OECD Green Growth Database have been selected. The study encompasses eight Southern European countries, with three being European Union members (Greece, Croatia, Bulgaria) and the remaining five non-EU countries (Albania, Serbia, Montenegro, North Macedonia, Bosnia and Herzegovina). The study aims to assess the country's performance in terms of the efficient use of natural capital, environmental and resource productivity, and the degree to which economic growth aligns with green principles.

Literature review

Green growth, as an integral facet of sustainable development, encompasses the dual objective of environmental protection and economic advancement (OECD, 2015; Capasso et al., 2019; Sowah & Kirikkaleli, 2022). This paradigm shift involves transitioning towards a low-carbon and resource-efficient society, necessitating active engagement in public policy formulation and implementation at the territorial level (Lyytimäki et al., 2018; Dogaru, 2021). Sustainable development, as a holistic approach, addresses economic, environmental, social, and institutional dimensions of progress (Golusin et al., 2011).

The broad concept of the green economy encompasses diverse facets of growth, well-being, efficiency, and risk reduction associated with natural resource utilization (Loiseau et al., 2016). Governments globally have recognized economic growth and environmental sustainability as crucial policy objectives (Hao et al., 2021). The green economy is a focal point in initiatives like the Europe 2020 strategy, aiming to achieve sustainable development and confront challenges related to pollution, waste management, resource efficiency, and climate change (Kasztelan, 2021; Dogaru, 2021).

Green growth stands out as a potent solution against environmental degradation by advocating for sustainable practices and policies. It strives to decouple economic growth from environmental harm, highlighting the significance of investing in clean technologies, renewable energy, energy efficiency, sustainable agriculture, waste management, and other measures promoting environmental protection.

Numerous studies provide valuable insights into the intricate relationship between renewable energy, economic growth, and CO₂ emissions across diverse contexts. Awosusi et al. (2023) explored bidirectional causality between renewable energy and CO₂ emissions in energy transition economies. Saqib et al. (2023) focused on G-10 countries, revealing positive impacts of environmentally friendly technologies and renewable power generation on reducing carbon emissions. Nataly Echevarria Huaman et al. (2014) suggested approaches to reduce CO₂ emissions, emphasizing

energy efficiency measures and transitioning to renewable energy. Mitic et al. (2018) highlighted the interdependence of economic growth and CO₂ emissions in South East European countries.

The renewable energy system plays a pivotal role in achieving energy sustainability and fostering sustainable supply chain management. Sun et al. (2023) underscore the importance of renewable energy in supporting sustainable practices throughout the supply chain, providing an environmentally friendly alternative to conventional energy sources.

Biomass, a significant source of renewable energy, comprises various organic materials such as wood, agricultural residues, energy crops, and industrial waste (Wee et al., 2012). Utilizing biomass for energy purposes offers benefits like reduced greenhouse gas emissions, effective waste management, and the potential for local resource development. The forestry sector, through proper management practices, reforestation, and sustainable harvesting, can play a pivotal role in promoting renewable energy and mitigating carbon emissions. By utilizing forestry residues and sustainably managed wood resources, the forestry sector contributes significantly to enhancing renewable energy and reducing carbon emissions on a long-term basis.

Variable			Unit	Legend	Effect
Environmental and resource productivity	CO ₂ Productivity	Production-based CO ₂ productivity, GDP per unit of energy-related CO ₂ emissions	US dollars per kilogram, 2015	X ₁	Positive
	Energy productivity	Energy intensity, TPES per capita	Tonnes of oil equivalent (toe)	X ₂	Negative
		Renewable energy supply, % total energy supply	Percentage	X ₃	Positive
		Renewable electricity, % total electricity generation	Percentage	X ₄	Positive
		Non-energy material productivity	Non-energy material productivity, GDP per unit of DMC	US dollars per kilogram, 2015	X ₅
	Biomass, % of DMC		Percentage	X ₆	Positive
	Non-metallic minerals, % of DMC		Percentage	X ₇	Negative
	Metals, % of DMC		Percentage	X ₈	Negative
	Forest resources	Forest resource stocks	Cubic metres, Millions	X ₉	Positive
	Environmental dimension of quality of life	Exposure to environmental risks	Mean population exposure to PM _{2.5}	Micrograms per cubic metre	X ₁₀
Mortality from exposure to ambient PM _{2.5}			Per 1 000 000 inhabitants	X ₁₁	Negative
Welfare costs of premature mortalities from exposure to ambient PM _{2.5} , GDP equivalent			Percentage	X ₁₂	Negative
Economic opportunities and policy responses	Technology and innovation: Patents	Development of environment-related technologies, % all technologies	Percentage	X ₁₃	Positive
		Development of environment-related technologies,	Number	X ₁₄	Positive

		inventions per capita			
Socio-economic context	Economic context	Real GDP, Index 2000=100	Index, 2000=100	X ₁₅	Positive
		Real GDP per capita	US Dollar, 2015	X ₁₆	Positive

Source: Data extracted on 27 May 2023 16:26 UTC (GMT) from OECD.Stat

Methodology

This study leverages the OECD Green Growth database to conduct a rigorous assessment of green growth progress across eight countries, with a particular focus on Albania. A meticulously chosen set of 16 indicators (outlined in Table 1) guided by well-defined criteria and the conceptual framework provided by the OECD in 2017 forms the basis of the analysis. These indicators strategically capture crucial facets of green growth, emphasizing environmental and resource productivity. Employing the index method, as proposed by Prendi et al. (2023), enables a comparative evaluation of each country's performance.

Table 1. Green Growth Indicators (OECD) used in the study

The calculations, guided by the methodology proposed by Prendi et al. (2023), involve several steps. Firstly, the average of the variables over years is computed for each country. The percentage contribution per variable for each country is then determined. The index of performance (k_i) is calculated using the points assigned for each variable based on its positive or negative impact on green growth or sustainable development, as indicated by the values of ρ (percentage contribution).

$$\begin{aligned}
 & \text{Average of variables (country)}_k \\
 &= \frac{\text{sum of all observation for each variable}}{\text{Total number of observations for each variable}}
 \end{aligned}$$

Percentage of the contribution per variable for each country:

$$\rho = \frac{\text{Average (country)}_k}{\sum_{k=1}^n \text{Average (country)}_k} \times 100$$

Index of performance is calculated as following:

$$\varphi = \sum_{k=1}^n k_i$$

k_i = points for each variable

The same authors (Prendi et al., 2023) explain that the calculation of points for each variable (k_i) can be done as shown in table 2.

Table 2. Calculation of points for each variable (k_i)

Variable with positive effect	0	1	2	3	4
	0-10%	11-20%	21-30%	31-40%	41-50%
Variable with negative effect	4	3	2	1	0

Methodology according to Prendi et al., (2023)

The assignment of positive or negative effects is delineated in Table 2, wherein positive effects signify larger values of ρ indicating a positive impact on green growth or sustainable development, while negative effects signify larger values of ρ indicating a negative impact. Points are then assigned based on the magnitude of these effects, with larger positive effects or smaller negative effects receiving higher points.

Expanding beyond the West Balkan countries, this study incorporates three additional Southeast European countries, providing a more comprehensive understanding of green growth and sustainability in the region. The augmentation of indicators from eight to 16 allows for a more nuanced analysis of various aspects of green growth. This broader scope, inclusive of additional Southeast European countries, facilitates a comprehensive regional analysis, unveiling common challenges, best practices, and potential areas for collaborative efforts to promote green growth and sustainable development in the region.

Results and discussions

According to the OECD (OECD, 2017), production-based CO₂ productivity quantifies the economic value generated per unit of CO₂ emitted, calculated from gross direct CO₂ emissions resulting from fossil fuel combustion within a country's national territory, excluding bunkers, sinks, and indirect effects. The adverse impacts of fossil fuel combustion on human health and welfare are well-documented (Midilli et al., 2006). Notably, there is a recognized conflict between global economic growth and the escalating levels of CO₂ emissions. As articulated by Sowah et al., (2022), the surge in CO₂ emissions is closely associated with GDP per capita, underscoring a correlation between economic growth and increased carbon emissions. Moreover, a study conducted by Santra, (2017) reveals that technological innovation exerts a positive influence on CO₂ emission productivity, particularly in BRICS countries (Brazil, Russia, India, China, and South Africa). This underscores the pivotal role of innovation in shaping sustainable practices within emerging economies.

A comprehensive comparative analysis of CO₂ productivity was undertaken spanning three decades across eight nations—Albania, Bosnia, Montenegro, North

Macedonia, Serbia, Croatia, Greece, and Bulgaria—examining the efficiency with which these countries convert energy-related CO₂ emissions into GDP (Figure 1). Notably, Albania consistently demonstrates higher CO₂ productivity than Bosnia, while Montenegro outperforms Albania, showcasing potential disparities in resource management. Additionally, the study reveals an upward trend in CO₂ productivity for Albania and Croatia, suggesting advancements in environmental policies. Greece consistently surpasses Albania in CO₂ productivity, emphasizing its pronounced success in harmonizing economic growth with environmental responsibility. These insights provide a nuanced understanding of how different nations navigate the delicate balance between economic development and ecological preservation, offering valuable implications for sustainable policies and future research endeavors.

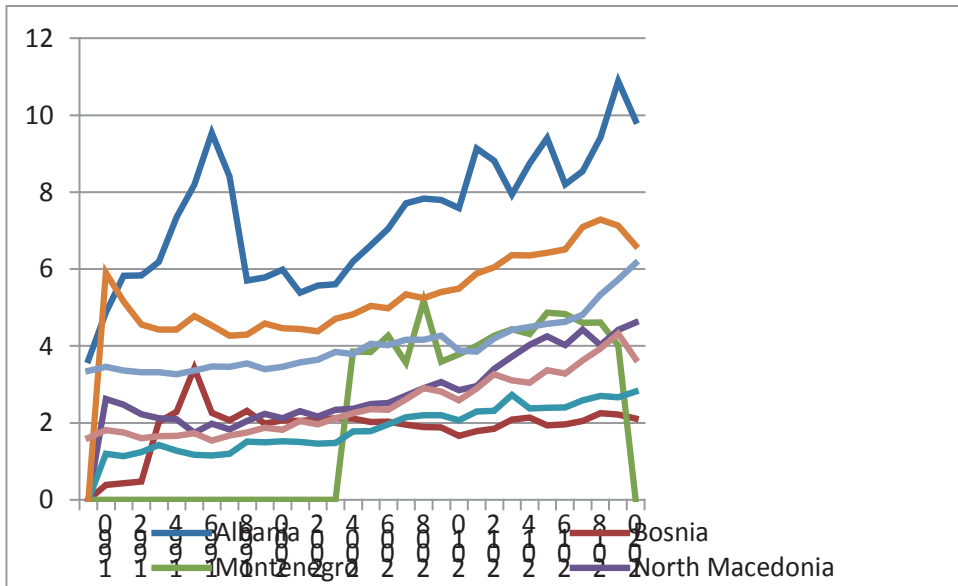


Figure 1. Production-based CO₂ productivity: GDP per unit of energy-related CO₂ emissions. Source: author calculations based on OECD.stat

Environmental sustainability has become a central focus in studies related to energy, with the present research highlighting energy and non-energy productivity parameters. Energy, a critical input in all economic activities, is evaluated through energy productivity, defined as the output (measured in real GDP) per unit of Total Primary Energy Supply (TPES), signifying efforts to improve energy efficiency and reduce carbon and atmospheric emissions (OECD, 2017). Energy productivity, encapsulating both energy consumption and efficiency enhancement, provides insights into the complex interdependencies of economic, energy, and environmental challenges faced by nations (Petković, 2023; Atalla et al., 2017; Gavurová et al., 2021). Another metric explored in the literature is energy intensity, representing the energy required for a unit of economic output and serving as a potential variable in

energy and climate policies. Lower energy intensity values denote heightened energy efficiency, and policies aimed at its reduction contribute to the establishment of sustainable energy frameworks (Atalla et al., 2017).

The critical need to develop green energy strategies for a sustainable future is underscored by the work of Midilli et al. (2006). Green energy, defined as an energy source with minimal or zero environmental impact, is derived from renewable sources such as solar, hydro, biomass, wind, and geothermal. The primary goal of green energy is to mitigate the negative effects associated with fossil fuels, reduce emissions from electricity generation, combat climate change, and address the increasing demand for clean energy across sectors. The transition from fossil fuels to green energy not only curtails greenhouse gas emissions but also actively contributes to environmental betterment.

Recognizing energy consumption and economic growth as pivotal drivers of CO₂ emissions, this study aligns with the urgent need to mitigate emissions due to their profound impact on climate change. Renewable energy consumption and innovation are identified as potent strategies to address this challenge (Godil et al., 2021; Petković, 2023). The authors emphasize the transformative potential of shifting from fossil fuels to renewable sources, facilitating a substantial reduction in greenhouse gas emissions and mitigating the environmental footprint of energy generation. This holistic approach, integrating energy productivity, intensity, and the transition to green energy, lays a robust foundation for advancing environmental sustainability in the complex interplay of economic and energy systems.

Climate change and global warming stand out as urgent and contentious environmental issues confronting the world (Kirikkaleli, Karmoh Sowah, et al., 2023). In response to this pressing context, (Mitić et al., 2020) posit that renewable energy sources hold significant potential for substantial reductions in greenhouse gas (GHG) emissions when compared to fossil fuels. The adoption of renewable energy is viewed as a viable alternative capable of replacing non-renewable energy sources and enhancing overall environmental quality (Kirikkaleli, Addai, et al., 2023). Furthermore, the consumption of renewable energy carries the added benefit of mitigating the adverse effects associated with carbon footprints (Sowah et al., 2022). By diminishing reliance on carbon-intensive energy sources, societies can curtail their carbon footprints, fostering a more sustainable and environmentally friendly energy system.

Building on previous findings, studies, such as the work by (Majeed et al., 2022), have indicated that an increase in energy productivity and energy prices serves as a catalyst for promoting renewable energy consumption, particularly evident in BRICS countries between 1990 and 2018. This suggests that initiatives aimed at improving energy efficiency and implementing policies that elevate energy prices can act as incentives for the widespread adoption of renewable energy sources, consequently contributing to a further reduction in emissions.

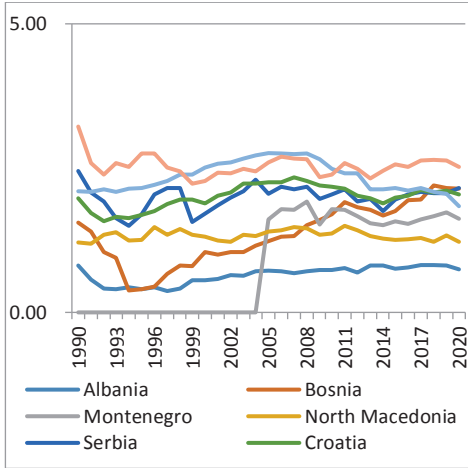
Figure 2 provides comprehensive insights into the energy landscape of the examined countries in the region. In Figure 2a, showcasing energy intensity measured in

Tonnes of oil equivalent (toe) per capita, notable trends emerge. Albania and Bosnia exhibit declining patterns, suggesting improvements in energy consumption efficiency. Montenegro's limited data points to a similar trend. In contrast, North Macedonia and Serbia display consistent decreases in energy intensity, indicating sustained efforts in enhancing energy efficiency. Croatia and Greece show increasing trends, possibly influenced by economic growth or evolving energy consumption patterns, while Bulgaria stands out with an overall decrease, signaling positive strides in energy efficiency.

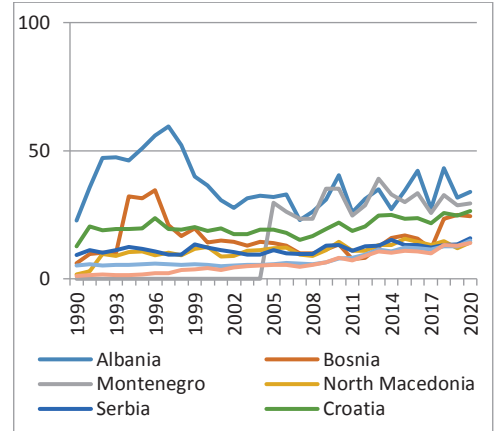
Figure 2b delves into the percentage of renewable energy supply within the total energy mix. Albania and North Macedonia reveal upward trajectories, indicating significant transitions toward renewable sources. Bosnia's fluctuating trend suggests varying degrees of renewable energy adoption, while Montenegro shows a positive but limited progression. Serbia and Croatia display gradual increases, demonstrating efforts to integrate renewables. Greece and Bulgaria exhibit notable rises, reflecting a collective shift towards more sustainable energy supplies. The figures underscore the diverse commitment levels and successes in incorporating renewables into the energy portfolios.

Figure 2c illustrates the percentage of renewable electricity in total electricity generation. Albania consistently achieves high levels, reaching 100% in recent years, showcasing a strong reliance on renewable sources. Bosnia exhibits an upward trajectory, reflecting a substantial increase in renewable electricity. Montenegro's positive trend, though limited, suggests a focus on renewables. North Macedonia maintains a relatively steady proportion of renewable electricity, indicating ongoing efforts. Serbia displays a gradual increase, emphasizing a commitment to integrating renewables. Croatia consistently maintains a substantial share of renewable electricity, while Greece and Bulgaria show progressive increases, highlighting the collective transition towards a more sustainable and environmentally friendly electricity generation landscape. These findings underscore the diverse approaches and successes of the examined countries in promoting renewable electricity within their energy portfolios.

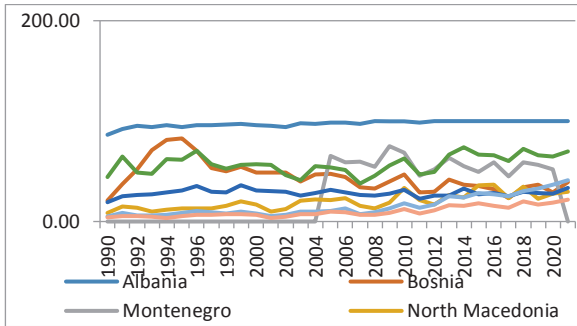
Figure 2. Energy productivity.



(a) Energy intensity, TPES per capita;



(b) Renewable energy supply, % total energy supply



(c) Renewable electricity, % total electricity generation Source: author calculations based on OECD.stat

The current study undertakes an analysis of non-energy material productivity parameters, specifically focusing on waste materials and recycling, with a particular emphasis on biomass. Recognizing the significance of these parameters, improvements in waste management and recycling practices can yield substantial benefits for sustainability and the circular economy. Biomass, a key component of the bioeconomy, emerges as a pivotal alternative to traditional fossil resources. Defined as organic materials derived from diverse sources such as plants, animals, and other organic entities, biomass serves a multifaceted role in energy production, biofuel manufacturing, and the development of bio-based products. Its importance is accentuated in the context of the global shift towards a low-carbon economy. As societies endeavor to diminish their dependence on fossil fuels and mitigate greenhouse gas emissions, biomass emerges as a renewable and potentially carbon-neutral energy source. Biomass energy systems leverage organic waste, agricultural residues, dedicated energy crops, and sustainably managed forests to generate heat,

electricity, and biofuels, contributing significantly to the pursuit of sustainable and environmentally friendly energy solutions.

Figure 3a illustrates Non-Energy Material Productivity (NEMP) parameters, specifically GDP per unit of Domestic Material Consumption (DMC) in US dollars per kilogram (2015). The data for Albania, Bosnia, North Macedonia, Serbia, Croatia, Greece, and Bulgaria reveals changes in economic efficiency related to material consumption. However, some years and countries have missing values. Notably, Albania shows a decreasing trend in NEMP from 1990 to 2001, followed by fluctuating values, indicating changes in material use efficiency. Bosnia's NEMP increases until around 2003, followed by a declining trend, suggesting variations in material productivity. North Macedonia displays an overall increasing trend in NEMP, implying improvements in material productivity. Serbia's NEMP fluctuates but generally indicates improvements in material efficiency. Croatia exhibits an increasing trend, implying enhanced material productivity, while Greece and Bulgaria show varied trends with fluctuations. These findings highlight diverse patterns in material productivity across the examined countries, emphasizing the importance of targeted strategies for sustainable and efficient resource use.

Figure 3b provides data on the percentage of biomass in Domestic Material Consumption (DMC) from 1990 to 2020 across the region. Biomass, as a percentage of DMC, signifies the share of organic materials in overall material consumption. For Albania, Bosnia, North Macedonia, Serbia, Croatia, Greece, and Bulgaria, the data reflects fluctuations and trends in biomass resource utilization. Albania shows a fluctuating pattern with an increasing trend in recent years, indicating growing reliance on biomass. Bosnia's data reveals variations with occasional peaks, suggesting changes in the contribution of biomass to material consumption. North Macedonia demonstrates a relatively steady trend with a minor decline, indicating a stable but decreasing share of biomass in DMC. Serbia displays fluctuations, but the overall trend suggests a decline in the percentage of biomass in material consumption. Croatia exhibits a decreasing trend, implying a reduced reliance on biomass. Greece and Bulgaria both display varying patterns, emphasizing the dynamic nature of biomass utilization and the need for sustainable resource management strategies.

Figure 3c presents data on the percentage of non-metallic minerals in DMC from 1990 to 2020. Albania shows a fluctuating pattern with an increasing trend in recent years, suggesting a growing reliance on non-metallic minerals. Bosnia exhibits fluctuations, but the overall trend indicates a relatively stable share of non-metallic minerals in DMC. North Macedonia demonstrates a fluctuating pattern with a general increasing trend. Serbia displays fluctuations, implying changes in the reliance on non-metallic minerals. Croatia exhibits a fluctuating pattern, reflecting changes in the utilization of non-metallic minerals over the years. Greece and Bulgaria show a declining trend, indicating a decreasing reliance on non-metallic minerals. These findings highlight the dynamic nature of non-metallic mineral

utilization across the examined countries, emphasizing the need for sustainable resource management practices and tailored policies.

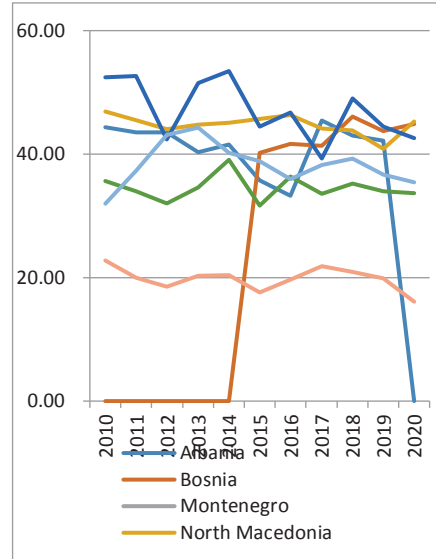
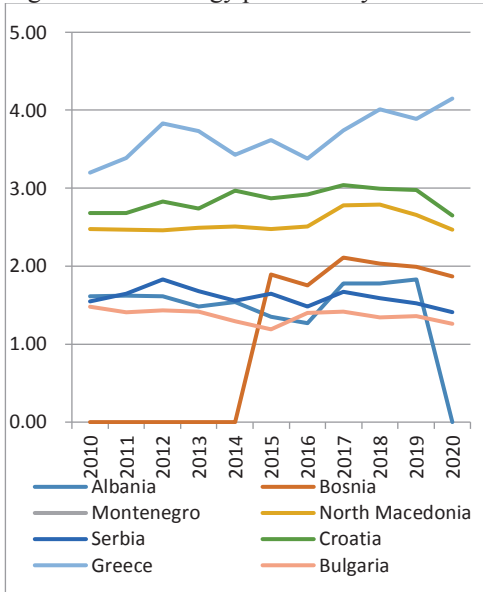
Figure 3d illustrates the percentage of metals in DMC from 1990 to 2020. Albania shows a fluctuating pattern with a notable increase in recent years, suggesting a rising reliance on metals. Bosnia exhibits fluctuations, but the overall trend indicates a relatively stable share of metals in DMC. North Macedonia demonstrates a fluctuating pattern with a general increase, suggesting variations in the contribution of metals to material consumption. Serbia displays a fluctuating pattern with a significant increase in recent years, indicating changes in the reliance on metal resources. Croatia exhibits a fluctuating pattern, reflecting changes in the utilization of metals over the years. Greece shows a generally decreasing trend, indicating a decreasing reliance on metals. Bulgaria displays a fluctuating pattern with a slight increase in recent years, suggesting variations in the contribution of metals to material consumption. These findings underscore the dynamic nature of metal utilization across the examined countries, emphasizing the importance of sustainable resource management practices and tailored policies to address resource consumption patterns.

The review conducted by Golušin et al. (2013) provides a comprehensive examination of the energy systems in Western Balkan countries, highlighting key characteristics and underscoring the necessity of prioritizing the development and intensification of renewable energy sources, particularly wind energy. This strategic shift, involving the diversification of the energy mix and reduced reliance on fossil fuels, is proposed as a means for the region to effectively address environmental challenges, promote sustainable development, and bolster energy security.

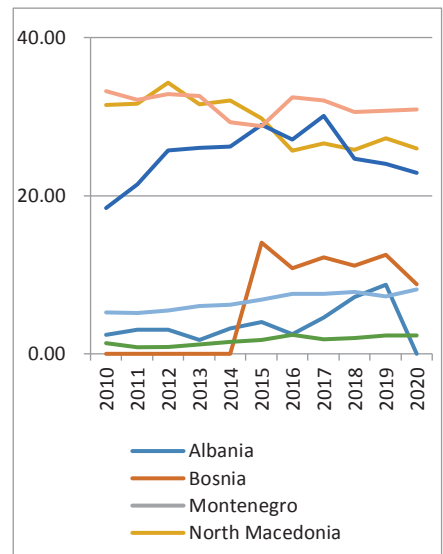
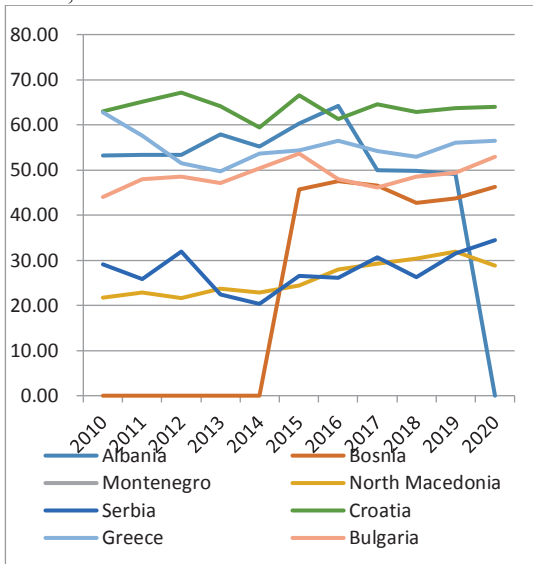
In the review by Đurašković et al. (2021), the authors emphasize the substantial potential inherent in the Western Balkans region for building sustainable and resilient energy systems through the utilization of renewable energy sources (RES). The analysis conducted by the authors concludes that numerous countries in the Western Balkans have already integrated renewable energy targets into their energy policies. These targets not only guide the adoption and implementation of renewable energy technologies but also establish a comprehensive framework for policy implementation. Through the incorporation of renewable energy targets into their policies, the Western Balkans countries manifest their commitment to transitioning towards more sustainable and environmentally friendly energy systems.

The study by Brahuși et al. (2020) is centered on assessing the potential of biomass derived from fruit trees and grapes for bio-energy production in Albania. The researchers calculate predictive agricultural biomass production for Albania in the short and long term, extending up to 2025, and report satisfactory biomass production levels. The increasing agricultural production in Albania leads to the accumulation of significant residues, providing a valuable resource for energy production. This research contributes significantly to understanding the bio-energy potential in the region and emphasizes the importance of exploring diverse renewable energy sources for a more sustainable and resilient energy landscape.

Figure 3. Non-energy productivity.



(a) Non-energy material productivity, GDP per unit of DMC; (b) Biomass, % of DMC;



(c) Non-metallic minerals, % of DMC (d) Metals, % of DMC

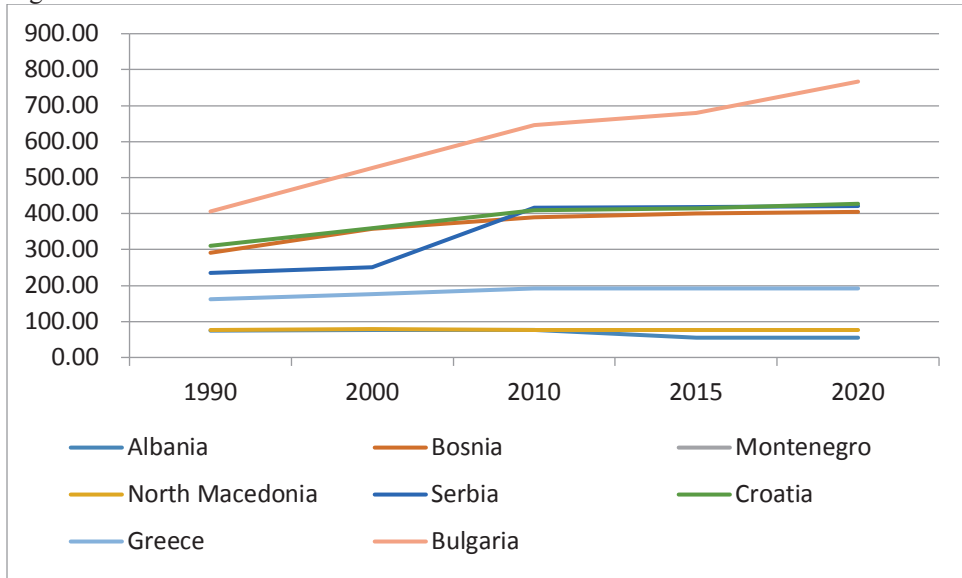
Source: author calculations based on OECD.stat

According to the OECD (2017), forest resource stocks are measured as the growing stock of standing trees. This is defined as the volume over the bark of all living trees

with a minimum diameter of 10 cm at breast height, including the stem from ground level up to a top diameter of 0 cm, excluding branches. Figure 4 presents data on forest resource stocks measured in cubic meters for the years 1990, 2000, 2010, 2015, 2020, 2021, and 2022 across several countries in the region. Albania's forest resource stocks show a decreasing trend from 1990 to 2010, followed by a more substantial decline in 2015 and 2020. Bosnia exhibits a consistent increase in forest resource stocks from 1990 to 2020, with a slight decrease in 2021 and 2022. North Macedonia maintains relatively stable forest resource stocks over the years. Serbia shows an increase in forest resource stocks from 1990 to 2010, with a significant surge in 2015, and a subsequent plateau in 2020, 2021, and 2022. Croatia demonstrates a consistent upward trend in forest resource stocks throughout the entire period. Greece maintains relatively stable forest resource stocks from 1990 to 2010, with no data available for subsequent years. Bulgaria experiences a steady increase in forest resource stocks, notably peaking in 2022. These findings underline the diverse patterns in forest resource stocks across the examined countries, emphasizing the need for sustainable forest management practices and policies to address variations in stock levels.

Between 1990 and 2000, Albania experienced significant changes in greenhouse gas emissions. Emissions associated with changes in land use and forestry notably decreased during this period, while emissions from other sectors increased (Knez et al., 2022). Merko et al. (2019) emphasized the critical issue of deforestation in Albania and the need for effective forest resource management. The authors indicate that over the past 30 years, Albania has experienced a concerning trend of forest degradation. Forest development policies and programs have highlighted this negative trend and the urgent need to address degradation and redirect development efforts towards sustainable practices. The authors report that tragic figures from the past two decades reveal a significant reduction of about 40% in the national forest fund. Wood cutting for firewood exceeds the annual growth of forests by 2-2.5 times, and a substantial portion of the cut forests are inefficiently burned for fuel, further contributing to degradation.

Figure 4. Forest resource stocks



Source: author calculations based on OECD.stat

In Figure 5, indicators related to environmental dimensions and quality of life are presented. Figure 5a illustrates data on energy intensity (measured in tonnes of oil equivalent per unit of GDP) for Western Balkan countries from 1990 to the present. Albania exhibited a decreasing pattern from 1990 to 2001, followed by fluctuating values. Bosnia experienced a decline in biomass percentage from 1990 to 2008, followed by a slight increase. Montenegro showed a generally decreasing trend, suggesting reduced reliance on biomass. North Macedonia exhibited a decreasing trend from 1990 to 2009, followed by an increasing pattern until 2013, and a subsequent decline. Serbia demonstrated fluctuations with an overall increase, indicating improved biomass utilization efficiency. Croatia displayed a fluctuating pattern, notably decreasing from 1990 to 1998, followed by an increase and subsequent fluctuations. Greece showcased a decreasing trend until 1998, followed by fluctuations, while Bulgaria demonstrated a general decrease, indicating declining biomass reliance. These diverse trends emphasize the need for targeted strategies to address fluctuations and promote sustainable resource use.

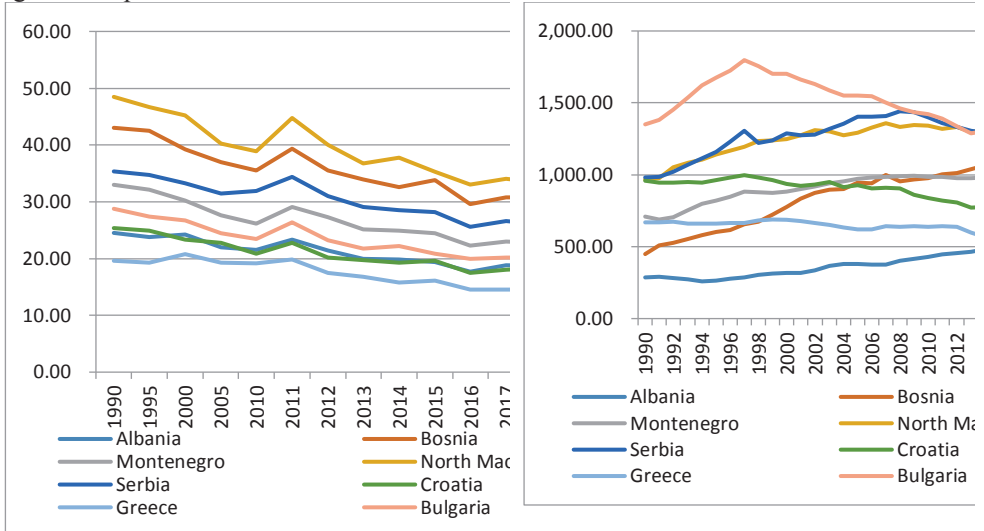
Figure 5a represents energy intensity (measured in tonnes of oil equivalent per unit of GDP) for Western Balkan countries. North Macedonia consistently had the highest energy intensity, indicating relatively higher energy consumption per unit of GDP. In contrast, Greece consistently had the lowest energy intensity, implying lower energy consumption per unit of GDP. Overall, the data shows a decreasing pattern from 1990 to 2019 for all countries, suggesting a general improvement in energy efficiency, increased use of renewable sources, and advancements in technology.

Figure 5b focuses on mortality from exposure to ambient PM2.5. Bulgaria initially experienced an increasing trend until 1998, followed by a decreasing trend. Albania saw a decreasing trend in emissions from 1990 to 2011, followed by slight increases and fluctuations. Bosnia witnessed a continuous decline from 1990 to 2019, indicating consistent reduction in greenhouse gas emissions. Montenegro displayed fluctuating patterns, North Macedonia exhibited an overall increase in emissions with fluctuations peaking in 2019, and Serbia showcased a decreasing trend with occasional spikes. Croatia, Greece, and Bulgaria displayed decreasing trends with fluctuations, reflecting efforts to mitigate emissions.

The trends suggest that efforts to address air pollution may have been implemented after 1998, leading to a reduction in mortality related to PM2.5 exposures. However, other countries show a slight increase, indicating ongoing challenges in controlling air pollution. Albania has the lowest values, suggesting a relatively lower impact of ambient PM2.5 pollutions on mortality.

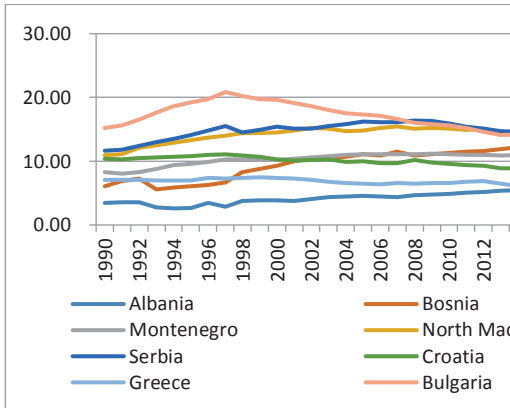
Figure 5c presents "Welfare costs of premature mortalities from exposure to ambient PM2.5, GDP equivalent." Albania experienced fluctuations with a peak in 2010, while Bosnia showed a general increase reaching a peak in 2022. Montenegro exhibited fluctuating trends, North Macedonia displayed a steady increase reaching a peak in 2015 and remaining relatively stable thereafter. Serbia demonstrated a gradual decline with fluctuations, Croatia showed fluctuations with a peak in 1995, and Greece displayed a decreasing trend with fluctuations. Bulgaria exhibited fluctuating patterns with a peak in 1992, followed by a gradual decline. Bulgaria had the highest values, indicating significant economic costs due to premature deaths from PM2.5 exposures, while Albania had the lowest values, suggesting lower economic costs. For Bulgaria, the trend showed an initial increase until 1997, followed by a subsequent decrease, indicating that economic costs associated with premature deaths peaked in 1997 and have since decreased. In contrast, other countries showed relatively stable or slightly increasing economic costs related to premature mortalities from exposure to ambient PM2.5 over time.

Figure 5. Exposure to environmental risks



(a) Mean population exposure to PM2.5

(b) Mortality from exposure to ambient PM2.5

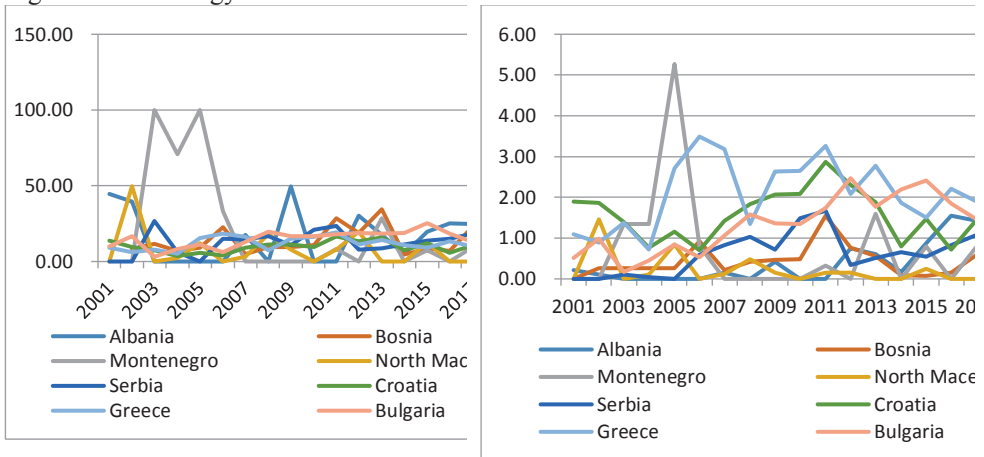


(d) Welfare costs of premature mortalities from exposure to ambient PM2.5, GDP equivalent. Source: author calculations based on OECD.stat

Figure 6a presents the percentage of development in environment-related technologies as a share of all technologies for several countries over the specified years. Montenegro initially led in this indicator until 2006, showcasing a higher proportion of environment-related technologies. Subsequently, all countries displayed similar values, indicating a more balanced development across technological areas. Albania exhibited notable fluctuations, Bosnia demonstrated an overall increasing trend, and Montenegro showcased considerable growth until 2002. North Macedonia, Serbia, Croatia, and Greece displayed varying patterns, with

peaks at different points. Bulgaria exhibited fluctuating development, emphasizing differences in environmental technology emphasis among the countries. Figure 6b illustrates inventions per capita in environment-related technologies, showing diverse patterns across countries. Albania experienced fluctuations, Bosnia peaked in 2012, and Montenegro demonstrated irregular trends. Serbia, Croatia, and Greece showed increasing trends, while Bulgaria had intermittent peaks. Greece led in inventions per capita after 2005. Notably, Croatia and Greece demonstrated more consistent growth, distinguishing them from Bosnia and Bulgaria's variable trajectories. The fluctuations across both figures may be influenced by factors like research investments, innovation policies, and technological advancements in the environmental sector.

Figure 6: Technology and innovation: Patents



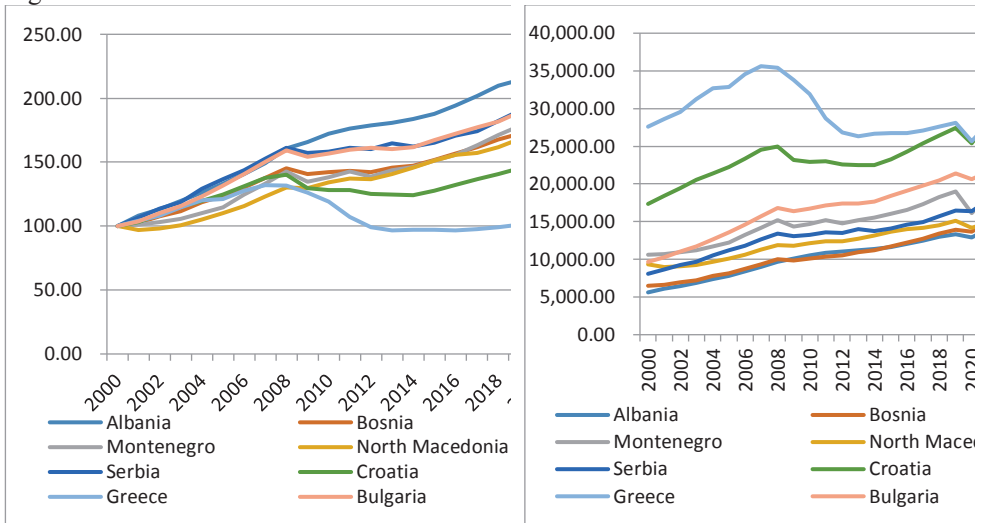
(a) Development of environment-related technologies, % all technologies

(b) Development of environment-related technologies, inventions per capita

Source: author calculations based on OECD.stat

Figure 7a presents the results for the "Real GDP, Index 2000=100" indicator, revealing a period of comparable economic growth among the Western Balkans countries from 2000 to 2008. However, post-2008, there is increased variability, indicating divergent economic trajectories. Albania stands out with the highest values, signaling robust economic growth, while Greece exhibits the lowest values, suggesting weaker economic performance during this phase. Figure 7b illustrates "Real GDP per capita," where Greece leads with the highest values, reflecting superior economic output per person. Croatia and Bulgaria also show relatively high values, while Bosnia lags behind, indicating a lower economic output per capita. These indicators unveil distinct economic contexts, highlighting variations in GDP growth and per capita output influenced by factors like economic policies, investments, and overall economic performance.

Figure 7. Economic context



(a) Real GDP, Index 2000=100

(b) Real GDP per capita

Source: author calculations based on OECD.stat

Variabli	Effect	Albania		Bosnia		Montenegro		North Macedonia		Serbia		Croatia		Greece		Bulgaria	
		p	k	p	k	p	k	p	k	p	k	p	k	p	k	p	k
X ₁	Positive	24.43	2	6.41	0	14.11	1	9.56	0	6.24	0	17.89	1	13.3	1	8.2	0
X ₂	Negative	4.66	4	9.71	4	12.01	3	9.6	4	14.38	3	14.45	3	16.8	3	18.3	3
X ₃	Positive	26.29	2	11.4	1	21.5	2	7.82	0	8.36	0	14.6	1	5.65	0	4.33	0
X ₄	Positive	29.49	2	13.4	1	17.4	1	6.07	0	8.65	0	17.34	1	4.66	0	2.99	0
X ₅	Positive	10.2	0	12.4	1			16.42	1	10.28	0	18.32	1	23.5	2	8.77	0
X ₆	Positive	15.32	1	15.8	1			16.59	1	17.67	1	12.84	1	14.3	1	7.49	0
X ₇	Negative	17.1	3	14.1	3			8.03	4	8.48	4	19.96	3	17.1	3	15.13	3
X ₈	Negative	3.7	4	10.5	3			26.68	3	22.84	3	1.53	4	6.07	4	28.63	3
X ₉	Positive	3.33	0	18.1	1			3.79	0	17.12	1	18.91	1	8.99	0	29.77	2
X ₁₀	Negative	9.84	4	16.5	3	12.41	3	18.33	3	14.13	3	9.76	4	8.11	4	10.91	3
X ₁₁	Negative	4.95	4	11.1	3	11.81	3	16.34	3	16.46	3	11.56	3	8.25	4	19.53	3
X ₁₂	Negative	5.05	4	11.3	3	11.89	3	16.47	3	16.9	3	11.33	3	7.74	4	19.33	3
X ₁₃	Positive	14.96	1	14.3	1	19.91	1	7.99	0	10.98	1	8.37	0	10.4	1	13.03	1
X ₁₄	Positive	5.49	0	6.39	0	9.8	0	3.74	0	8.57	0	20.02	1	27.8	2	18.17	1
X ₁₅	Positive	14.82	1	12.5	1	12.27	1	11.87	1	13.81	1	11.39	1	9.71	0	13.59	1
X ₁₆	Positive	7.81	0	7.98	0	11.3	1	9.33	0	10.08	0	17.92	1	22.9	2	12.67	1
Total			32		27		19		23		23		29		31		2

Table 3. Percentage of contribution for each country

In Table 3, the country-specific results for each index reveal distinctive performance indicators for Albania. Notably, Albania demonstrates strengths in several key aspects:

Energy Intensity: Albania exhibits a favorable position by showcasing relatively lower energy consumption per capita compared to its counterparts.

Metals % of DMC: Albania maintains a lower proportion of non-renewable and environmentally intensive metal resources in its domestic material consumption, indicating a more sustainable resource use pattern.

Mortality from PM2.5 Exposure: Albania stands out with lower mortality rates associated with exposure to ambient PM2.5, reflecting a potentially healthier living environment.

Welfare Costs of Premature Mortalities: In terms of economic impact, Albania experiences lower costs associated with premature mortality from PM2.5 exposures, as measured by GDP equivalent.

Conversely, Albania faces challenges in the following areas:

Non-energy Material Productivity (GDP per unit of DMC): The country lags in non-energy material productivity, suggesting lower efficiency in utilizing non-energy materials for economic output.

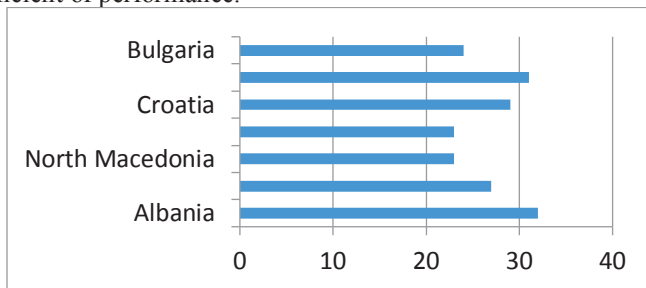
Forest Resource Stock: Albania exhibits relatively lower levels of forest resource stocks, signaling potential concerns in terms of forest conservation and sustainable management.

Development of Environment-related Technologies (Inventions per Capita): Albania falls behind in technological innovation and advancement in environmentally related sectors, reflecting a need for increased emphasis on technology development.

Real GDP per Capita: Albania's economic well-being and living standards are comparatively lower than those of other countries in the study.

These findings provide a nuanced perspective on Albania's environmental, economic, and technological landscape, emphasizing areas of success as well as opportunities for improvement.

Figure 8 Coefficient of performance.



Source: author calculations based on OECD.stat

Figure 8 presents the coefficient of performance for each country, excluding Montenegro due to incomplete data for five indicators. The findings, in conjunction

with Table 3, underscore Albania's exemplary performance, as it consistently holds the highest coefficient of performance among all countries. This signifies that Albania excels across the selected indicators, showcasing a superior overall performance. Following closely, Greece also demonstrates a commendable coefficient of performance (31), positioning it as a strong performer in the assessed criteria. In contrast, North Macedonia and Serbia exhibit lower coefficients of performance relative to their counterparts, indicating areas where their performance falls behind. These insights highlight Albania's leadership in the evaluated indicators and provide valuable comparative assessments of environmental and economic performance across the studied countries.

Conclusions

The comprehensive examination of environmental and economic indicators across diverse countries provides nuanced insights into the intricate relationship between sustainability and economic development. The analysis covers factors such as energy intensity, mortality rates from PM2.5 exposure, forest resource stocks, and technological innovation, offering a holistic understanding of each country's environmental and economic performances.

Albania stands out as a notable performer, showcasing lower energy intensity, decreased mortality rates linked to PM2.5 exposure, and reduced economic costs associated with premature deaths. Despite these strengths, challenges in non-energy material productivity and real GDP per capita highlight areas for targeted interventions.

Greece closely follows Albania, demonstrating commendable performance across various indices, emphasizing its dedication to environmental conservation and sustainable economic development.

Conversely, North Macedonia and Serbia face challenges with lower coefficients of performance, suggesting room for improvement in environmental and economic outcomes.

The examination of specific indicators, including the development of environment-related technologies and forest resource stocks, provides valuable insights. While excelling in certain areas, Albania faces challenges, offering a roadmap for tailored interventions and policies.

The coefficient of performance reinforces Albania's exemplary position, underscoring the need for a multifaceted approach to sustainability that balances environmental conservation with economic growth.

In conclusion, the study serves as a comprehensive reference for policymakers, researchers, and stakeholders seeking to understand the dynamics of environmental sustainability and economic prosperity. The variations across countries highlight the importance of context-specific interventions, emphasizing the diverse challenges and opportunities in achieving a sustainable global community. Leveraging these insights can guide collaborative efforts toward a more sustainable future, where each nation plays a crucial role in balancing economic growth with environmental responsibility. The selected indicators from the OECD Green Growth database offer

quantitative data crucial for assessing policy effectiveness and tracking progress over time, supporting the transition to sustainable and resource-efficient economies.

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ENHANCING GLOBAL COMPETITIVENESS: LEVERAGING PUBLIC-PRIVATE PARTNERSHIPS FOR DIGITAL TRANSFORMATION IN POST-COVID ERA

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ABSTRACT

The swift advancement of technology in the IT sector, notably following the Covid-19 pandemic, has heightened the imperative for businesses to maximize competitiveness in global markets. Concurrently, state institutions serve as covert partners, their level of bureaucracy, procedural simplicity, and adoption of digital labor practices and documentation serving as either an asset or hindrance to the competitiveness of these enterprises.

Digital transformation presents avenues for service optimization, irrespective of researchers' location or service type. However, it's unfortunate that state institutions aren't always specialized in producing goods, services, and technologies. The establishment of public-private partnership projects, particularly in technological development, stands to yield benefits for the state, including reduced initial capital outlays and enhanced transparency, while providing investment returns for the private sector (Berezin et al., 2018). Advancements in digital infrastructure, encompassing the digitization of public services, play a crucial role in fostering sustainable and inclusive economic growth. Utilizing the PPP mechanism in this context facilitates the collaboration between businesses and the government to address the challenges of digitally transforming public services. The findings of this study will illustrate the progression and trajectories of digital transformation facilitated by the technological initiatives within PPP frameworks.

Keywords: Public - Private Partnership, Businesses, Digital Transformation, Competitiveness, Public Institutions.

JEL Classification: G2

Introduction

Public-private partnership (PPP) is considered an efficient mechanism and method for the realization of infrastructure projects through the attraction of financial resources. This mechanism, according to (Berezin et al., 2018), creates benefits in that manner that reduces the initial state capital costs for the projects and improves the efficiency of the private capital usage.

While finding the benefits of PPP projects, we need to identify the reasons of using them, reasons differing from state to state. Some states take into consideration to use them with the aim to reduce administrative costs. Some other due to the budgetary constraints, the need of private sector mobilization, the need to accept a common risk by both public and private parties (Farquharson, E., & Yescombe, E. R. 2011). According to (Trebilcock, M., & Rosenstock, M. 2015), the usage of PPP projects in one hand reduces burdens on short term government spending and in the other hand tends to improve the quality and efficiency of public services. PPP mechanism is also a great opportunity for state and businesses in dealing with the public service digitalization.

During the last years, especially the post Covid-19 period, there is a large need for the digital transformation of the economy, which increases the request for penetration into the investment processes as well finding the financing tool for them. Many developing countries do not have the financial developing capacity for the adoption of digital technologies, needed for the digitalization of public services. A weak progress of the digitalization of the public administration system of these countries often causes reduced quality of services, delay in funding, extensions of deadline, problems with the provision of infrastructure (Ilollari et al., 2022).

Introducing the digitalization of the PPP mechanism, requires the introduction of information and communication technologies as well as the digitalization in all areas of public life, including business and public administration (Tolstolesova et al., 2021).

After Covid-19, the global economy and local communities need to be recovered and small businesses to survive. This can be made through the collaboration between the private and public sectors, enabling though the incentives for small businesses to digitize, expanding ways to access capital and democratizing access to payment and commerce tools.

This transition requires some substantial investments, but increasing budgetary limitations of governments, makes it unable to deal with the fast-growing development of digital products, making necessary the integration and implementation of the public-private partnership model. PPP model is an increasingly effective strategy for bringing together private contributions for public benefits, the resources and know-how strategies (Pratap, K. V., & Chakrabarti, R. 2017).

The development of a digital infrastructure, including digitalization of public services, affects the promotion of sustainable and comprehensive economic development. The PPP mechanism in this direction will allow the combination of the

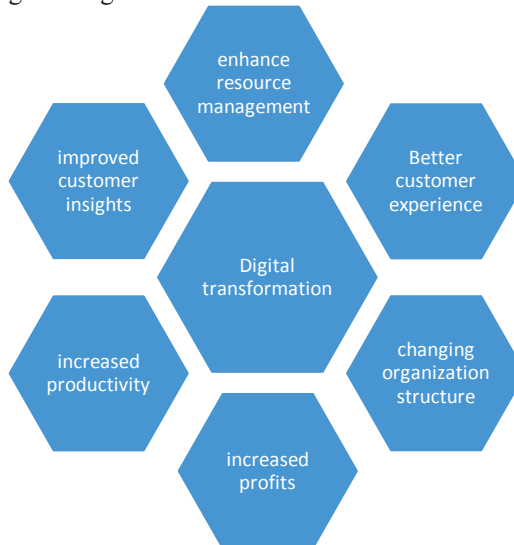
opportunities of businesses and the state to solve the problems of digital transformation of public services (Delmon, J. 2017).

This study analysis the importance of digital transformation in the public sector, the need and advantages of using PPP in the digital transformation of public sector as well as some successful case studies in different countries, including Albania.

Digital transformation and its importance in public sector

Digital transformation is considered the process of using digital technologies with the aim to create new or modify existing business processes, culture and customer experiences. This helps to fulfill the market requirements and changes toward an innovative economy. By approaching, digital transformation, companies can ask themselves if they can change their processes in order to enable better decision-making, better customer experience, etc. Digital transformation has some advantages:

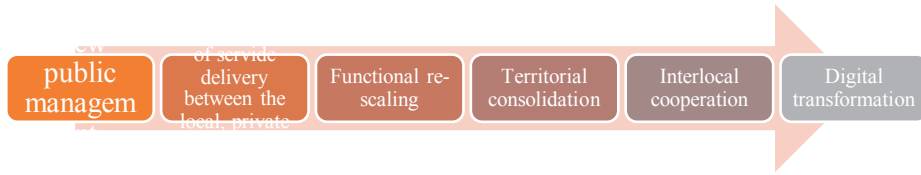
Figure 1: Advantages of digital transformation



Source: Kraus, S., Jones, P., Kailer, N., Weinmann, A., Chaparro-Banegas, N., & Roig-Tierno, N. (2021). Digital Transformation: An Overview of the Current State of the Art of Research

Nowadays, digital transformation is important not only for businesses, but also for governments. It came out as a necessity, during different crises. The local governments in Europe, have been affected by crises such as the global financial crisis, austerity policies the refugee crisis and Covid-19 (Kuhlmann et al., 2021).

Figure 2: Trajectories of local governments during crisis periods



Source: Bouckaert & Kuhlmann 2016; Kuhlmann et al., 2021

During these periods, reforms have taken variety forms, from new public management method, to inter local cooperation and then to digital transformation. Early stages of the digital transformation of public services, consisted on the shift from paper-based to digital government, initiated by policy transitions. Terms used to describe these processes were digitization, digitalization and digital transformation.

The technological development is bringing new opportunities, especially for public sector and its interaction with the citizens, by simplifying procedures as well as contributing to open government. Digital transformation in the public sector means new ways of working with stakeholders, building new frameworks of service delivery and creating new forms of relationships (European Commission, “Powering European Public Sector Innovation: Towards a New Architecture”, 2013).

The concept of “digital transformation” of public sector comprises:

- Further modernization of public administration;
- Seamless cross-border mobility;
- Enhanced digital interactions;
-

The digitalization of public services can help:

- Increase efficiency;
- Offering a more inclusive service, as inclusion is essential to all local public services;
- Reduce time and administrative load of businesses;
- Increase people's trust in their governments, which is essential in public services. This can be done by enabling connection with citizens in a convenient, transparent and frictionless way;
- Fighting fraud;
- Drive innovation;
- Adapt to changes and challenges;

Need of PPP mechanism for the digital transformation of public services

E-government is the used usual term to define government dealing with changes in service delivery. Their focus is not creating new business models, but to make service delivery more efficient and accessible for citizens (Meijer, A., & Bekkers, V. 2015).

The next step of “e-government” is to focus on a “whole organization” approach to digital, which in some cases is likely to implicate many other processes and systems.

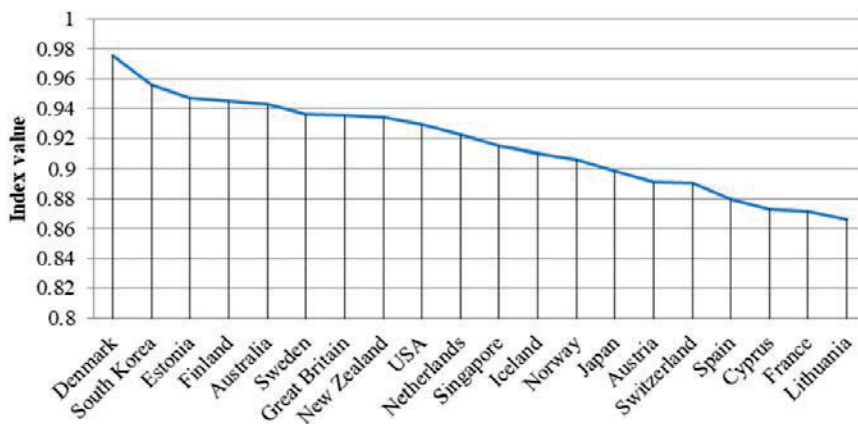
This requires the ability to hire new types of talent and integrate digital related tools, methods, culture, strategies in daily habits (Observatory Public Sector Services).

Unfortunately, many governments are in lack of data analysts and data scientists, who are often part of private company's staff. Digital transformation requires also qualitative changes in modern law, driving to the necessity of changes in such a legal institution as PPP, known as an effective tool contributing to the modernization of the national economy.

While states are facing budgetary deficits, it seems that private sector is the best way to offer additional sources of financing. The potential of PPPs in helping governments into the provision of efficient accessible digital public services is currently well known. In terms of digital transformation, PPP mechanism can contribute to leverage innovation and technologies from private parties, can reduce the need for upfront investments from public budgets and can create fiscal space for other priorities (Da Fonseca, R. S., & Veloso, A. P. 2018).

Knowing the fact that the engagement of PPP mechanism in innovation sector is important because it brings scientific and technological development and competitive industry for local and global economies, this approach has been accepted in a strong way. Combining private sector financing and innovation and sharing the risks in innovative ways with a perceptive public approach, PPPs can provide much needed savings for the public sector and a fair deal for the private sector, especially in a fast-growing sector like the digital one. A study rating country, by the e-government development index, showed that in 2020 the level of integration of digital technologies in public administration is greater.

Figure 3. E-government development index



Source: Lyudmila Tolstolesova, et. al (2021): Digital Transformation of Public-Private Partnership Tools

From the Figure No 3, it is understood that countries such as Denmark, South Korea, Estonia, Finland and Australia, have an index over 0.94 and the country with the lower indicator is Lithuania with approximately 0.87. Developed countries have the

financial capacity to adopt digital technologies, while developing countries find difficulties regarding this. Some of them have been supported by the World Bank in order to develop a modern system of government and to introduce IT technologies. Main funding of World Bank are for the introduction of information and communication technologies and the creation of appropriate infrastructure (Tolstolesova, L., 2021).

The difference between past and current days is the fact that information and communication technologies (ICT) are expanding the need to use PPPs beyond all previous limitations and boundaries

The main first step is the creation of a city-wide strategy allowing leaders to view their cities as an interdependent system of systems, and to assess ways in which ICT can be used to improve them all (Witters et.al., 2012).

By using ICT, PPPs has the power to improve services such as education, public safety, healthcare, social services, and transportation, contributing directly to the economic development. Now, governments have the possibility that in conditions of budget deficits, can cooperate with private sector to transform the way such services are delivered by using ICT through initiatives such as e-government, remote healthcare, and intelligent transport.

PPPs in the field of technological innovation are essential for the competitiveness of regions and individual countries. Organization for Economic Co-operation and Development (OECD) give governments a set of practical references on how to better govern PPPs by creating a clear, predictable, and legitimate institutional framework supported by competent and well-resourced authorities as a key enabler for a sustainable adoption of this economic model (Catalá-Pérez, D., et.al., 2021)

Transiting to a digital economy, forces the need to assign new tasks for PPPs for the development of intellectual, scientific, technical, and innovative activities. Their implementation largely depends on the involvement of business representatives in such projects and on its demand for innovative developments. The creation and development of robotics and artificial intelligence is actively taking place in foreign countries based on PPP. In the European Union, in particular, research in the field of robotics received the largest funding under the innovative Horizon 2020 program based on PPP projects – about 190 million euros (European Commission, 2021“*What future for European Robotics*”).

The request for innovation by governments is constantly growing, creating the need to have new arrangements of public procurement especially in the field of innovation procurement. Actually, there is no specific framework for PPPs in digital transformation at European level, but certain forms for PPPs are subject to European legislation on public procurement procedures. European Union has approved the directives, all countries, part of EU has the obligation to transpose these directives to their national laws

(Directive 2014/24/EU on public procurement); (Directive 2014/25/EU on procurement by entities operating in the water, energy, transport, and postal services sectors); (Directive 2014/23/EU on the award of concession contracts).

The Digitising European Industry initiative supports the development of digital industrial platforms, large-scale piloting and public– private partnerships (PPPs) that provide the digital technology building blocks of the future. In Albania, the Law 125/2013 "On Concessions and Public Private Partnership" (amended by Law No. 50, dated 07/18/2019), defines Public Private Partnership as:

"...Public infrastructure contract or public service contract, which meets the conditions, which fulfills the conditions, which define it as a public-private partnership, as regulated in this law and which is signed between the contracting authority on the one hand and the economic operator chosen as the most successful bidder."

The purpose of this law is to create a favorable and sustainable framework for encouraging, absorbing, and creating facilities for investments realized as concessions/PPP. The responsible units, which are the main actors in monitoring and reporting the progress of the implementation of concession contracts/PPPs, are:

- Contracting Authorities and units within Ministry of Finance and Economy (MFE), are responsible for preparing the annual summary report on the progress of the implementation of active concession/PPP contracts (MFE Report 2019).
- The Agency for the Handling of Concessions (ATRAKO), which is a budgetary institution whose mission is to:
- Promote and assist the Contracting Authorities in the review and evaluation of concession projects / public-private partnerships, as requested or unsolicited proposals;
- Drawing up the request for proposal, pre-qualifying and qualifying documents and evaluating the proposals, as well as continuing with the procedure for granting concessions/public-private partnerships.
- Here, we can also mention inter sectorial Strategy of Digital Agenda for Albania, for the period 2015-2020. Albania's digital revolution started in 2013 included only 14 electronic services then, while today its government provides 1,225 e-services, meaning that Albania has digitized 95 % of public services, for which by 2022 there were 27 million requests by citizens (Merkoci, 2022).

Some PPPs in digital transformation of public services

Some European Countries have implemented PPP mechanism in innovative projects of digital transformation of different fields.

European Union has been investing in PPPs in the innovation field, with the aim to support the implementation of projects able to empower the interoperability of public and private services and the realization of a Digital Single Market, concretely:

Projects aiming to build cybersecurity solutions in fields such as: the energy, health, transport, and finance sectors;

Projects aiming to foster key enabling technologies linked to photonics;

Projects aiming to develop the next generation of High Performance Computing technologies;

Projects aiming to provide a platform for the industrial and academic community to develop a common roadmap for robotics in Europe;

- Projects aiming to support Future Internet-enhanced applications of public and social relevance;
- Projects aiming to maintain semiconductor and smart systems manufacturing capability in Europe and help it grow;
- Projects aiming to strengthen Europe's industrial competitiveness and sustainability in the future.

SPID project: Digital Identity System -Sistema Pubblico di Identità Digitale

In 2016, Italy launched the SPID project, in compliance to EU e IDAS regulation on digital identity services, as a solution for accessing public administration online services through once-only digital identity generated by private Identity Providers - *Observatory of Public Sector Innovation (OPSI)*.

Italian citizens can use it to access public online services: from citizen Wi-Fi to payment of school fees. The unique characteristic of this mechanism is the fact of being at zero cost for the public administration.

This system achieved two goals (OPSI):

The rationalization of access systems for public administration online services. Simplification on the citizen side, favoring the simple and secure use of online services.

Living Cities

Living Cities is a USA based innovative cooperation between 22 foundations and financial institutions, for a comprehensive approach with the aim to improve the lives of low-income people and to revitalize the urban areas in which they live. This initiative works to connect city governments and private partners to ensure that key urban issues such as green jobs, housing, education, and neighborhood stabilization are addressed in innovative ways (MacArthur Foundation)

Living Labs

Living labs are a European government initiative cooperating with private companies with the main aim to create a user-driven open innovation eco-system where users can live, work, study, play and entertain (Commission, European, 2009, *Living Labs for user-driven open innovation, an overview of the Living Labs methodology, activities and achievements*). This is a real living environment, where the participants—in cooperation with government institutions and private companies have the opportunity to co-create, experiment, and test new ideas, new products, and new services. What is needed is ICT and the Internet, considered to be at the heart of the open co-creation, the key facilitators and the soul of competitiveness and new services. Cities being using Living labs are Oulu in Finland, Dubuque in the USA, and Beijing in China (Witters L. et. al., 2012).

The government of Oulu city used the living lab (PPP project) with the main aim to take investments for the city, turning it into a successful initiative. The government

of Dubuque used living labs with the main aim to amplify the potential benefits of the Energy Efficiency and Conservation Block Grant funding program from the federal government (Witters L. et. al., 2012). The main focus of this living lab was to turn the city to a “smart” city by contributing to environment through reduction of energy consumption and greenhouse gas emissions. The government of Beijing used the PPP model toward the construction and operation of the city’s fourth subway line consisting of 28 kilometers long, with 24 stations, engaging companies from both inside and outside of China (Witters L. et. al., 2012).

Public-private partnerships in the ICT sector e-Mitra (India)

This PPP mechanism was used by the government of the Indian state of Rajasthan and local service providers with the main aim to deliver e-government services such as forms, birth certificates, information to Indian citizens. This was possible via dedicated centers and kiosks (Witters L. et. al., 2012).

ASAQ Winthrop

This is a PPP mechanism implemented between the World Health Organization (WHO) and a private company with the main aim of developing a new anti-malarial medicine and addressing issues posed by its deployment in the field (Bompart F. et. al., 2011).

Lab@AOR

The authors Casprini et al. (2022) analyzed the case of “Lab@AOR”, a PPP established between Loccioni and the University Hospital of Marche (Italy) focused on the robotization of a critical component of healthcare services’ delivery. According to authors, this project was considered a success due to three ingredients that influenced positively to the success of PPP. The first one is the alignment between the public partner’s needs and the private partner’s competences.

The second one is related to the knowledge contamination and the last but not least, the adoption of patient-centeredness as the inspiring principle of the collaboration. PPPs are becoming an effective strategy for bringing together the resources and expertise required to expand and improve support and services to ensure that different countries advance in their digital transformation (Casprini E. And Palumbo R. 2022).

PPP for the provision of medical laboratory services in Albania

The digital transformation of public services is a challenge also for Albania. The report of the Ministry of Finance and Economy (MFE report) mentions the concession/PPP *"For the provision of medical laboratory services"* with an investment value of 1.31 billion ALL for 10 years.

The Contracting Authority in this case is the Ministry of Health and Social Protection, while the concessionaire is "Labopharma" sh.p.k (limited liability corporation).

This contract started its operation on November 2, 2020, in the "Mother Teresa" University Hospital Center, then continuing with the provision of the service in all University Hospitals in the country, in regional hospitals (Durrës, Elbasan, Shkodra, Fier, Berat, Korçë, Lezha) and Municipal (municipal hospital in Lushnjë) (MFE report 2021, *Performanca e Kontratave të Koncesionit dhe të Partneritetit Publik Privat*).

After the provision of the service by the concessionaire, the range of analyzes in university hospitals has increased from 100 to 164 examinations, while in regional hospitals this range has increased from 50-70 examinations to 165 examinations.

This concession contract has brought a new standard in the digitization of information through the establishment for the first time of the computerized system of all laboratory analyses. The inclusion of this system creates more convenience to certify analyzes as well as bring a quality service according to the best international standards to the citizens.

E-Albania Platform in Albania

The European Bank for Reconstruction and Development's Transition Report 2021–22 highlights Albania's progress on digitalization by placing the country 17th on a list of 37 countries, with an overall score of 65.4 mostly due to the progress in government services (Jorgoni E., Report 2022/30, Albania's digital transformation of public services delivery).

In the framework of digital transformation of public services, the Albanian government created a unique government portal called "E-Albania". This portal serves as a single contact point for government services.

Digital innovation hubs

Most of digital innovation hubs engage mixed funding models, mainly focused toward public funding from European, national, or regional programs (Casorati et. al., 2020). One case study is a digital innovation hub in Ireland, consisting on a not-for-profit partnership between a private enterprise, public research institute and the local public authority (Casorati et. al., 2020).

This intends to support Irish and international talent by fostering a design-led, living-lab ecosystem. It also helps the digitalization of businesses, the scale up through training, accelerator programs for start-ups and innovation services for established companies. The Irish hub generates incomes through rental income, monthly and annual memberships, utilization fees for testing and research facilities, coaching and other investment-readiness support, milestone success fees, etc.

Another digital hub is another approach, founded in 2003 by the Irish government with the main aim to support companies in the information and communication technology sector. It was firstly supported by government funds, but nowadays it has incomes from its private sources, such as the fees paid by more than 70 small and large companies being hosted in the campus of the digital innovation hub (Casorati et. al., 2020).

The digitalization of Gas Station

The digitization of Pertamina's gas stations is a government program (Kusuma et al., 2021). This program was carried out with the main aim to improve Pertamina's services to consumers. In this manner, the program improves the expenditure and income of gas stations from the sale of fuel oil. In this case, the business sector and the use of information technology are very supportive to the needs of society. The development of technology, has encouraged Pertamina sector to be innovative in its continuity (Kusuma et al., 2021).

Conclusions

Public-private partnership creates benefits in that manner that reduces the initial state capital costs for the projects and improves the efficiency of the private capital usage. The technological development is bringing new opportunities, especially for public sector and its interaction with the citizens, by simplifying procedures as well as contributing to open government.

In terms of digital transformation, PPP mechanism can contribute to leverage innovation and technologies from private parties, can reduce the need for upfront investments from public budgets and can create fiscal space for other priorities. The development of a digital infrastructure, including digitalization of public services, affects the promotion of sustainable and comprehensive economic development. PPP mechanism can contribute to leverage innovation and technologies from private parties, can reduce the need for upfront investments from public budgets and can create fiscal space for other priorities.

Combining private sector financing and innovation and sharing the risks in innovative ways with a perceptive public approach, PPPs can provide **much needed savings for the public sector** and a fair deal for the private sector, especially in a fast-growing sector like the digital one. In overall analysis, PPPs need the support by governments, by a transparent and trustworthy process in accessing this methodology and especially by public awareness of the relative costs, benefits, and risks of it. From the analysis of some successful studies, we conclude that the implementation of digital projects and reforms, can be performed much better by involving PPP mechanism.

The implementation of “e-Albania” platform, resulted a successful and very effective methodology for the access to public services, even though there is a “small” need to train people, especially old people to use digital channels of taking services. This problem is not only for Albania, but also for other countries, especially those who are in earlier stages of digital transformation.

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EVOLVING PERSPECTIVES ON LEADERSHIP: A THEORETICAL AND PRACTICAL OVERVIEW

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Abstract

Leadership is a multifaceted phenomenon, encompassing various perspectives and interpretations. While there are numerous ways to define and conceptualize leadership, certain foundational components remain consistent across diverse frameworks. In this comprehensive exploration, we delve into the definition, conceptualization, and key components of leadership, shedding light on its dynamic nature and evolving manifestations. Drawing from seminal research and theoretical frameworks, we elucidate the essence of leadership as a process of influence occurring within group dynamics, driven by shared goals and mutual interaction between leaders and followers. Moreover, we examine the interplay between appointed and emergent leadership, the nuances of power dynamics, and the distinctions between leadership and management. As we navigate the complexities of leadership in the digital age, we highlight the imperative of evolving digital leadership, characterized by adaptability, innovation, and strategic foresight. Against the backdrop of the COVID-19 pandemic, we underscore the heightened relevance of digital platforms in facilitating communication, collaboration, and influence among leaders and their followers. Through a synthesis of theoretical insights and practical considerations, this discourse aims to deepen our understanding of leadership dynamics and equip leaders with the insights and competencies necessary to navigate the challenges and opportunities of contemporary leadership landscapes.

Keywords: *leader, influence, digital, followers, perspectives, coercive*

Definition of Leadership

There are myriad ways to finish the sentence, "Leadership is..." Indeed, as Stogdill highlighted in his 1974 research summary (p. 7), there are nearly as many definitions of leadership as there are people who have attempted to define it. It is similar to words like love, democracy, and peace. Although each of us intuitively knows what we mean by such terms, the words can have different meanings to different people. The more we attempt to pin down leadership, the more we find that it encompasses a variety of interpretations.

Conceptualizing Leadership

Over the past six decades, more than 65 different classification systems have been developed to define leadership (Fleishman et al., 1991). One such classification system directly relevant to our discussion is the framework proposed by Bass (1990, pp. 11-20). This framework views some definitions of leadership as central to group

processes. From this perspective, the leader is at the core of group change and activity, embodying the group's will. Another definition sees leadership from a personality perspective, suggesting that leadership is a combination of specific traits or characteristics that some individuals possess. These traits enable such individuals to motivate others to accomplish tasks. Other methods define leadership as an act or behavior—the actions a leader takes to effect changes within a group. Additionally, some define leadership in terms of power dynamics between leaders and followers, where leaders possess power that they exercise to effect change in others. Others view leadership as a transformative process that guides followers to achieve more than typically expected. Lastly, some scholars address leadership from a capabilities perspective, emphasizing the skills (knowledge and ability) that make a leader's opportunities effective.

Definition and Components of Leadership

Regardless of the numerous ways in which leadership has been conceptualized, the following components can be identified as the foundation of the phenomenon: (a) Leadership is a process, (b) Leadership involves influence, (c) Leadership occurs in groups, and (d) Leadership entails common goals. Based on these components, we define leadership in this text as follows: Leadership is a process where an individual influence a group of people to achieve a common goal.

Defining leadership as a process means that it is not a trait or characteristic carried by the leader, but rather a transactional event that occurs between the leader and the followers. The process implies that a leader influences and is influenced by followers. It emphasizes that leadership is not linear, a one-directional event, but rather an interactive occurrence. When defined in this way, leadership becomes accessible to everyone and is not confined only to officially designated leaders in a group.

Leadership involves influence. It is interesting how the leader impacts the followers. Influence is essential to leadership; without it, a leader does not exist. Leadership happens in groups. Groups are the context in which leadership develops. Leadership involves influencing a group of individuals who share a common purpose. This could be a small group with a specific task, a community group, or a large group encompassing an entire organization. Leadership is about one individual impacting another group to achieve shared objectives. Others (a group) are necessary for leadership to develop (to act). Training programs that teach people to lead themselves are not considered part of leadership within the definition discussed in this document.

Leadership and Its Focus on Common Goals

Leadership involves focusing on shared goals. Leaders direct their energies towards individuals who are striving together to achieve something collectively. By shared, we understand that both leaders and followers have a common objective. Focusing on shared goals lends an ethical dimension to leadership, as it emphasizes the need for leaders to work with followers to achieve the chosen goal. Emphasizing

reciprocity reduces the likelihood that leaders may act towards followers in coercive or unethical ways. It also enhances the likelihood that leaders and followers will collaborate towards a mutually beneficial outcome (Rost, 1991).

Throughout our discussion, we will use the term "Leader" for leadership and "Follower" for those we define as followers. Both leaders and followers are jointly involved in the leadership process. Leaders need followers, and followers need leadership (Burns, 1978; Heller & Van Til, 1983; Hollander, 1992; Jago, 1982). While leaders and followers are closely linked, it is often the leader who initiates the relationship, establishes communication links, and bears the burden of maintaining these relationships.

In our discussion of leaders and followers, attention will be directed both towards issues concerning followers and issues concerning leaders. Leaders have an ethical responsibility to engage with the needs and concerns of their followers. As Burns (1978) pointed out, discussions of leadership are sometimes seen as elitist due to the implied power and importance that often accompany the leader in leader-follower relationships. Leaders are not superior or better than followers. Leaders and followers must be understood in relation to each other (Hollander, 1992) and collectively (Burns, 1978). They are in a leadership relationship together and are both sides of the same coin (Rost, 1991).

Continuing the Discussion on the Nature of Leadership Following the discussion on the definition, it is also essential to explore further questions related to the nature of leadership. In the subsequent section, we will address issues such as how leadership as a trait differs from leadership as a process, how a designated leader differs from an emergent one, and how the concepts of power, obligation, and management differ from leadership.

Trait Versus Process in Leadership

We have all heard statements like, "He is born to be a leader" or "She is a natural leader." These assertions typically come from those who adopt a trait perspective towards leadership. The trait perspective suggests that certain individuals possess unique natural characteristics or qualities that make them leaders, and it is these qualities that distinguish them from non-leaders. Some of the personal qualities used to identify leaders include unique physical factors (e.g., height), personality traits (e.g., extroversion), and other attributes (e.g., intelligence and eloquence, Bryman, 1992).

In Chapter 2, we will discuss a substantial body of research that has examined these personal qualities. Figure 1.1 depicts various perspectives on leadership. Describing leadership as a trait is fundamentally different from describing it as a process (Figure 1.1). From the trait perspective, leadership is conceived as a gift or a set of gifts possessed to varying degrees by different people (Jago, 1982).

This suggests that it resides in selected individuals and restricts leadership to those believed to have special, often innate, talents. The process perspective, however, suggests that leadership is a phenomenon that exists within the interactions between leaders and followers, making leadership accessible to everyone. As a process,

leadership can be observed in the behaviors of leaders (Jago, 1982) and can be learned. The definition of the leadership process aligns with the definition of leadership we have established in this chapter.

Appointed Versus Emergent Leadership Some people are leaders because of their formal position within an organization, while others are leaders because of how other group members respond to them. These two common forms of leadership are called appointed and emergent leadership. Leadership that is based on the position held within an organization is designated as appointed leadership. Team captains, company managers, department heads, directors, and administrators are examples of appointed leadership. However, a person assigned to a leadership position does not always become a true leader in a specific environment. When others view an individual as the most influential member of a group or organization, regardless of the individual's title, that person is exercising emergent leadership. The individual gains emergent leadership through the support of other people in the organization who endorse and accept that individual's behavior. This type of leadership is not determined by position, but rather emerges over time through communication. Positive communication behaviors that are valuable for leadership success include being verbally involved, being well-informed, seeking others' opinions, initiating new ideas, and being firm yet flexible (Fisher, 1974).

Table 2.1 Studies of Leadership Traits and Characteristics

Stogdill (1948)	Mann (1959)	Stogdill (1974)	Lord, DeVader, and Alliger (1986)	Kirkpatrick and Locke (1991)	Zaccaro, Kemp, and Bader (2004)
intelligence	intelligence	achievement	intelligence	drive	cognitive abilities
alertness	masculinity	persistence	masculinity	motivation	extraversion
insight	adjustment	insight	dominance	integrity	conscientiousness
responsibility	dominance	initiative		confidence	emotional stability
initiative	extraversion	self-confidence		cognitive	openness
persistence	conservatism	responsibility		ability	agreeableness
self-confidence		cooperativeness		task	motivation
sociability		tolerance		knowledge	social intelligence
		influence			self-monitoring
		sociability			emotional intelligence
					problem solving

SOURCES: Adapted from "The Bases of Social Power," by J. R. P. French, Jr., and B. Raven, 1962, in D. Cartwright (Ed.), *Group Dynamics: Research and Theory* (pp. 259–269), New York: Harper and Row; Zaccaro, Kemp, & Bader (2004).

Leadership and Power

The concept of power is crucially linked to leadership because it is part of the process of influence. Power is the capacity or ability to influence others. People possess power when they can influence the beliefs, attitudes, and actions of others. Ministers, doctors, coaches, and teachers all exemplify individuals who have the ability to

influence us. When they exercise this ability, they are utilizing their power, which are potential resources to effect changes in us. The most extensively cited study on power is by French and Raven (1959), who developed the theory of social power. In their framework, they viewed power as part of a dyadic relationship that includes both the influencer and the influenced. French and Raven identified five fundamental and important bases of power: referent, expert, legitimate, reward, and coercive. Each of these bases enhances a leader's capacity to affect the attitudes, values, or behaviors of others.

In organizations, there are two primary types of power: positional power and personal power. Positional power is derived from holding a specific office or rank within a formal organizational system. It is the ability of a leader to influence, stemming from having higher status than the followers. Vice presidents and department heads have more power than other staff members due to the positions they hold within the organization. Positional power includes legitimacy, reward, and coercion. Personal power is the influence a leader has that comes from being seen by followers as likable and knowledgeable. When leaders act in ways that are significant to followers, it grants the leader power. For example, some managers have power because their subordinates consider them exemplary. Others have power because their subordinates view them as highly competent or caring. In both instances, the power of these managers is given to them by others, based on how they are perceived in their relationships with others. Personal power includes referent and expert power.



Leadership and Coercion

Coercive power is a specific type of power available to leaders. Coercion involves using force to implement changes. "Coercion" means influencing others to do something against their will and may include manipulation, punishment, and rewards in the workplace. Coercion often involves the use of threats, punishment, and negative rewards. Classic examples of leaders who used force include Adolf Hitler in Germany, Jim Jones in Guyana, and David Koresh in Waco, Texas, each of whom used power and persistence to compel followers to engage in extreme behaviors.

It is important to distinguish between coercion and leadership because it allows us to clearly separate our examples of leadership from the behaviors of individuals like Hitler, Jones, and Koresh. In our discussions of leadership, coercive individuals are not used as models for ideal leadership. Our definition suggests that leadership is reserved for those who influence groups of individuals towards a common goal. Leaders who use violence are focused on their own goals and rarely consider the desires and needs of their followers. The use of coercion is contrary to working with followers to achieve a common goal.

Leadership and Management

Leadership is a process that shares many similarities with management. Both leadership and management involve influencing people and are concerned with effectively achieving objectives. However, the majority of management functions align with the initial definition of leadership discussed in this chapter, yet leadership differs significantly from management. While the study of leadership can be traced back to Aristotle, management emerged in the 20th century with the advent of industrial society. Management was developed as a means to reduce chaos in organizations and to make them operate more efficiently and effectively. The primary functions of management, first identified by Fayol (1916), are planning, organizing, staffing, and controlling. These functions still represent the management field today. In a book that compares management functions with leadership functions, Kotter (1990) noted that the two are quite distinct. The essential function of management is to ensure order and stability within organizations, whereas the primary role of leadership is to produce change and movement. Management seeks order and stability, while leadership seeks adaptive and constructive changes.

The principal activities of management are performed differently from those of leadership. Although they differ in purpose, Kotter (1990, pp. 7-8) contends that both management and leadership are essential for an organization's development. For example, if an organization has strong management but lacks leadership, the result might be stagnation and bureaucracy. Conversely, if an organization has strong leadership without management, the result could lean towards chaos and ineffective disarray. For effectiveness, organizations need to be nourished with both competent management and skilled leadership.

Many researchers, in addition to Kotter (1990), argue that leadership and management are distinct constructs. For instance, Bennis and Nanus (1985) stated that there is a significant difference between the two. Managing means performing

routine activities, while leading means influencing others to create visions for change. Bennis and Nanus clearly differentiated in their often-quoted line, "Managers are people who do things right, and leaders are people who do the right thing"

Rost (1991) also advocated for distinguishing between leadership and management. He argued that leadership is a multi-dimensional influence relationship, whereas management is a unidirectional relationship of authority. While leadership is about the process of developing common goals, management is focused on coordinating activities to get work done. Leaders and followers work together to create real changes, whereas managers and subordinates join forces to produce and sell goods and services.

From a narrower perspective, Zaleznik (1977) went so far as to argue that leaders and managers are fundamentally different types of people. He contended that managers are reactive and prefer to work with people to solve problems but do so with low emotional involvement. They operate within a limited range of choices. Zaleznik suggested that leaders, on the other hand, are emotionally active and engaged. They seek to shape ideas rather than respond to them and act to expand the options available for solving long-term problems. Leaders change the way people think about what is possible.

Although there are clear differences between management and leadership, both constructs overlap. When executives are involved in influencing a group to achieve its goals, they are engaging in leadership. When leaders are involved in planning, organizing, staffing, and controlling, they are engaging in management. Both processes involve influencing a group of individuals toward achieving a goal. For the purposes of our discussion in this lesson, we focus on the leadership process. In our examples and case studies, we treat the roles of managers and leaders similarly and do not emphasize the differences between them.

Managers vs Leaders	
Manager - does things right	Leader - does the right thing
Manages change	Creates change
Control	Commitment
Focused on rules	Focused on outcome
Conforms	Innovates
Transactional	Transformational
Concerned with stability	Concerned with energizing
Execution	Ideas
Problems are problems	Problems are opportunities
Likes control	Is comfortable with risk
Works in the system	Works on the system
Coordinates efforts	Inspires and energises
Follows orders	People follow them
Detail	Direction
Tells	Sells
Results focus	Achievement focus
Uses established paths	Creates new paths
Provides resources and goals	Provides vision
Processes	People
Formal authority	Personal charisma
Subordinates	Followers
"what"	-why-
Organises people	Aligns people
Control	Passion
Initiates	Originates

Digital leadership

Evolving digital leadership is a dynamic process that requires adaptability, innovation, and strategic foresight. In today's rapidly changing technological landscape, leaders must possess a deep understanding of digital tools, trends, and their implications for organizational success. As businesses increasingly rely on digital platforms for operations, communication, and growth, effective digital leadership becomes paramount. It entails not only harnessing the power of existing technologies but also embracing emerging advancements such as artificial intelligence, blockchain, and the Internet of Things. A successful digital leader fosters a culture of experimentation and continuous learning within their team, encouraging them to explore new digital strategies and technologies. Moreover, digital leadership extends beyond technical expertise; it encompasses the ability to inspire and empower employees, foster collaboration, and drive digital transformation at all levels of the organization. By embracing a forward-thinking mindset and leveraging digital tools strategically, evolving digital leaders can navigate complexities, seize opportunities, and steer their organizations towards sustainable growth in the digital age.

The COVID-19 pandemic has significantly accelerated the demand for a digital direction in leadership, prompting leaders to embrace digital platforms as compelling

and potent tools for expressing their ideas and influencing their followers. With physical distancing measures and remote work becoming the norm, digital channels such as video conferencing, social media, and online collaboration tools have become essential for maintaining connections and driving initiatives forward. Leaders have recognized the potential of these digital mediums to transcend geographical boundaries and reach broader audiences with their messages. By leveraging digital platforms effectively, leaders can engage with their teams in real-time, share insights and updates, foster collaboration, and inspire action, all while adapting to the evolving needs of their organizations and stakeholders. In essence, the digital landscape has provided leaders with a new avenue for communication and engagement, allowing them to navigate unprecedented challenges and lead with resilience and innovation.

Conclusions

Leadership is a topic of universal appeal, extensively covered in both popular media and academic research. Despite the abundance of literature on the subject, understanding the nature of leadership remains a significant challenge for both practitioners and scholars due to its complex and valued phenomenon.

Over the years, leadership has been defined and conceptualized in various ways. A common element in nearly all definitions is that leadership is a process of influence that assists groups of individuals in achieving a goal. Specifically, in this module, leadership is defined as a process where an individual influence a group of individuals to achieve a common goal.

As both leaders and followers are integral parts of the leadership process, it is crucial to address issues faced by followers as well as those confronted by leaders. The relationship between leaders and followers must be understood.

Initially, many studies focused on leadership as a trait. The trait perspective suggests that certain individuals in our society have innate qualities that make them leaders. This view limits leadership to those believed to have special characteristics. Conversely, this text presents leadership as a process that can be learned and is available to everyone.

Two common forms of leadership are appointed and emergent. Appointed leadership is based on a formal title or position within an organization. Emergent leadership results from what an individual accomplishes and how they garner support from followers. Leadership, as a process, is applicable to individuals in both appointed and emergent roles.

Related to leadership is the concept of power, the ability to influence. There are two main types of power: positional and personal. Positional power, similar to appointed leadership, is the power that stems from holding a title in a formal organizational system. It includes legitimacy, reward, coercive, and referent power. Personal power comes from followers and involves referent and expert power. Followers grant this power to the leader because they believe the leader has something valuable to offer. Treating power as a shared resource is crucial as it devalues the notion that leaders are merely power wielders.

Leadership and coercion are not the same. Coercion involves the use of threats and punishment to induce change in followers for the sake of the leader. This contradicts leadership as it does not treat leadership as a process involving followers and does not achieve this by working with followers to reach common goals.

Lidhur me lidershipin është koncepti i pushtetit, mundësia për të ndikuar. Ka dy lloje kryesore të pushtetit: pozite dhe personale. Pushteti pozite, i cili është pak a shumë si lidershipi i emëruar, është fuqia e individit që buron nga të pasurit një titull në një sistem formal organizativ. Ai përfshin legjitimitetin, shpërblimin, pushtetin, dhe shtrëngimin. Pushteti personal vjen nga pasuesit dhe përfshin fuqi referente dhe eksperte. Pasuesit ia japin atë liderit, sepse ata besojnë se liderët kanë diçka me vlerë. Trajtimin e pushtetit si një burim i përbashkët është i rëndësishëm sepse zhvlerëson idenë që liderët janë të ushtrues pushteti. Lidershipi dhe shtrëngimi nuk janë të njëjtë. Shtrëngimi përfshin përdorimin e kërcënimeve dhe dënimit për të nxitur ndryshim në pasuesit për hir të liderit. Shtrëngimi bie ndesh me lidershipin, sepse ai nuk trajton lidershipin, si një proces që përfshin pasuesit, dhe ai nuk e arrin këtë duke punuar me pasuesit për të arritur qëllimet e përbashkëta.

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THE USE OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING TECHNOLOGY BY COMPANIES IN ALBANIA.

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Abstract

Artificial Intelligence is being used increasingly in business and is transforming it dynamically. Artificial Intelligence and Machine Learning tools are radically changing the way businesses are conducting their day-to-day activities. According to the CIO survey by Gartner 2019, companies using Artificial Intelligence and Machine Learning technology have grown from 4% to 14% between 2018 and 2019. AI's potential contribution to the global economy could be \$ 15.7 trillion, or an increase of 23% of global GDP in 2030, according to statistical data published on the website semrush.com. In any case, artificial intelligence will positively affect our society and lead us to redefine humanity. Although the potential of AI for companies has been proven, companies operating in Albania have been slow to use this technology. Very few studies have been conducted in Albania to understand the reason for this disturbing trend, and through this study, we will present how Artificial Intelligence and Machine Learning technologies are used by companies in Albania, in which business operations they are used, and the advantages that come from the use of AI.

Keywords: *Artificial Intelligence, Machine Learning technologies, Business*

Introduction

In the era of the Fourth Industrial Revolution, AI has been regarded as an essential innovation, and AI-based technologies have expanded their applications in various fields. In short, AI is a branch of computer science that is focused on developing a form of machine intelligence, similar to the natural intelligence found in humans that can learn and use deductive reasoning in a similar way to humans.

In business, artificial intelligence has a wide range of uses. Most of us interact with AI in one form or another every day. Artificial intelligence is already changing almost every business process in every industry. As AI technologies proliferate, they are becoming imperative to maintain a competitive edge.

Numerous studies have been conducted on technology use and especially on Artificial Intelligence in recent years. Unfortunately, most of these studies were conducted outside Albania. Therefore, there is a lack of reliable information about their use by businesses in Albania. As a result, there are few studies in this field. This study aims to address this challenge and to go further in determining the factors that influence the use and integration of Artificial Intelligence and Machine Learning technology by Albanian companies. Rona is the first voice robot and the only one so far implemented in Albania by Raiffeisen Bank, which serves customers more and

more, faster, every day 24/7, replacing traditional communication channels, such as phone or email, and saves time because it is not necessary to appear in the branch, to get information on banking products and services.

Through this study, we aim to measure the use of AI in companies operating in Albania, in which work processes they have implemented AI technology, where they intend to go in one year concerning AI technology, how they see the return on investment ROI and how much stable and reliable are AI technologies for Albanian companies.

Purpose: The main purpose of this paper is to study the use of artificial intelligence in Albanian companies.

Objectives:

- To analyze the integration of AI technologies in companies in Albania;
- To identify operations that use AI technology;
- To present whether automation has affected employment needs.

The inferences obtained from the survey will provide a better understanding of the innovations, the actual current degree of application, and the impact of AI on businesses. In conclusion, the result analysis provides the answers to the following questions:

In which business operations do the companies integrate AI technologies, which outcomes have been archived, and to what extent have they realized value from AI initiatives?

Do they have plans for the adaptation of new AI technologies in the coming year?

How confident are the companies to measure the ROI (return on investments) of current AI initiatives and Predict the ROI of AI initiatives in the next 12 months?

What do they do to develop AI systems that are responsible, fair, trustworthy, and stable?

How is the current general labor market impacting organization AI initiatives, do AI initiatives increase automation and reduce our general hiring needs?

The answers to the above questions will help human society to be prepared for future challenges and accept the rapid changes occurring with the use of AI in business.

To answer all these questions, we targeted 6 large businesses (Balfin Group, Agna Group, Vodafone, UnitSystem, Smartwork, OTP Bank), to which we conducted a structured interview.

This paper is organized as follows:

Section 2 focuses on the literature review of the AI and today's reality in business;

Section 3 provides the methodology and the survey data;

Section 4 illustrates the survey results and the answers to research questions;

Section 5 provides the conclusions and directions for future research.

Literature review

We are living in such an exciting time in science and technology, where things are changing and developing quite quickly, but of all developments, perhaps the biggest changes and advances will be in artificial intelligence. The future of Artificial

Intelligence looks promising and will be the foundation of developments in science and technology during the next decade.

Robots and artificial intelligence are becoming faster and smarter than ever before and making everyday life easier for people. Cars have already taken on many human roles, such as teachers, cooks, policemen, and drivers. Advanced technology is also revolutionizing and automating cars, restaurants, and shops. Thanks to AI, an even more exciting future awaits us...

Artificial Intelligence

We can define AI as a branch of computer science that deals with the development of intelligent machines that can behave like humans, think like humans, and have the ability to make decisions on their own. With artificial intelligence, machines can have human-based abilities such as learning, reasoning, and solving logical problems.

AI is one of the fastest-growing technologies that is making human life much easier by providing solutions to complex problems.

According to Stanford researcher John McCarthy, “Artificial Intelligence is the science of creating intelligent machines, especially intelligent computer programs”. Artificial Intelligence is related to the similar task of using computers to understand human intelligence, but AI should not be limited to biologically observable methods. Simply put, the goal of AI is to make computers/software smart enough to mimic the behavior of the human mind.

Artificial intelligence is the ability of a computer system to mimic human cognitive functions such as learning and problem-solving. Through AI, a computer system uses math and logic to simulate the reasoning that humans use to learn from new information and make decisions.

Artificial Intelligence refers to machine intelligence. This is in contrast to the natural intelligence of humans and animals. With artificial intelligence, machines perform functions such as learning, planning, reasoning, and problem-solving. More importantly, Artificial Intelligence is the simulation of human intelligence by machines. It is perhaps the fastest-growing development in the world of technology and innovation. Moreover, many experts believe that AI can solve major challenges and crises.

Machine Learning

The ability of machines to continuously improve their performance without humans having to explicitly explain how to complete each task they are given is what makes artificial intelligence, namely machine learning (ML), the most significant general-purpose technology of our time. Machine learning has been much more efficient and accessible in the past few years alone. We may now create systems that develop the ability to carry out tasks on their own.

Machine Learning is an application of AI. It is the process of using mathematical models of data to help a computer learn without direct instruction. This enables a computer system to continue to learn and improve itself based on experience.

An "intelligent" computer uses AI to think like a human and perform tasks on its own. Machine learning is how a computer system develops its intelligence.

Artificial Intelligence in Business

Artificial intelligence is increasingly being used in the field of business and is dynamically transforming it. It is fundamentally changing the way businesses conduct their day-to-day activities. Although AI is now used by thousands of businesses around the world, most of its important prospects are still untapped. The impact of AI will grow over the next ten years, as incorporating AI into almost every work process such as manufacturing, retail, transportation, finance, healthcare, law, advertising, insurance, entertainment, and education will transform the operations of its main and business models.

Artificial intelligence applications use technologies that include natural language processing, speech recognition, machine learning, robotics, and computer vision. These technologies offer several business opportunities.

We can mention some of the advantages of AI in the field of business:

- Automating Workflows - By automating typical tasks, AI can improve the efficiency of a company's workflow. This enables the workforce to focus on the work that matters most and complete tasks faster. Additionally, AI can facilitate market research and data analysis for decision-makers.
- Virtual support - Voice commands can be understood by a virtual AI assistant, which can then fulfill the user's requests. With the help of AI technology, businesses can communicate with tens of thousands of customers every day. These systems keep in touch with both social media and the market in real-time. Numerous firms have already used chatbots to help them with a variety of activities, including dealing with customers and alerting employees. The best virtual assistants available right now are Alexa, Google Assistant, and ELSA Speak. AI virtual assistants can enhance a company's capability and position it in a world of more sophisticated technology.
- Behavioral recognition - Businesses that deal directly with customers are often looking for new ways to understand their behavior. They now have it easier thanks to AI. Current AI systems can monitor, evaluate, and understand human behavior thanks to Machine Learning. Some can also determine whether a customer's response is "reasonable" or "normal," helping companies detect exceptional customer circumstances. Such AI algorithms can also be used by businesses to identify employee actions. Additionally, AI can improve a company's security network. Certain technologies can identify errors, reduce the risk of cyberattacks, and alert managers to malicious attempts to access corporate data.

However, many irrational expectations have been raised about AI, as with many other new technologies. We can mention some of the risks of using AI:

- Mistakes - Mistakes can seriously damage a company's reputation and infrastructure. Because of this, using AI for coding and programming can be dangerous. Especially if you own a business or e-commerce website, an error can cause the company's main frameworks to break. Errors in coding or programming can be quite expensive.

- Exposure to cyber-attacks - Cyber-attacks are a very common occurrence today. Cyber-attacks can cost a business money and cast doubt on its security procedures. Cyber-attacks continue to pose a serious threat to businesses that rely on AI systems.
- Inhuman behavior - Even if AI can convincingly replicate human behavior, there is still room for improvement. Sometimes, an AI-powered chatbot answers a customer's question insensitively as it is unable to understand human emotions. Such "robotic" perceptions can irritate or frustrate a consumer, which can lead to the loss of a customer.

Companies today have more access to data than ever before. According to Forbes, the amount of data created and consumed increased by 5000% between 2010 and 2020. With the help of emerging technologies, companies are now able to capture user data that can help them make decisions informed about their business. The applications of Artificial Intelligence range from detecting trends in data to mitigate market risks, enhancing customer service through virtual personal assistants, or even analyzing millions of documents across a company's servers to find compliance failures.

According to the Forbes Advisory survey, businesses are using AI in a wide range of areas, such as customer service (56%), cyber security and fraud management (51%), customer relationship management (46%), personal assistants digital (47%), inventory management (40%) and content production (35%), product recommendations (33%), accounting (30%), supply chain operations (30%), recruiting and sourcing talent (26%) and audience segmentation (24%).

The most widespread use of AI in businesses is in customer service cyber security and fraud management, while the least common use is in talent recruitment and audience segmentation.

Some facts about the use of AI in business and the effects that it brings.

- 93% of organizations have tested, used, or deployed AI or are in the process of doing so.
- 91.5% of leading businesses, including Amazon, Apple, and Meta, are investing money to develop AI further.
- The global AI market is worth \$387.45 billion and is expected to reach \$1.39 trillion by 2029.
- 79% of sales and marketing leaders reported that AI has helped their companies increase revenue.
- 64% of companies that have implemented AI have experienced an increase in productivity.
- AI is projected to contribute \$15.7 trillion to the global economy by 2030. The global AI market size was worth \$62 billion in 2020 and is expected to have an annual growth rate of 40.2% from 2021 to 2028, according to Grand View Research.
- 56% of respondents in McKinsey's "The state of AI in 2021" survey report adopted AI, up from 50% of respondents in 2020.
- IT analyst firm Info-Tech Research Group reports that 44% of private sector companies plan to invest in AI systems in 2023.

- 63% of surveyed companies plan to increase spending on implementing AI technology in 2023.
- According to Salesforce, 23% of customer service companies currently use AI.
- 80% of retail executives expect their companies to adopt AI-powered intelligent automation by 2027.
- IBM reports that using chatbots can reduce customer service costs by up to 30%.
- 40% of people use the voice search function at least once a day.
- Gartner also tells us that customer satisfaction is expected to increase by 25% by 2023 in organizations using AI.
- Entertainment giant Netflix reports saving \$1 billion a year by using AI tools.
- The global AI market size was worth \$62 billion in 2020 and is expected to grow at a CAGR of 40.2% from 2021 to 2028, according to Grand View Research.

These facts demonstrate the huge and undeniable effect of AI on business today. They also show that most businesses are in the process of adopting or expanding its use. Given AI's rocky start in public perception, these advances are surprising.

Introducing artificial intelligence into a business operation allows companies to quickly complete their business opportunities, eliminate errors, increase transparency, and increase revenue by leaps and bounds. (Paliwal, Patel, Kandale, Anute, 2021).

It is very difficult to determine whether AI technology will create new jobs in the future, but it is easy to see how it could be useful for humans. (Geisel, 2018).

A benchmarking study by research firm ESI ThoughtLab that was sponsored by Deloitte recently examined how businesses are approaching their AI implementations, what value they are seeking, and what they are doing. Currently, businesses are generally reaping a return on their AI investments. According to the report, the top areas for returns are planning and decision-making (66%), IT operations and infrastructure (69%), and customer service and experience (74%). Although encouraging to observe, some businesses have yet to see a return on investment.

According to the report, businesses are currently benefiting from their AI deployments in five key areas: improved productivity, improved staff engagement, increased customer satisfaction and retention, increased profitability, and new goods and services. Leaders predict that these top five categories will not change over the next three years. However, the percentage of those who expect value from new AI-powered products and services doubled, from 19% to 42%.

According to the article "Artificial Intelligence and Employment: New Cross-Country Evidence" (Georgieff and Hye, 2022) partial automation by AI directly increases productivity, shifting the task composition of occupations towards higher value-added tasks. This increase in labor productivity and output counteracts the direct displacement effect of automation through AI for workers with good digital

skills, who may find it easier to use AI effectively and switch to non-automated tasks, with higher added value within their professions. The opposite may be true for workers with poor digital skills, who may not be able to interact.

Methodology

We conducted an in-depth interview study to better understand the challenges and potentials of AI adoption, as well as the relevant factors that influence companies' readiness to adopt AI technology. We used a purposive sampling, where we identified 6 large companies in Albania (Balfin Group, Agna Group, Vodafone, UnitSystem, Smartwork, Raiffeisen Bank, OTP Bank.), where the focus was on decision-makers and the IT department of selected companies, which we consider to be key informants on digital transformation and the adaptation of technologies such as AI in companies in Albania.

We chose companies operating in the IT field and large companies operating in Albania, as they were more likely to have started using AI technology, in order to have an accurate picture of the approach that business in Albania has to Artificial Intelligence.

The profiles of the companies:

Balfin Group: This is one of the leading investment groups in the Western Balkans region. BALFIN is a diversified group active in wholesale and retail, banking, real estate, asset management, tourism, media, and logistics. The Group employs approximately 5,000 people and operates in 8 countries.

OTP Bank Albania: OTP Bank Albania, part of the OTP Group, entered the Albanian banking market in 2018. OTP Bank Albania is the fifth largest player in terms of total assets and the third largest player in terms of customer loans in Albania.

Agna Group: The company was established in 1991 and is an importer and exclusive distributor of well-known brands. AGNA S.A. also operates in the fields of energy investment, hospitality, construction, and real estate in Albania and abroad. This company has created a significant investment portfolio over the years.

Vodafone Albania: Vodafone Albania is part of Vodafone Group Plc – one of the world's largest telecommunications companies. As one of the world's most valuable brands, Vodafone Albania is a leader in the market, not only as an operator in the electronic communication industry but also as a remarkable contributor to the economic and social development of the country.

UnitSystem: UnitSystem is a newborn company that offers services to solve challenges and automate business processes. The company services can help to improve efficiency and agility, reduce cost, participate in new business models, and capture new market opportunities through cloud-based solutions.

Smartwork: Smartwork, was created in 2017 under the leadership of Altea Federation and under the supervision of Deloitte Albania & Kosovo. Since then it has laid strong foundations in the field of business technology consultancy by cooperating mainly with foreign clients and domestic clients. With different products and dedicated units, Smartwork is excelling in offering 360° technical & business

solutions that support the growth and competitiveness of companies accompanying them in the path of digital transformation.

The questionnaire was built based on the questions we raised at the beginning of the study and aimed to measure the use of AI in companies operating in Albania, in which work processes they have implemented AI technology, where they intend to go after one year about the AI technology, how they see return on investment ROI and how stable and reliable AI technologies are for Albanian companies.

Results

This study has a descriptive nature, and its main contribution is the presentation of the results from the deep interviews with the IT manager or chief operating officer in 6 companies that operate in Albania.

The companies were selected based on personal information and personal relations and were conducted online.

The companies are Balfin Group, OTP Bank, Agna Group, Vodafone Albania, UnitSystem, and Smartwork.

In total 7 interviews because 2 representatives from OTP Bank were interviewed.

Below are the answers to the questions regarding the use of AI technologies.

1. To what extent is your company looking to integrate AI technologies into its operations?
 1. Widespread adoption
 2. Limited AI use cases
 3. Looking to scale
 4. Not yet using but considering

From the answers, it seems that AI technologies are being used in limited cases and looking to scale. Only Balfin Group has widespread adoption of AI technologies

2. Over the past 12 months, which of the following business outcomes has your company been trying to achieve through AI initiatives?

1. Increase productivity through automation
2. Improve decision-making
3. Improve customer experience
4. Innovate our products and services
5. Improve employee experience and skills acquisition
6. Develop new, data-driven business models
7. Increase agility
8. Increase the valuation of the company
9. Improve retention and recruitment
10. Strengthen resilience
11. Enhance stakeholder trust

In this case, it seems that AI initiatives are only being used to: Increase productivity through automation; Improve decision-making; Improve customer experience; Innovate products and services; Develop new, data-driven business models; Increase the valuation of the company; and Enhance stakeholder trust.

3. To what extent has your company realized value from AI initiatives in these areas (areas above) over the past 12 months?

From AI initiatives, the benefits over the past 12 months are about: Increasing productivity through automation; Improving decision-making; Improving customer experience; Innovating the products and services; Increasing agility; Increasing valuation of the company; Improving employee experience and skills acquisition and Enhancing stakeholder trust

Regarding the OTP Bank Albania, they are evaluating the implementation of AI for document checking of loan disbursement. It is expected to increase efficiency increase accuracy and minimize operational errors.

The UnitSystem is implementing AI in limited cases and cannot report the value in the phase.

4. To support what kind of business decisions will your company use AI for?

1. Technology
2. Operations and maintenance
3. Customer experience
4. Strategy
5. Product and service development
6. Supply chain
7. Marketing and Sales
8. Workforce, including DEI
9. Finance
10. Mergers and acquisitions
11. Environmental, social and governance

Seems that AI is used to support: Technology; Operations and maintenance; Customer experience; Strategy; Product and service development; Supply chain; Marketing and Sales and Finance.

5. How will your company use AI simulations, such as digital twins, in 2023?

1. Forecast market conditions
2. Support financial, sales, and marketing planning
3. Enhance supply chain, operations
4. Develop new products, target new segments
5. Make long-term strategic decisions
6. Monitor physical assets
7. Support IoT, industrial, and smart city initiatives
8. Hire and train employees
9. We do not plan to use AI simulations in 2023

In this case, only Balfin Group will use AI simulations to Forecast market conditions; Support financial, sales, and marketing planning; Enhance supply chain, and operations; Develop new products, and target new segments; Make long-term strategic decisions and Hire and train employees.

UnitSystem will use AI simulations for Developing new products, targeting new segments; Monitoring physical assets; Supporting IoT, industrial, and smart city initiatives, and Smartwork for making long-term strategic decisions.

Other companies do not plan to use AI simulations in 2023.

6. How confident are you in your company's ability to Assess ROI (return on investments) of current AI initiatives? Please, could you explain?

In this case, only Balfin Group and Vodafone Albania measure the ROI from AI initiatives but sometimes the time frame is not sufficient.

Other companies answered that at this moment it is difficult to assess ROI because the initiatives and projects are ongoing and it is necessary to wait 3-5 years.

7. How confident are you in your company's ability to accurately predict the ROI of AI initiatives in the next 12 months? Please, could you explain?

Again, only Balfin Group and Vodafone Albania are confident, for other companies, the prediction of ROI with certainty for an emerging technology such as AI is difficult due to the rapid pace of change and uncertainty surrounding the market demand and competition.

8. What steps, if any, will your company take in 2023 to develop and deploy AI systems that are responsible, that is, trustworthy, fair, bias-reduced, and stable?

1. Confirm AI is compliant with applicable regulations
2. Protect AI systems from cyber threats, manipulations
3. Improve governance of AI systems and processes
4. Confirm AI-driven decisions are interpretable and easily explainable
5. Monitor and report on AI model performance
6. Confirm AI systems provide robust performance
7. Develop and report on controls related to AI models, processes
8. Address the issues of fairness
9. Review to be sure third-party AI services meet standards
10. No plans to address AI responsibility issues

In this case, seems that the possible steps are: Confirm AI is compliant with applicable regulations; Protect AI systems from cyber threats, and manipulations; Improve governance of AI systems and processes; Confirm AI-driven decisions are interpretable and easily explainable; Monitor and report on AI model performance; Confirm AI systems provide robust performance; Develop and report on controls related to AI models, processes.

9. And, how is the current general labor market impacting your organization's AI initiatives? Accelerating AI to increase automation and reduce our general hiring needs.

1. Have implemented
2. Have a plan and start to implement
3. Developing a plan
4. Do not plan to do this
5. Not sure

In this case, Balfin Group and OTB bank, have no plan to reduce hiring needs. Vodafone Albania has implemented AI technologies and so has reduced general hiring needs. Other companies are developing a plan.

Conclusions and future research

This research paper used the qualitative research method which involved semi-structured interviews with 6 different companies in Albania. After analyzing the results obtained from the structured interviews, we conclude that although AI technology is widely used in the business field, businesses in Albania are using AI technology in limited cases. Even companies that have started using AI, use this technology in some limited parts of the work processes. AI simulations are also not planned to be used. Only one company, from the companies considered, is ready to use AI simulations next year. The study concluded that the prediction of ROI with certainty for emerging technology such as AI is difficult due to the rapid change and uncertainty surrounding market demand and competition. As for the impact of AI technology on the reduction of work staff, in general, the use of AI technology has not yet affected the reduction of employees; only the telecommunication company Vodafone has reduced staff by automating work processes, while other companies are developing a plan.

The field of Artificial Intelligence is very promising and very attractive for IT researchers. The potential of this technology is many times greater, compared to its current use. For this, researchers should focus more on deepening studies in AI technology.

In Albania, there are very few studies in this field, and currently, the rate of use of AI technology in Albanian companies, in health, education, industry, and public institutions has not yet been measured.

By measuring and analyzing the benefits of this technology in the conditions of our country, we would encourage more companies, institutions, and the government itself in the wider application of Artificial Intelligence.

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THE EFFECTIVENESS OF FISCAL POLICY DURING ECONOMIC RECESSIONS

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Abstract

Fiscal policy is one of the main catalysts that the government can use to fight recessionary pressures with the main goal of restoring economic stability. Economic recessions represent periods of heightened uncertainty, characterized by declining economic activity, rising unemployment, and financial market turmoil. In such challenging times, fiscal policy emerges as a crucial tool for policymakers to stabilize economies, stimulate aggregate demand, and mitigate the negative effects of recessions on households and businesses. This paper examines the critical role and importance of fiscal policy in addressing economic recessions and promoting economic stability.

Furthermore, relying on theoretical frameworks, empirical evidence and historical examples, this paper highlights the various perspectives of theorists regarding the impact of fiscal policy measures during economic recessions. Drawing upon the classical Keynesian, monetarist and new theoretical perspectives, we have provided a general overview of the positive, negative and neutral viewpoints on how these theorists conceptualize the effectiveness of fiscal policy in combating economic recessions.

Finally, this paper envisions a theoretical reassessment of the importance of fiscal policy in the economy, as a consequence of the post-economic crisis from the Covid-19 pandemic, emphasizing key considerations and emerging priorities for policymakers. The pandemic exposed and aggravated existing inequalities, underscoring the need for targeted fiscal interventions in addressing socio-economic inequalities. Consequently, the need for a more comprehensive and forward-thinking approach to fiscal policymaking in the post-Covid-19 era is highlighted, which would include fiscal flexibility, inclusiveness, and sustainability.

Keywords: *Fiscal policy, economic recession, economic sustainability.*

Introduction

The importance of Fiscal Policy during economic recessions

Over the years, fiscal policy has played an extraordinary role in addressing economic crises worldwide, achieving economic stability through its fiscal instruments. During economic and financial crises, characterized by a significant downturn in economic activity, governments tend to employ expansionary fiscal policies such as increasing public spending, reducing taxes, and other stimulus measures with the main goal of protecting economic activity and achieving economic stability (A. J. Auerbach

2012). Thus, fiscal policy, through its responsible and coordinated actions, can play a crucial role in mitigating the effects of major global economic crises and steering economies towards a sustainable growth path. These measures can be instrumental in preserving employment, enhancing social welfare, and strengthening economic sustainability.

The importance of fiscal policy in addressing economic recessions has been a subject of considerable study and political debate over the years, especially considering the most severe economic and financial crises worldwide. It is worth mentioning one of the largest global crises, the Great Depression of the 1930s (C. D. Romer 1992), during which governments worldwide acknowledged the need for aggressive fiscal policy interventions to address the deep economic downturn. Such policies, including public works programs, increased government spending, and financial regulation aimed to stimulate demand and stabilize financial markets.

Meanwhile, the post-World War II period witnessed the emergence of Keynesian economics, which also emphasized the role of fiscal policy in stabilizing economies. Governments used discretionary fiscal policy measures, such as deficit spending and tax cuts, to manage aggregate demand and promote full employment (Hall 2009).

On the other hand, the global financial crisis of 2007-2008 underlined the importance of fiscal policy in addressing economic recessions. Governments implemented large-scale fiscal stimulus packages, including increased public spending, tax cuts and financial sector interventions, to support aggregate demand and prevent a deeper downturn (A. J. Auerbach 2012).

Last but not least due to the effects it caused on the economy, the COVID-19 pandemic also highlighted the critical role of fiscal policy in mitigating the economic impact of crises. Governments around the world enacted unprecedented fiscal stimulus measures to support households, businesses and health care systems (Cogan 2020). Policies such as income support programs, business grants, and investments in infrastructure aim to stabilize incomes, preserve jobs, and facilitate economic recovery.

Beyond managing economic recessions, fiscal policy plays a crucial role in fostering long-term economic growth and stability. Investments in infrastructure, education, and innovation can boost productivity and competitiveness, while prudent fiscal management and structural reforms support fiscal sustainability and macroeconomic stability (Mendoza 2010).

Theoretical perspectives regarding the impact of Fiscal Policy during economic recessions

Fiscal policy, referring to government spending and taxes, has long been a topic of debate among economists regarding its effectiveness, especially during economic recessions. Such debates, how fiscal policy could influence the achievement of economic stabilization, have managed to position economic theorists in three attitudes: positive, negative and neutral.

On one hand stand the economists who hold *positive* views regarding the effectiveness of fiscal policy in achieving economic sustainability, especially during

economic recessions. One of the primary representatives of these theorists is John Maynard Keynes (Keynes 1936) who also led the Keynesian stream, mainly during the most sensitive crisis in the world, that of the Great Depression, the importance of government intervention through fiscal policy was significantly emphasized as an important tool in stimulating aggregate demand during economic recessions. According to this perspective, an expansionary fiscal policy through increased government spending and/or tax reduction would stimulate aggregate demand, reviving economic activity and reducing unemployment. Moreover, this viewpoint emphasizes that a fiscal policy implemented at the right time could positively impact the fight against economic recession by injecting additional demand into the economy (R. Barro 1999).

Furthermore, the positive effectiveness of fiscal policy during economic recessions was also analyzed through the impact of automatic stabilizers (Taylor 2016), which are mechanisms integrated into the fiscal system that automatically increase government spending and/or reduce taxes during economic recessions, without the need for the application of discretionary fiscal policies. Automatic stabilizers such as unemployment benefit payments and progressive taxation assist in mitigating economic recessions by stabilizing incomes and consumption and promoting economic recovery.

Additionally, advocates of fiscal policy emphasize the importance of infrastructure investment (Aschauer 1989) as a key tool for stimulating economic activity during economic recessions. Such investments affect not only the opening of new jobs and the increase in demand in short term but also enhance productivity and the long-term potential for economic growth.

Blanchard and Perotti, through their study have argued the positive effect of fiscal policy during economic recessions by focusing on characterizing the dynamic effects of changes in government spending and taxes on production, emphasizing potential benefits of the measures fiscal stimulus (O. J. Blanchard 2002).

Also, during economic recessions, governments often implement countercyclical fiscal policies to stimulate demand and support economic activity. According to Wagner's Law, the expansion of government spending relative to GDP may naturally occur during economic crises as governments increase expenditures on social safety nets, unemployment benefits, and other forms of economic stimulus (Akitoby Bernardin 2006). This countercyclical increase in government spending can help offset the decline in private sector demand and moderate the impact of recessions.

Finally, empirical studies often cite historical examples where fiscal policy interventions have been effective in addressing economic recessions (Blinder 2010). For instance, during the Great Depression of the 1930s, the implementation of New Deal programs in the United States, which included public works projects and social welfare initiatives, helped soften the impact of the downturn and set the stage for recovery. Similarly, fiscal stimulus measures enacted during the global financial crisis of 2007-2008, such as the American Recovery and Reinvestment Act, are credited with supporting economic recovery and preventing a sharper downturn.

While fiscal policy is often considered a crucial tool for economic stabilization, there are also *negative* perspectives among economists regarding its effectiveness, especially during economic recessions. Some of the main critics regarding the effectiveness of fiscal policy during economic recessions are monetarist economists who emphasize the priority of monetary policy in stabilizing the economy over to fiscal policy (Friedman 1968). This is because they claim that a fiscal policy intervention could lead to a high budget deficit, which in turn may worsen inflationary pressures without significantly easing unemployment.

Furthermore, a negative effect of the fiscal policy on economic sustainability is also explained based on the basis of Ricardian equivalence. According to this theory, proposed by Robert Barro (R. J. Barro 1974), individuals anticipate future tax increases to finance current deficits and adjust their behavior accordingly by saving any increase in disposable income received from fiscal stimulus. As a result, the assumed stimulative effect of fiscal policy is offset by the increase in private savings, leading to a limited impact on aggregate demand and economic activity.

Another negative perspective on the effectiveness of fiscal policy arises from the Crowding-out concept (R. J. Barro 1990). When governments increase spending or cut taxes to stimulate the economy during recessions, they often have to finance these measures through borrowing. This increase in government borrowing can lead to higher interest rates as the demand for credit increases, discouraging and minimizing private investments. Consequently, any increase in government spending may be offset by a corresponding decrease in private sector spending, limiting the overall effectiveness of fiscal stimulus. Such a perspective is consistent with the neoclassical view, which, in contrast to Keynesianism, argues that government intervention in the economy has minimal effects on achieving economic sustainability, leading to a high budget deficit and thus the Crowding-out effect (A. a. Auerbach 1987).

Critics of the effectiveness of fiscal policy also emphasize time lags and implementation issues as significant challenges. Fiscal policy measures, such as infrastructure projects or tax cuts, often require time for planning, approval, and implementation (C. D. Romer 2010). By the time these measures are approved, economic conditions may have already changed, making them less effective or even counterproductive. Moreover, political gridlock and administrative inefficiency can further delay the implementation of fiscal stimulus measures, reducing their impact on economic recovery.

Additionally, Robert E. Lucas Jr., through his study, emphasizes the importance of considering the long-term effects of fiscal policy, highlighting potential distortions and inefficiencies resulting from government intervention primarily during economic recessions (Lucas 1976).

A significant concern of aggressive fiscal policy during recessions is its potential impact on long-term fiscal sustainability (C. M. Reinhart 2010). High levels of government debt accumulated during downturns may pose risks to macroeconomic stability and future economic growth. Economic theorists warn that unsustainable fiscal policies can lead to higher borrowing costs, reduced investor confidence, and ultimately, a fiscal crisis that aggravates rather than improves economic downturns.

Alongside the positive and negative perspectives on the effectiveness of fiscal policy during economic recessions, there are also *neutral* perspectives that acknowledge both the benefits and potential limitations of fiscal measures.




Neutral perspectives often emphasize the importance of expectations and confidence in shaping the effectiveness of fiscal policy during recessions. While fiscal stimulus measures may potentially boost consumer and business confidence, their impact can be tempered by uncertainties surrounding future economic conditions, policy effectiveness, and political stability. Therefore, the effectiveness of fiscal policy may depend not only on the size of stimulus measures but also on how they are perceived and anticipated by economic agents (Mankiw 2002).

Moreover, theorists of this strand emphasize the importance of considering sectoral and regional variations in assessing the effectiveness of fiscal policy during recessions (O. J. Blanchard 2002). Different sectors and regions within an economy may respond differently to fiscal stimulus measures based on factors such as industry composition, labor market dynamics, and exposure to international trade. Therefore, the overall impact of fiscal policy on economic activity may vary across sectors and regions, necessitating targeted and tailored approaches to maximize effectiveness.

On the other hand, besides government intervention through fiscal policy, its interaction with monetary policy is also essential to achieve economic stability during recessions (Woodford 2003). While fiscal stimulus measures may boost aggregate demand, their impact can be influenced by the stance of monetary policy, particularly regarding adjustments to interest rates and liquidity provision.

Various authors have also argued that the effectiveness of fiscal policy can be hampered by delays in implementation, bureaucratic inefficiency, and political constraints, which can affect the timing and magnitude of policy impacts for achieving economic sustainability during recessions (Alesina 1998).

Neutral perspectives also emphasize the importance of complementing short-term fiscal stimulus measures with long-term structural reforms to enhance economic elasticity and growth potential (Acemoglu 2012). While fiscal policy may provide temporary support during recessions, addressing underlying structural weaknesses, such as labor market rigidities, regulatory barriers, and productivity constraints, is crucial for maintaining long-term economic prosperity and resilience to future downturns.

	Positive		Negative		Neutral
	Keynesianism		Monetarist		Expectations and trust
	Automatic stabilizers		Ricardian equivalence		Sectoral and regional variations
	Infrastructure Investments		Crowding-Out Effect		Interactions with Monetary Policy
	Countercyclical fiscal policy		Time delays and implementation issues		Policy implementation challenges

Historical evidence	Long-term effects of Fiscal Policy (<i>distortions and inefficiencies</i>)	Long-Term Structural Reforms
	Fiscal sustainability concerns	

Table 1. Theoretical perspectives regarding the impact of Fiscal Policy during economic recessions. Source: Summary of Literature Review

Re-dimensioning the importance of Fiscal Policy after the Covid-19 pandemic

The economic crisis resulting from the Covid-19 pandemic led to a significant disruption of economic activity, including supply chain interruptions, decreased consumer spending, and increased unemployment. All these negative effects demanded swift and decisive responses from governments worldwide to prevent a prolonged economic downturn through fiscal policies and beyond.

The Covid-19 pandemic has redefined the importance of fiscal policy during economic recessions, elevating its significance to unprecedented levels. Initially, the Covid-19 pandemic caused an unprecedented global economic shock, characterized by widespread lockdowns, supply chain disruptions, and sharp declines in economic activity. In response, governments worldwide heavily relied on fiscal policy measures to mitigate the crisis impact and support economic recovery (Baldwin 2020).

Additionally, in response to the recession caused by the pandemic, governments implemented expansive fiscal policies, including wide-ranging stimulus packages, emergency aid programs, and targeted support for affected sectors. These measures aimed to stabilize incomes, preserve jobs, and prevent a deeper economic downturn (IMF 2020). Meanwhile, the scale and duration of fiscal support measures during the pandemic raised concerns about debt sustainability in many countries. However, the urgency of the crisis led policymakers to prioritize immediate economic stabilization over long-term fiscal sustainability considerations (C. M. Reinhart 2020).

Fiscal policy played a crucial role in providing social protection during the pandemic, including income support for individuals, financial assistance for businesses, and funding for healthcare systems (OECD 2021). These measures helped mitigate the impact of the crisis on vulnerable populations and prevented an increase in poverty and inequality. Beyond immediate crisis management, fiscal policy is essential for investing in resilience and promoting sustainable post-pandemic recovery (Bank 2021). This includes investments in healthcare infrastructure, digitalization, green technologies, and skills development to build a more resilient and inclusive economy.

The Covid-19 pandemic has underscored the essential role of fiscal policy in addressing economic recessions and promoting recovery. As economies continue to navigate the aftermath of the pandemic, the importance of well-targeted and coordinated fiscal measures remains paramount to ensure a strong and sustainable economic recovery.

Conclusions

Despite ongoing debates, many economic theorists hold positive views regarding the effectiveness of fiscal policy in fighting economic recessions. From Keynesian principles to modern interpretations of automatic stabilizers and investments in infrastructure, the consensus among these theorists is that well-implemented fiscal measures can play a crucial role in stabilizing economies and promoting recovery during periods of economic downturn.

However, it should be emphasized that the effectiveness of the fiscal policy depends on its timely implementation, the targeted allocation of resources and careful consideration of economic conditions. Policy responses should be well-planned for the nature and severity of the recession, given fiscal constraints and complemented by other macroeconomic policies, such as monetary policy.

As evidenced by the COVID-19 pandemic, which underscored the crucial role of fiscal policy in crisis management, governments must recognize the evolving dynamics of the global economy and adapt their fiscal strategies accordingly. Embracing innovation, promoting inclusion, and prioritizing economic sustainability are essential to navigating the complexity of modern economic challenges.

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ARTIFICIAL INTELLIGENCE AND THE TECHNOLOGY REVOLUTION IN THE BANKING AND FINANCIAL SECTOR

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Abstract

Artificial Intelligence, AI is revolutionizing the banking and financial industry, ushering in a new era of efficiency, security and customer-centric services. This transformative technology is reshaping various aspects of banking operations, from fraud detection and credit scoring to customer service and compliance management. This article will explain the application of AI in banking and the financial sector, examining its impact on customer service, fraud detection, credit risk assessment and the expansion of payment channels.

In addition, specific examples of the application of AI in banking payments services will be provided, highlighting the benefits and challenges associated with the integration of AI in the financial sector. While looking at the transformational landscape in banking systems, it becomes clear that this technology is not just a tool but a real revolution, reshaping not only the banking industry but every type of industry. Therefore, customer experience is enhanced using different applications, mobile banking and client interfaces (ex chatbots) (Nagaraj et al., 2021).

Keywords: Digital banking; Digitalization; Digital transformation; Technology; Banking Sector; Financial Sector.

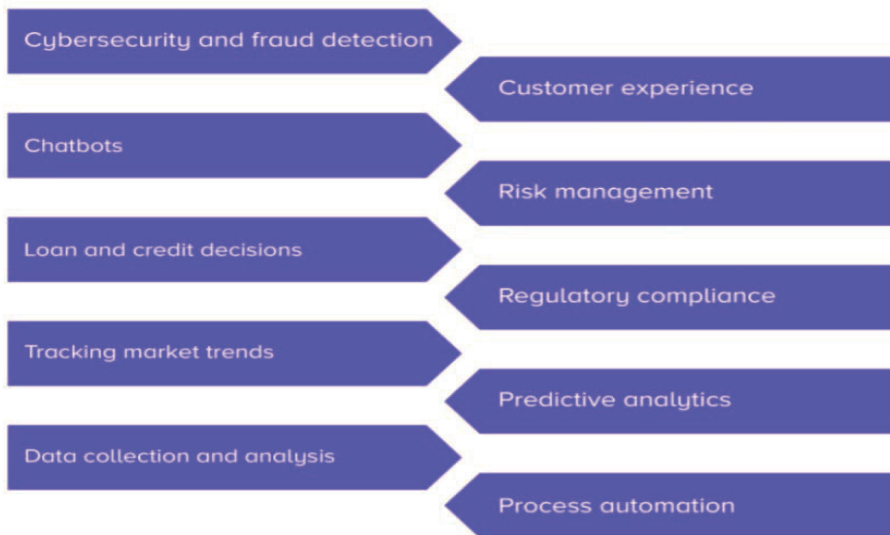
JEL Classification: O33

Introduction

Applications of AI in Banking and Financial Sector

Artificial Intelligence is transforming the banking and financial industry by providing insights that can help financial institutions make better decisions, improving customer experiences, improving back-office operations, fraud detection, risk management and improving compliance (Donepudi, P. K. 2019).

Applications of AI in banking and finance



Source: Deloitte, 2022

Some of the Main Applications of AI in Banking and Finance:

Cyber security and fraud detection

AI-based systems quickly analyze large volumes of data to detect fraudulent information within seconds, making banks safer. AI manages to help banks comply with regulations and protect customer data by identifying potential security breaches and vulnerabilities.

Overall, AI is set to revolutionize the banking landscape with the potential to improve processes, reduce errors and improve the customer experience.

Customer Service and Engagement

AI has powered chatbots giving personalized customer service and support, answering customer questions and providing assistance 24/7.

Credit assessment and direct lending

AI helps lenders determine the creditworthiness of customers by analyzing data from a wide range of traditional and non-traditional data sources, making the loan approval process faster and more accurate.

Business process management

AI can automate back-end processes, reducing costs and increasing productivity.

The AI Revolution in the Banking System-Transforming Services, Increasing Efficiency and Challenges

Artificial intelligence AI has emerged as a force that has potential to revolutionize various industries, including the banking sector. AI technology has enabled banks to provide more personalized customer service, improve efficiency, reduce costs and increase security.

Artificial intelligence AI is used to transform the banking industry in many ways, by automating repetitive tasks such as data entry and document processing, allowing banks to improve efficiency and reduce costs. Additionally, AI-powered chatbots and virtual assistants manage to provide customers with 24/7 customer service, answering questions and resolving issues in real time. (Fares et al., 2022)

This results in increased customer satisfaction and reduces the workload for customer service employees. AI can also help banks make better decisions as a more accurate credit scoring, which allows for better lending decisions and reduces the risk of loan defaults (Ilollari et al., 2022).

AI also analyzes large amounts of data to provide more accurate insights, which can lead to better decision-making in areas such as risk management and investment strategies. Another advantage of AI in the banking system is the ability to provide more personalized services to customers. AI analyzes customer data to provide financial advice personalized and targets marketing offers that can improve customer satisfaction and loyalty (Sadok et al., 2022).

The use of AI in banking also presents some challenges related to

Banks must comply with regulations related to data privacy, security and consumer protection when using AI.

The use of AI requires skills that need to be updated, to develop and maintain the technology, where there is a shortage of these types of skills.

Despite these challenges, the impact of AI on the banking sector is expected to be significant and its adoption is likely to become more widespread as AI technology continues to develop and become more accessible and affordable for all banks. Overall, AI represents a true revolution that is reshaping the banking sector to deliver significant benefits to banks and customers (Ilollari, O., Papajorgji, P., & Civici, A. 2020).

The Power of AI and the Prospect of Expansion in the Banking Sector

Artificial Intelligence technology has made an important step in the banking sector and is expected to increase its impact in the coming years. In this rapid transformation, AI has impacted several key aspects of the banking sector, bringing significant innovations and improvements (Caron, M. S. 2019).

Some of the main ways in which AI is reshaping the banking sector include:

Improved Customer Service: The use of AI-powered chatbots and virtual assistants is enabling 24/7 customer service. This not only improves customer satisfaction, but also reduces the workload for human customer service representatives.

Improved Fraud Detection: Using AI to analyze large amounts of data can detect fraudulent activity in real time, thus reduces the risk of financial losses. This improves the security of customer accounts and increases confidence in the banking system.

More Accurate Credit Assessment: Using AI for data analysis can result in a more accurate credit assessment for customers. This development allows banks to make more informed lending decisions and reduces the risk of default.

Automated Processes: Automating routine tasks such as data entry and document processing improves efficiency and reduces costs for banks.

Personalized Services: Analysis of customer data can be used to provide more personalized services, including financial advice and tailored marketing offers. This improves the customer experience and increases loyalty to the bank.

Data privacy concerns: Its use requires large amounts of data and there are concerns about how this data is collected, stored and used. This tailored framework of AI in the banking sector leads to a more efficient and innovative environment, serving the benefits of all stakeholders (Theuri et al., 2022).

Benefits and Challenges of AI in the Banking System

The use of AI in the banking sector presents both benefits and challenges.

Some of the benefits of AI in banking include:

- Automating repetitive tasks, reducing the workload for human capital while improving efficiency.
- Detect fraudulent activity and prevent it from happening, improving the security of customer accounts.
- Analyzing large amounts of data to generate more accurate insights and improve decision-making.
- Analyzing customer data to provide more personalized services, improving customer satisfaction and loyalty (Kaya et al.,2019).

On the other hand, the use of AI requires large amount of data and there are concerns about how this data is collected, stored and used, and banks must comply with regulations related to data privacy, security and consumer protection when using AI. Also, the use of AI requires talents and skills to develop and maintain the technology, where it is observed that there is a shortage of such talents (Mishra et al.,2021)

Impact of AI on Payment Services

The impact of payment banking services on the banking industry could be significant, and the use of artificial intelligence could further enhance the benefits.

Some ways in which payments banking and AI could impact the industry:

Reduction of operational costs and risk: The banking industry is largely digital in operation, but it is still oversaturated with human capital-based processes. In these processes, banks face significant operational cost and risk issues due to the potential for human error. AI can automate repetitive tasks, such as data entry and processing, which can save time and reduce errors. Banks can achieve a 2-5x increase in the volume of interactions or transactions with the same number of employees using AI-based tools.

Personalized customer service and support: AI can analyze customer data to understand their preferences and needs and use this information to provide personalized customer service and support to users by addressing their questions and

concerns in real time. Banks can also use AI models to provide personalized financial advice, targeted product recommendations, proactive fraud detection and shorter support waiting times (Gkikas et al., 2022).

Automation of routine tasks: AI can automate many routine tasks, such as account balance inquiries and password resets, without committing customer service representatives to focus on complex issues. It can increase efficiency and reduce costs for banks by providing faster and more accurate customer support. And all this will be available 24/7, making it easy for customers to get help by answering questions, resolving issues and providing financial education outside of regular business hours (Tyson, L. D., & Zysman, J. 2022).

Credit risk assessment: Credit risk is the possibility that a borrower will not be able to make regular loan payments until the borrowed amount is repaid. Credit risk assessment by IA provides a more accurate and faster judgment on an individual's creditworthiness. This was done with the help of machine learning, which was able to analyze various factors of the customer's financial behavior. As a result, the use of AI credit risk assessment in the Fintech industry will significantly influence lending decisions (Smith, A., & Nobanee, H. 2020).

Fraud detection: AI can detect anomalies in account transactions, identify fraudulent transactions and prevent money laundering. AI models can analyze transactions and record suspicious cases. For each movement of capital, different criteria are examined, such as the amount, currency, the country it is going to and the type of transaction. If a criterion does not match the typical patterns, the AI reports the anomaly to the account manager. If the transaction is suspicious, it is forwarded to the Financial Fraud Department (Fares et al., 2022).

As feedback grows, the AI learns to classify transactions correctly and report only those where there is a real threat of a financial crime. Payment banking services have a significant impact on the banking industry and the use of AI can further enhance the benefits. AI can reduce operational costs and risk, provide personalized customer service and support, automate routine tasks, improve credit risk assessment and detect fraud. The use of AI can lead to cost reduction, increased customer satisfaction and the development of new services (Sleimi et al., 2020).

Examples of AI used in Banking Payment Services

AI chatbots for customer service

One of the best examples of AI chatbots for banking applications is Erica, a virtual assistant from Bank of America. Chatbot, "Erica" is able to answer questions, provide assistance with banking transactions, provide information about an individual's account and provide other personalized services through online chat (Farishy, 2023)

AI chatbot handles credit card debt and provides personalized financial advice to customers. Ally Financial and Capital One also use AI chatbots to help customers with questions, transfers and payments.

Personalized financial advice:

Banks can use AI models to provide personalized financial advice, targeted product recommendations and proactive fraud detection. For example, Kasisto is the creator of KAI, an AI communication platform used to improve customer experiences in the finance industry. KAI helps banks reduce call center volume by providing customers with self-service options and solutions (Bhatia, M. 2022).

Automation of routine tasks:

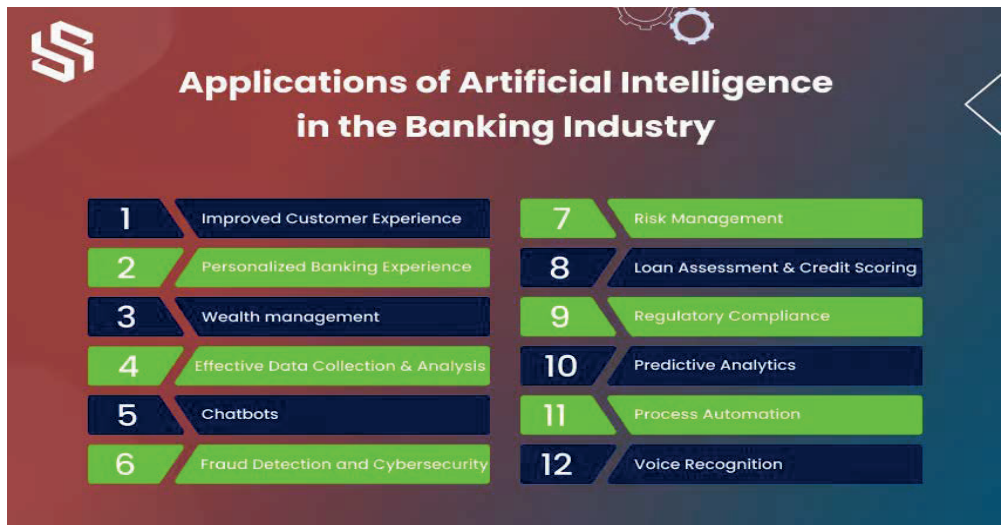
AI automates many routine tasks, such as account balance inquiries and password resets, freeing up customer service representatives to focus on complex issues. It can increase efficiency and reduce costs for banks by providing faster and more accurate customer support (Caron, M. S. 2019).

Fraud detection:

AI is able to detect anomalies in account transactions, identify fraudulent transactions and prevent money laundering. AI models analyze transactions and record suspicious cases. AI is being used in payments banking services to improve customer service, automate routine tasks, assess credit risk and detect fraud. AI chatbots for customer service, personalized financial advice, automation of routine tasks, credit risk assessment and fraud detection are some of the examples of AI being used in payments banking services.

Artificial intelligence has become an integral part of our world and banks have already begun to integrate this technology into their products and services (Chakraborty, U. 2020).

Main applications of AI in the banking industry



Source: Sleimi et al., 2020

Credit assessment and direct lending:

It can help lenders determine the creditworthiness of customers by analyzing data from a wide range of traditional and non-traditional data sources, making the loan approval process faster and more accurate.

Business process management:

It manages to automate the last processes, reducing costs and increasing productivity.

Privacy, security and compliance:

It helps banks comply with regulations and protect customer data by identifying potential security breaches and vulnerabilities. AI can help banks and financial institutions make better decisions, improve customer experiences, improve back-office operations, detect fraud, manage risk and improve compliance. Using the power of AI, financial institutions will gain a competitive advantage, achieve operational efficiencies and make more informed decisions in a rapidly evolving financial landscape.

These applications demonstrate how AI is reshaping the finance industry, delivering benefits such as improved decision-making, improved customer experiences and streamlined operations (Hassan, M., et al., 2023).

Benefits of using AI in Banking and Finance

Artificial Intelligence is fundamentally changing the banking and financial sector, bringing several key advantages, including:

Reduction of Operational Costs and Risk:

Automation of processes by AI reduces costs and increases productivity. In addition, AI helps identify and mitigate risks, improving bank security.

Improved Customer Experience:

AI-powered chatbots provide personalized service and support, answering questions and providing assistance 24/7, increasing customer satisfaction and loyalty.

Enhanced Fraud Detection:

AI systems quickly analyze large volumes of data to detect fraudulent information, making banks safer.

Improving Regulatory Compliance:

AI helps banks meet regulations and protect customer data by identifying potential security breaches and vulnerabilities, avoiding fines (Ramamurty, V. et al., 2021)

Automated Investment Valuation:

It helps lenders assess customer credibility by analyzing data from traditional and non-traditional sources, improving the loan approval process.

AI helps banks make informed decisions, improve customer experiences, back-office operations, detect fraud, manage risk and improve compliance. By integrating AI, financial institutions gain competitive advantage and achieve operational efficiency in a rapidly evolving financial landscape. The integration of AI in the banking, financial and payment sector brings various improvements, contributing to the evolution of the financial industry (Fahres et al., 2022).

Table 1. Advantages of AI in the Banking and Finance sector

Advantages	AI in banks	AI in financial sector	AI Banking Payment Services

Operations Efficiency	Automation of "back-end processes"	Automation of "back-end processes"	Reducing operational costs and risk through task automation
Customer Experience	AI-powered chatbots for personalized customer service	AI-powered chatbots for personalized customer service	Personalized customer service and support, using AI-powered chatbots
Credit rating	AI-based credit scoring for better credit decisions	AI-based credit scoring for better credit decisions	AI-assisted credit risk assessment for faster and more accurate loan approvals
Fraud Detection and Security	Improved fraud detection through real-time data analysis	Improved security through fraud detection and prevention	AI-powered fraud detection reduces risk and improves security
Risk management	Improving risk management through analysis	AI helps manage risk through data analysis and insights	Reducing operational risks with AI-driven automation
Compliance with Regulations	AI helps with compliance by identifying security breaches and vulnerabilities	AI helps with compliance by identifying security breaches and vulnerabilities	AI supports compliance with regulations, ensuring data protection

Source: Authors

How Can AI Improve Customer Service in Banks?

AI significantly improves customer service in banks through various applications, some of which are:

Self-service tools: AI can improve customer service in banks by providing better self-service tools that handle more customer queries efficiently. AI-powered self-service enables banks to resolve high volumes of requests more efficiently, increasing customer satisfaction and reducing operational costs.

Chatbots: The use of chatbots or AI communication platforms in the banking and financial industry can significantly lighten the workload of consulting and customer service and provide a fast, engaging and efficient customer support system. Chatbots can solve customer queries in a fast and efficient way, providing quick answers to simple customer questions and improving the skills of service agents.

Personalized recommendations: AI algorithms help banks predict customer needs and automate personalized customer service, making service more personalized, profitable and efficient (Agarwal, A., et al., 2021).

Regulatory compliance: As AI continues to revolutionize customer service in banking, regulatory bodies are likely to introduce new laws and regulations to ensure the responsible use of AI technologies. Banks must stay abreast of these developments and be prepared to adapt their AI-driven solutions to meet changing regulatory requirements (Gomber, P., et al., 2018)

Improved customer insights: AI, when combined with data and CRM (Customer Relationship Management), can provide banks with a more holistic view of their customers, leading to more personalized banking experiences. By using artificial intelligence, banks can provide personalized customer service, improve operational efficiency and reduce costs, ultimately leading to increased customer satisfaction and loyalty. However, it is important that banks address the challenges associated with AI implementation, such as data quality, privacy concerns and regulatory compliance, to harness the full potential of AI in delivering exceptional customer service (Chatterjee et al., 2019).

Table 2: The risks associated with the use of AI in banking and finance, along with the corresponding benefits

<i>Risk</i>	<i>Advantage</i>
<i>Data privacy concerns</i>	Improving Customer Experience
<i>Regulatory Challenges</i> <i>Compliance</i>	Reduction of Costs and Operational Risk
<i>Need for talent</i>	Enhanced Fraud Detection
<i>Operational Cost and Risk in Payments</i>	Personalized Customer Service and Support
<i>Operational Cost and Risk in Payments</i>	Automation of Routine Tasks
<i>Data privacy concerns in payments banking</i>	Credit Risk Assessment
<i>Data privacy concerns in payments banking</i>	Fraud

Conclusion

AI can supply customer service in the bank, taking efficient self-service measures, chatbots for fast customer services, personalized recommendations that can take care of the customer, ultimately leading to a personalized and efficient work for the customer.

Artificial intelligence is a true revolution that is reshaping the banking sector and its impact will only increase in the coming years. Banks are adopting AI technology to gain a competitive edge in the market. As AI technology continues to evolve, it is set to transform banking in ways we can't yet imagine. The integration of Artificial Intelligence has significantly revolutionized the banking and financial industry, yielding a host of applications that offer substantial improvements.

Key areas of application include strengthening cyber security and fraud detection, providing personalized customer service through AI-powered chatbots, improving credit assessment and lending processes, automating back-end operations and ensuring privacy, security and regulatory compliance. The AI revolution in banking is characterized by its transformative impact, bringing personalized services, increased efficiency, cost reduction and improved security.

AI automation capabilities simplify mundane tasks, such as data entry and document processing, resulting in improved operational efficiency. Deploying AI-powered chatbots and virtual assistants ensures uninterrupted 24/7 customer service, easing the burden on human representatives and increasing overall customer satisfaction.

The impact of AI in the banking sector is already tangible, manifesting in improved customer service, increased fraud detection, more accurate credit scoring, streamlined processes and personalized services. AI can supply customer service in the bank, taking efficient self-service measures, chatbots for fast customer services, personalized recommendations that can take care of the customer, ultimately leading to a personalized and efficient work for the customer.

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PUBLIC POLICIES FAILURE AND THE COST OF THE BUREAUCRACY. A CRITICAL REVIEW

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Abstract

This article makes a contribution to the discussion of the cost of the bureaucracy as a factor for public policies failure. Government initiatives to combat inequality frequently only reach a small portion of the population they are intended to, which inevitably reduces their efficacy by excluding those who don't follow the necessary protocol. Sometimes burdens are unavoidable because costs serve political objectives or administrative realities. However, in many cases, the costs associated with burdens seem questionable at best and completely unjustified at worst. State bureaucratic structures have been said to have a significant impact on social, political, and economic outcomes. The costs of transactions related to market coordination are decreasing as a result of technological advancement, particularly in the areas of computer and information technologies. As a result, some observers predict a move toward smaller, less bureaucratic organizations that may be connected via platforms and a greater reliance on market exchange. Ex-post facto research design was chosen for this study, and the secondary data gathered for it includes a variety of topics covered in the study. Is there a relationship between cost and effectiveness that links higher spending to greater effectiveness? This is a pertinent question for public administration reforms. The main results show that the task of achieving national development rests with professional, efficient, motivated, and impartial public bureaucrats who can carry out their roles as best they can, even though the health of democracy depends on the government's ability to provide necessary services and use public bureaucracy to solve social problems.

Key words: *Cost of bureaucracy; Administrative burdens; Public policies failure; Albania*

RESEARCH CONTEXT

Macroeconomic trends, such as population changes, increasing urbanization, and resource scarcity, that are already evident and will persist in the future will continue to put pressure on governments and other public institutions to adapt. The need to quickly adapt is made more pressing by shifts in the requirements and preferences of people using public and governmental services (Connolly et al., 2021). All public sectors are impacted by this requirement, including infrastructure, transportation, healthcare, defense, and e-government. Citizens are becoming more and more conscious of the fact that policies are not born or raised; rather, their development depends on how they are put into practice. The three dubious underlying premises of

the normatively appealing top-down view of policy and its implementation are a chronological sequence in which stated intentions come before action, a linear causal logic in which goals determine instruments and instruments determine results, and a hierarchy in which policy formation takes precedence over policy implementation (Hudson, 2019). Whether the goal is to enhance public services or develop new programs, the systems nature of public policy makes it difficult or impossible to predict, evaluate, and control, all essential components of sound policy-making (Mueller, 2020). Certain roles and functions that may be challenging for individuals, families, and communities to effectively provide are carried out by the state. Particularly, national public goods are those that are beneficial to all state residents. These products include things like building roads and controlling waterways. The resources of the state, as well as those of the municipalities, are used to fund this type of public spending (Markova, 2019).

The public's scrutiny of these massive investments is growing as taxpayers demand more cuts to what they see as wasteful spending. As governments' understanding has grown, they have recognized that more needs to be done to ensure that intentions are translated into results - in other words, that policy failure is avoided. Rather than allowing policies to fail completely or partially, governments are increasingly interested in ways to strengthen and support the policy process, particularly the implementation phase. The purpose of state administration is to serve the public interest. There is a series of mechanisms that essentially ensure significant autonomy between the citizen in the role of the consumer and the official in the role of the administrator of the budget expenditures. With the help of numerous rules and directives, bureaucracy frequently creates the demand for "public goods". The question of the steering capacity of public authorities is therefore open, and the question of evaluation is a crucial component when it comes to reporting on what we do (Duran, 2018). It is evident why public policies result in waste, disappointment, and inefficiency so frequently. Incompetence, ignorance, corruption, overconfidence, self-interest, and transaction costs are present at every stage of the creation, projection, implementation, and operation of public policy. They are complex and full of contradictory incentives (Alexander, 2001). The main contention here is that initiatives and policies will mostly fail even if we are successful in eliminating or significantly mitigating each of these issues. Generally speaking, things can be made better with more data and information, better governance, better experts, more transparency, a higher public spirit and political will, checks and balances, etc. This article makes a contribution to the discussion of the cost of the bureaucracy as a factor for public policies failure.

Theoretical background

Government initiatives to combat inequality frequently only reach a small portion of the population they are intended to, which inevitably reduces their efficacy by excluding those who don't follow the necessary protocol. Sometimes burdens are unavoidable because costs serve political objectives or administrative realities. However, in many cases, the costs associated with burdens seem questionable at best

and completely unjustified at worst (Herd & Moynihan, 2019). State bureaucratic structures have been said to have a significant impact on social, political, and economic outcomes. Within public administration, academics have predicted the “rediscovery” of bureaucracy, defended the bureaucratic organization, and cautioned against the consequences of the New Public Management reforms (Dahlström et al., 2010). When the government puts in place new laws, it is necessary to call on bureaucratic structures which take care of the drafting of these new provisions and which put in place the necessary measures to enforce them. When the government opts to create new services, a bureaucratic structure will be put in place or linked to it. When public intervention is omnipresent, it is essential to look at the bureaucratic phenomenon (Carnis, 2007).

Max Weber is considered one of the founders of sociology and it is undeniable that his work played an essential role in the description and understanding of the bureaucratic mode of organization, its influence and its developments. He considers bureaucracy as the expression of a rational-legal mode of organization, in opposition to other, older forms where authority is less present (Weber, 1978). Weberian bureaucracy could be summarized as a form of general organization governed by rules and procedures applied in an impersonal manner by agents specialized in a given field of action. Bureaucratic organization therefore requires the neutrality of agents who refer to the rules rather than their free will. Bureaucracy, as a system of state organization, still remains an essential element of public action today. If some of its principles have been called into question by recent state reforms, the forms of action put in place have nevertheless led to new forms of bureaucratization (Ferlazzo, 2022). The costs of transactions related to market coordination are decreasing as a result of technological advancement, particularly in the areas of computer and information technologies. As a result, some observers predict a move toward smaller, less bureaucratic organizations that may be connected via platforms and a greater reliance on market exchange. However, technological advancement is also bringing down the price of bureaucratic, hierarchical coordination (Monteiro & Adler, 2022). Public bureaucracy is now essential to any endeavor in developing countries to accomplish developmental goals. Thus, there is a need to reconsider how the public bureaucracy helps these countries achieve national development. Anyway, the public sector is forced to increase taxes because it is unable to control its costs. Consequently, public budgets are able to grow. The rest of the economy is forced to concentrate more on wealth redistribution than wealth creation due to tax collection and tax defense (Gadenne, 2017). Because of its very nature, bureaucracy is unavoidable (Krasner, 1972). Measuring the costs of bureaucracy requires an institutional framework that guarantees accurate, long-lasting measurement. This paper aims to answer to the following question: what are the main administrative burdens in developing countries and how these burdens impact the public policies? In the following sections we will define the research design and the methodological approach used to analyse the data in order to answer to the research question of the paper.

Research design and methodology

The World Bank, European Union and the Western Balkans countries serves as the research context. Ex-post facto research design was chosen for this study, and the secondary data gathered for it includes a variety of topics covered in the study. Put differently, this study is a documentation of research and it uses only secondary data. Books, journals, official documents, newspapers, magazines, and internet resources are some of the tools used. Content Analysis was employed to analyze the data. There are still gaps in the public sector dataset population, despite its proliferation. First, there isn't a global dataset on public compensation that is consistent and harmonized. This makes it more difficult for academics and professionals to comprehend the relationships between management techniques and public sector productivity, of which pay is a major factor. To close this gap, a novel new global dataset on public personnel called the Worldwide Bureaucracy Indicators (WWBI¹) has been created by the World Bank's Bureaucracy Lab that created the unique cross-national the WWBI, which focuses on public sector employment and wages. The goal of the WWBI is to encourage the application of technology and evidence to the study of the civil service in order to enhance World Bank operations and policy recommendations. The metrics provide exclusive insights into the public sector's impact on local labor markets and government spending, the makeup of the public and private sectors' workforces, the competitiveness of public sector wages, and the equity of public sector hiring and compensation policies. When combined, these offer a crucial picture of the abilities and motivations of public servants. We, also, utilize a simulator indicator, called SIGMA, that uses a set of standard indicators based on the Principles of Public Administration to closely monitor public administration reform in collaboration with the European Commission. It assesses how well an administration operates in practice, including the implementation of reforms and their results, as well as the prerequisites for a good public administration, which include sound laws, policies, structures, and procedures. The indicators are made up of several sub-indicators that use various approaches, and a point distribution mechanism makes sure that the weight of any one approach is not disproportionate. It is feasible to triangulate active data because SIGMA² uses a mixed-methods approach.

Findings

Burdens associated with administration

It's simple to brush off the difficulties people have when interacting with the government—such as finding information about programs, filling out paperwork, and the ensuing annoyances—as a minor annoyance required for the administrative state to run smoothly. However, the role that these administrative burdens play in the quality of governance is more fundamental than has been traditionally recogniz

They are more than just a minor annoyance; they have an impact on people's ability to use basic civil rights like voting and access public services that can enhance their quality of life. The effectiveness of public programs is altered by burdens.

Table 1. Burdens associated with administration

Learning costs	The time and effort invested in learning about the service or program, including determining eligibility, the kind of benefits, requirements that must be met, and how to apply.
Compliance costs	Providing data and supporting documentation to establish standing; paying for services (such as fees, legal counsel, and travel expenses); avoiding or complying with administrators' arbitrary requests.
Psychological costs	The stigma associated with registering for and taking part in an unpopular program; the loss of autonomy brought on by invasive administrative oversight; the annoyance of having to deal with the expenses of learning and compliance; the needless or unfair procedures; and the stress that results from not knowing if citizens can bargain for procedures and compliance costs.

Source: (Herd & Moynihan, 2019)

It is extremely difficult to measure the cost of bureaucracy of the administrative burdens. Some recent research (Heinrich, 2016) studied a large cash transfer program that attempted to give millions of children more financial stability. The goal of the program was to improve educational outcomes and home stability by providing these families with financial resources. Changes in the policy rules made participants' compliance costs even more onerous, as they had to deal with lengthy documentation requirements, long wait times at welfare offices, and increased learning expenses. As a result, the majority of beneficiaries encountered hiccups in their cash transfers; of those, four were inadvertent. Adolescent outcomes were negatively impacted by the lost resources, which led to higher rates of alcohol use, criminal activity, and sexual activity. Put another way, administrative complexities undermined a well-intended program.

Burdens can exacerbate societal inequality since they affect some groups more than others. Higher income groups vote more frequently because they are more likely to be registered to vote; if they are registered to vote, low-income groups vote at rates comparable to those of higher income groups. Thus, registration-assistance policies encourage low-income, younger, and minority groups to participate. Vulnerable groups may find it more challenging to assert their status and engage fully in society when they bear burdens. Recent research by Nisar (2018) identify the difficulties gender non-conforming people in Pakistan have obtaining identity documents, which are becoming more and more important in order to obtain employment, assert property rights, obtain welfare services, or navigate interactions at security

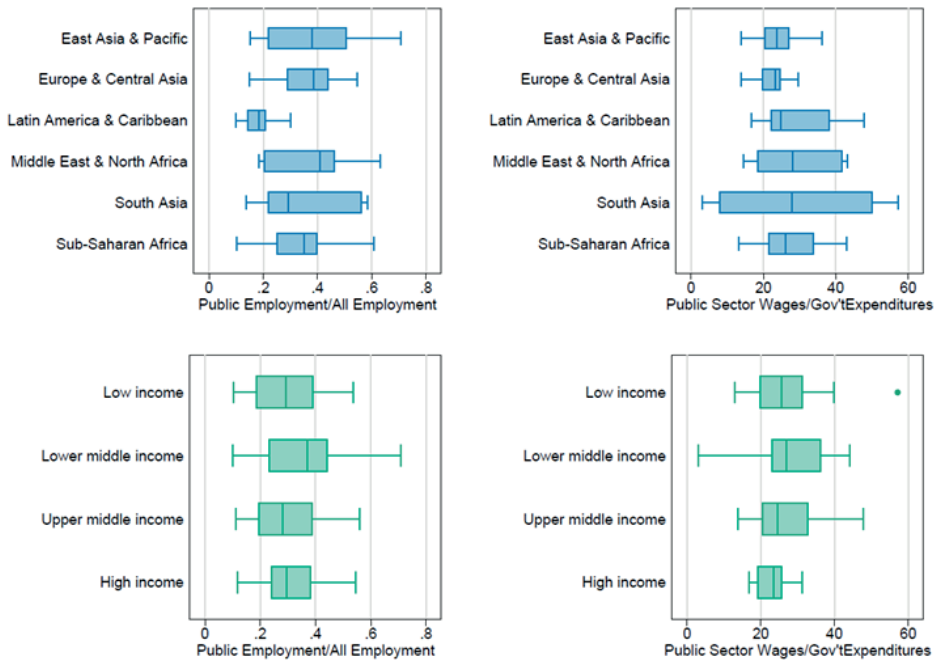
checkpoints. Those who are deemed less worthy and therefore more vulnerable are the targets of both official discrimination and increased burdens.

Global data on costs related to public administration

The public sector's size is independent of income levels.

In many nations, the public sector is significant; across the nations in the WWBI database, it accounts for roughly 32% of paid employment and 26% of government spending. It's possible that less people are aware of how little the income level of a nation accounts for in explaining variations in the size of the public sector. The WWBI database actually indicates that the majority of the variation in the public sector's scale occurs within income categories at the national level, as opposed to across them.

Figure 1. Relation between the size of public sector and income level



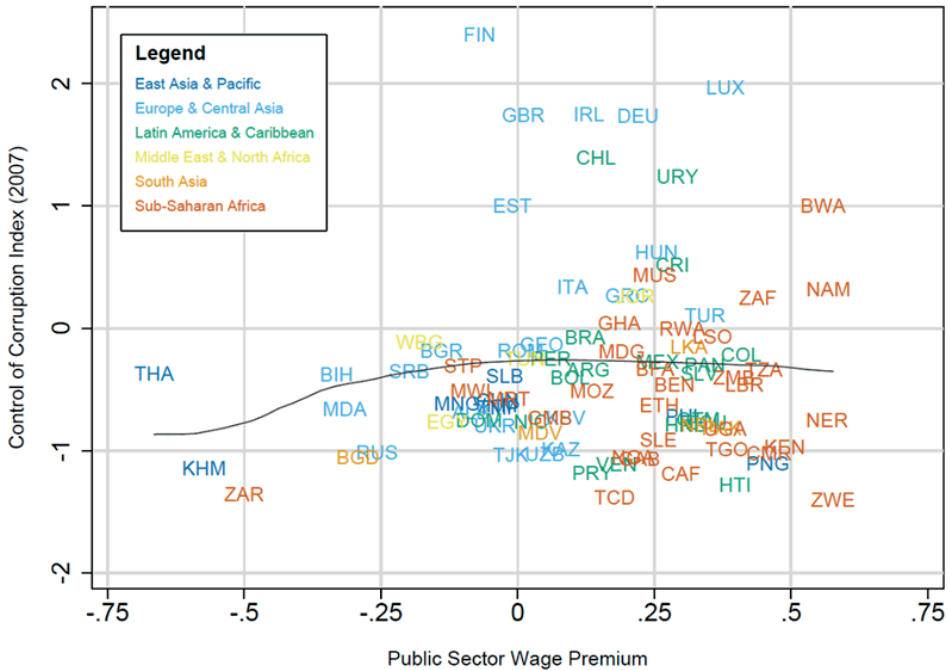
Source: Author's visual aid derived from data from the WWBI

Lower levels of corruption are not correlated with a higher wage premium in the public sector

The cross-national evidence that is currently available generally suggests a weak but negative correlation between corruption and the wage premium in the public sector (Van Rijckeghem & Weder 2001). It wouldn't be shocking to find such an empirical connection because economic theory contends that the costs of corruption are influenced by how desirable public-sector jobs are in comparison to private sector

jobs. It's interesting to note that this is not supported by the data; as the figure above illustrates, combining the World Bank's Control of Corruption Index with the WWBI indicates that there is no correlation between the level of corruption (higher Control of Corruption scores) and the wage premium in the public sector. On the one hand, this is not an estimate of the causal impact; rather, it is a correlation. However, the lack of an association over such a large range of wage premia implies that, in the event that a causal relationship exists, there must be some other significant variables that move in tandem with the wage premium in order to mitigate its effects.

Figure 2. Relation between corruption and wage premium in the public sector



Source: Author's visual aid derived from data from the WWBI

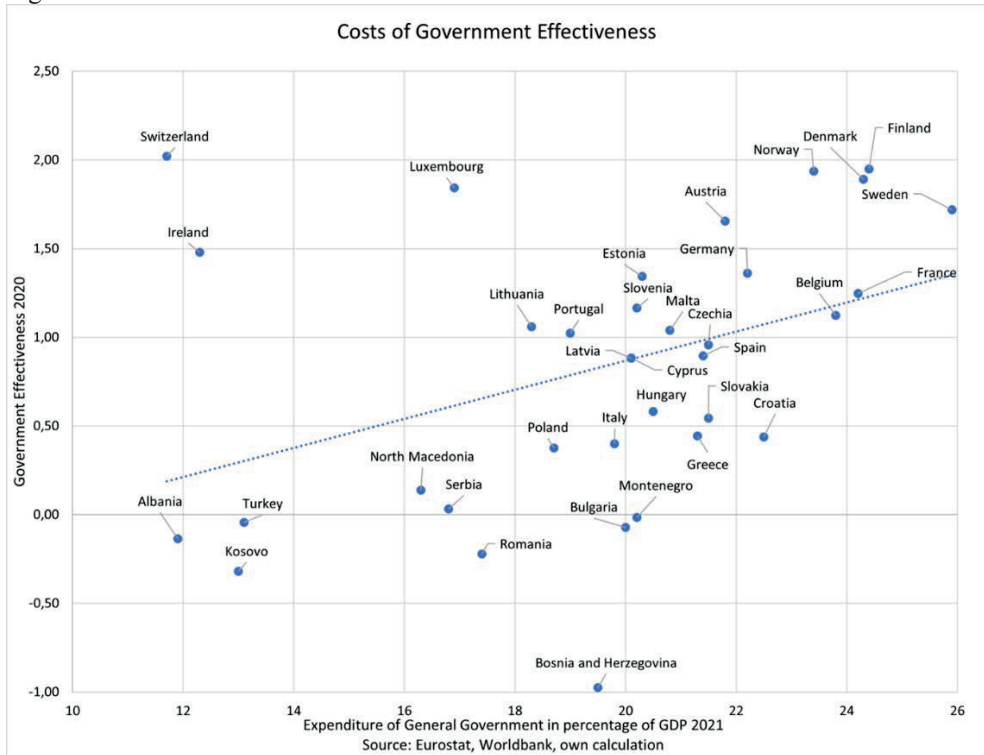
European Union, Western Balkans countries and Albania data related to public administration

Final consumption expenditure of general government” is a major component of GDP (Gross Domestic Product), encompassing all expenses related to the procurement of goods and services, including remuneration for general government employees in a nation. When evaluating the expenses of public administration and service delivery (absent investments and social transfers), this is a crucial metric to consider. These data are made available by Eurostat for the European Union and its neighboring countries in PPS³ of the European System of Accounts (ESA), which enables a comparison of public sector costs while accounting for variations in

purchasing power. The average amount of money spent by the 27-member states of the European Union on public administration and service delivery in 2021 was 7.142 PPS per resident. Luxembourg has the highest public-sector costs per capita at 15.487 PPS, while Albania has the lowest at 1.213 PPS. It demonstrates unequivocally the meager resources available to Southeast European public administrations. The World Bank's Worldwide Governance Indicators (WGI⁴) assess the current state of governance in almost every nation on Earth. One useful set of indicators for evaluating the results of public administration is the Government Effectiveness data. The governance performance scales from -2.5 (weak) to 2.5 (strong). With Finland having a plus 1,95 spread and Romania having a minus 0,22 spreads, the spread within the EU is extremely high. Bosnia and Herzegovina is ranked last in Europe with minus 0,98, while Switzerland is first with plus 2,02. Albania is ranked among the last countries with an indicator of plus 0.24.

Effectiveness is a term used in economics to describe how well an activity achieves its objectives. The ratio of an input to an intermediate or final outcome, or cost effectiveness, shows the relationship between resources used and outcomes obtained and is a crucial metric for assessing the efficacy of public policies. It is possible to compare the cost effectiveness of the education and healthcare sectors in a meaningful way because they have sufficiently developed and internationally standardized measures of inputs and outcomes. Is there a relationship between cost and effectiveness that links higher spending to greater effectiveness? This is a pertinent question for public administration reforms. Linking these data and providing an overview of the costs of government effectiveness is made possible by the public administration costs as measured by the "Final consumption expenditure of general government" of the Gross Domestic Product and, on the other hand, the public administration outcomes as measured by the World Bank Effective Government indicators. The findings unequivocally show a relationship between public administration costs and the efficiency of government. Countries with more effective governments are those with higher public administration (general government) expenditures. Switzerland is the only country that stands out in this comparison due to its low government spending and high effectiveness rating.

Figure 3. Cost of Government Effectiveness

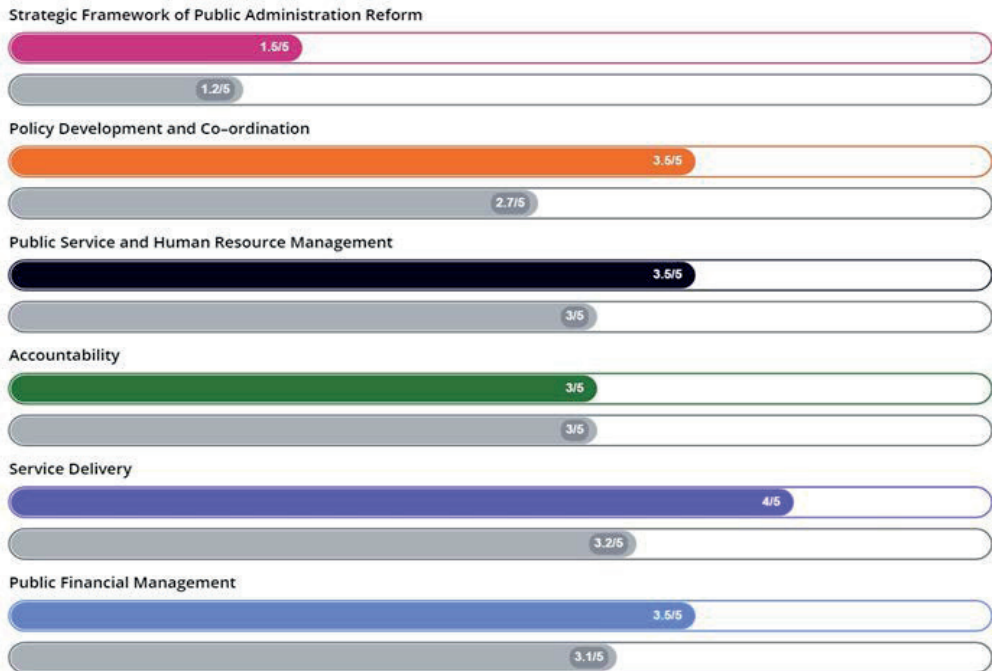


As mentioned above, the OECD and the EU jointly launched SIGMA (Support for Improvement in Governance and Management), which is a collection of specialized reports that concentrate on specific topics related to management and governance, including public procurement, administrative supervision, interministerial coordination, spending control, and public service management. Since 2015, SIGMA has reviewed potential candidates and EU candidate nations based on the Principles of Public Administration. This framework ensures a methodical focus on implementation by providing an accurate and balanced measure of each principle. In five Western Balkans administrations (Albania, Kosovo, Montenegro, Republic of North Macedonia, and Serbia), the portal provides a visual representation of the current situation and advancements made in raising the caliber of national public administrations. In recent years, Albania has carried out a number of significant reforms in various facets of the public administration. To organize and direct the implementation of reform, a public administration reform strategy is in place. Albania performed well overall in the regional comparison, despite difficulties with the overall coordination of reform and deficiencies in practice and regulation in a number of important areas.

Figure 4. Principal indicators⁵ of Albanian governance effectiveness

SIGMA Policy Simulator

Albania compared to undefined (2021)



Discussion and Conclusion

There are several options available to governments that are willing to lighten their burdens (Arendsen et al., 2014). While there hasn't been much research on attempts to directly minimize psychological costs, some of these focus on lowering learning costs and others on compliance costs (Petersen et al., 2024). Simplifying procedures is one way to lower compliance costs (Daddi et al., 2014). A different tactic is for the government or other actors to assist people directly in managing the costs associated with compliance if processes cannot be made simpler. Based on recent research, a cash transfer program aimed at assisting impoverished women in India serves as an illustration of the importance of assistance (Gupta 2017). Merely 33% of eligible participants were enrolled in the program, indicating low participation. In a field trial involving more than 1,200 participants, the effects of various enrollment-boosting strategies were investigated. Information provision boosted involvement, but only for individuals who could read the material. Helping individuals' complete forms or interacting directly with bureaucrats to make benefit claims had significant positive effects, increasing applications by 41% and 70%, respectively. The results

also support the burdens' distributive effects. Administrative burden can be decreased with the use of information technology (Veiga et al., 2016). For instance, the time it takes to travel to a physical location to collect and submit a form can be decreased by just having an online option. The state can improve accuracy and lessen the number of times applicants must submit the same information by investing in IT systems that can integrate data across programs. For instance, when confirming eligibility, data derived from tax returns is probably more reliable than self-reported income. It is a professional norm for public organizations to evaluate burdens. Overall, though, public managers and front-line staff are not generally influenced by the language or concepts surrounding administrative burdens in the same way that, say, the language and concepts surrounding strategic planning or performance measurement have become widely accepted (Spekle & Verbeeten, 2014).

The administrative burden associated with regular strategic planning, performance reporting, and audit requirements is not borne by public managers. The burdens that people face in public services can be mapped out and avoided with an emphasis on human-centered design. Bureaucracy, as a system of state organization, still remains an essential element of public action today. If some of its principles have been called into question by recent state reforms, the forms of action put in place have nevertheless led to new forms of bureaucratization. Today, the organization of the State is perceived as a hybrid model, a polymorphous bureaucracy (Sadran, 2004). This observation thus reinforces the unresolved questions of Weber who already noted in his time the unrivaled and unequalled capacity of the bureaucracy to grow to respond to a growing number of public policy issues. The task of achieving national development rests with professional, efficient, motivated, and impartial public bureaucrats who can carry out their roles as best they can, even though the health of democracy depends on the government's ability to provide necessary services and use public bureaucracy to solve social problems.

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WHAT IS INTERNATIONALIZATION PROCESS IN THE CONTEXT OF HIGHER EDUCATION INSTITUTIONS?

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Abstract

Internationalization in the higher education institutions in Albania has been for some time the center of discussions and initiatives from the main education authorities and HEIs themselves. Internationalization also comes as an imperative from the law “On Higher Education in the Republic of Albania 80/2015” right from the start, Chapter I, Article 1, paragraph e) states: Higher Education is a public responsibility and service whose mission is to support international cooperation in the field of higher education. Thus higher education institutions must incorporate internationalization in their internal regulatory acts and make it part of their mission objectives. Furthermore, under the frame of the EU integration processes, institutions in Albania are encouraged to become an active part in all the available programs financed by EU on higher education, such as Erasmus+. On the other side, the participation in such program is conditioned by a clear internationalization strategy putting the higher education institutions under the responsibility to develop and implement such strategies.

But in order to explore the issue of internationalization of higher education, first of all, it is necessary to understand what internationalization means, its, roots, forms, development, and current situation.

Keywords: internationalization, law, higher education institution,

What does the word itself “internationalization” mean?

In the Oxford Dictionary internationalization is defined as: the act or process of bringing something under the control or protection of two or more nations; the act or process of making something international, while translating the term into Albanian language that is “Ndërkombëtarizim”. The word in Albanian has the following meaning referring to the official present day Albanian language dictionary: It is related or has to do with relations among countries and peoples throughout the world, international relations, international arena, and international cooperation. Though the meanings in both languages refer to the same idea, my research topic focuses specifically on internationalization of higher education institutions in Albania.

In my endeavor to address the issue of internationalization of higher education institutions and specifically to the topic of internationalization I have referred to the latest researches on this field by several international researchers.

The concept and roots of internationalization

According to Hans de Wit, (2013), a globally recognized scholar in the internationalization of higher education, previously working as professor at the Amsterdam University of Applied Sciences and the Università Cattolica del Sacro Cuore in Milan, currently at Boston College, the notion, term and concept of “Internationalization” date from the 1990s. In that publication, De Wit states that there was already a substantial tradition of research and practice on the international dimension of higher education, in general under the term “international education” or under the terms that reflect some kind of international activity.

Globally renowned scholar in the field of internationalization of higher education, John K. Hudzik, a Professor, Michigan State University and NAFSA Senior Scholar for Internationalization, also a MSU Dean and Vice President of International Programs and Global Engagement 1995 to 2010, and Acting University Provost in 2005, in his publication “Comprehensive Internationalization” (Hudzik 2015) states that higher education internationalization is not a new concept. According to him, its roots and guiding principles can be tracked back thousands of years to higher-learning ideas centers which attracted scholars and students from diverse places. Hudzik mentioned the fact that such centers, among them the Confucius Schools in China (6th century BC), the Platonic Academy of Athens (5th century BC), the Library of Alexandria (4th century BC), Nalandia in India (5th century AD) and Renaissance in Italy (14th century AD) were intellectual hubs drawing mobile scholars and curious from afar. He underlines that the movement of people in search of new ideas and the movement of ideas to influence people in new places, as well blending of diverse cultures and epistemologies formed the inner core of early higher learning. He noted that the above centers provided the root stock for contemporary forms of internationalization of higher education. Hudzik argues that in ancient periods as well as with more contemporary idea centers such as universities, cross-border and cross-cultural influences impact the core missions of higher learning. Indeed, the movement of people to learn new ideas and the effect of the new ideas introduced to new places affecting more and more people is an early movement that has accompanied at least the community of scholars, researchers, and learners throughout the history. It becomes quite obvious that the main drivers behind the movement of people and ideas was:

-the endeavor to do more, to reach new heights, and in other words to translate that knowledge into benefits for personal and broader gains.

Internationalization of higher education institutions is not a recent one but dating back many and many years ago while some ideas have flourished from one place to another, transmitted thanks to the mobility of scholars and learners. It is an indication of the early forms of international cooperation and globalization with an impact on the overall global development. Therefore, the context of the internationalization of

higher education derives from such early forms. Still, in essence the drivers for internationalization are at the core the same though new motivations, rationales, and drivers continuously shape it by not giving it a clear-cut definition. However, with the ongoing rate of globalization, fast communication, development of universities and research centers, national and international needs and drivers, it is understandable that the nature of internationalization is ever becoming more and more complex and in different shapes and substance.

Hans de Wit (2013) in an introduction to internationalization of higher education on the issues of why, how, and what stated that international dimension and the position of higher education in the global arena are given greater emphasis in international, national, and institutional documents and mission statements than ever before. According to him, Philip Altbach, Liz Reisberg, and Laura Rumbley (2009, 7) in their report to the UNESCO World Conference on Higher Education note: “Universities have always been affected by international trends and to a certain degree operated within a broader international community of academic institutions, scholars and research. Yet, 21st century realities have magnified the importance of the global context. The rise of English as the dominant language of scientific communication is unprecedented since Latin dominated the academy in medieval Europe. Information and communication technologies have created universal means of instantaneous contact and simplified scientific communication”.

De Wit (2013) notes that everything has changed over the past 10 years with regards to the internationalization of higher education and that this change is primarily from a more cooperative model to a competitive model. Based on this statement by De Wit (2013) it sounds that it is quite normal that the nature of internationalization changes over the time.

There has been no static model throughout the history of internationalization of higher education, something which can be considered as a benchmark. Nonetheless, there still should be common features and traits in addressing internationalization issues among higher education institutions. Quite understandably, the nature, size, profile, geographical location, heritage, and local and national traditions vary from one university to another therefore the approach and needs towards internationalization differ too.

Defining the internationalization of higher education

In analyzing the meanings of internationalization and in an effort to define internationalization, the definition was provided by one of the most renowned scholars in internationalization of higher education, Jane Knight (2004) from University of Toronto argued that the challenging part of developing a definition is the need for it to be generic enough to apply to many different countries, cultures, and education systems. This statement by Knight once again highlights the need for internationalization of higher education to be defined in the broadest, widest, comprehensive, cross-border, and cross-cultural way as possible. Knight added that although it is not necessarily the intention to develop a universal definition, it is imperative that it be appropriate for use in a broad range of contexts and for

comparative purposes across countries and regions of the world. According to her, what is critical is that the international dimension relates to all aspects of education and the role that it plays in society.

Normally, the internationalization of higher education institutions should be viewed with the objective of adding value to the core missions of the higher education institutions improving it in an all-round aspects approach. The improvements and added values deriving from an all-round internationalization approach of the institutions should be reflected on better skills, cross-cultural and cross-boundary competencies of the students helping them better integrate in an ever more global job market.

Furthermore, Knight (2004) Internationalization at the national/sector/institutional levels is defined as: “the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of post-secondary education.” Referring to Knight (2004), the following sections attempt to describe why specific terms and concepts have been carefully chosen for the proposed working definition of internationalization:

1. Process; the term process is deliberately used to convey that internationalization is an ongoing and continuing effort;
2. International, intercultural, and global dimension; these terms are intentionally used as a triad, as together they reflect the breadth of internationalization;
3. Integrating; the concept of integration is specifically used to denote the process of infusing or embedding the international and intercultural dimension into policies and programs to ensure that the international dimension remains central, not marginal, and is sustainable;
4. Purpose, function, and delivery; these three concepts have been carefully chosen and are meant to be used together;
5. Delivery is a narrower concept. It refers to the offering of education courses and programs either domestically or in other countries.

While the above definition and all the sections explaining it as provided by Knight (2004), it becomes clear the overall objective of the internationalization as a process. Now focusing on the key words she opted to define internationalization, it seems that such definition is affected by other developments. In a word that is becoming more global in all senses, affected mostly by technological developments and ease of travel, the internationalization of the higher education institutions will cater better to the needs of the students to be prepared to access an even more international job market. The rapid exchange of information in almost all areas of society, has also affected the world of business and culture while the movement of people from one place to another has increased significantly. Companies are looking for a workforce that it is ready to respond to all global developments, a workforce with cross-cultural acquaintance ready to adapt to all foreseen and unforeseen changes at global level.

The higher education institutions should see the internationalization process around the definition described by Knight as a tool and an instrument to provide better inputs to the society. A more international a higher education institution, its graduates will normally have cross-cultural skills, new competencies, and a more global view of any perspective. Even the use of the word “purpose” by Knight in defining internationalization refers to the main core objectives and goals of the very existence

of the higher education institutions. Seeing the main core objectives and goals of a higher education institution in a given country of the world, being in complete isolation or with very little exposure to the international, intercultural and global dimensions, it is obvious that they would serve to a narrow audience with very local impact to the society while its graduates will struggle in the future to adopt to new global developments and requirements for cross-cultural competencies in the job market. Another definition for the internationalization of higher education is the comprehensive internationalization. This definition was presented by John K Hudzik (2011), in the publication “Comprehensive Internationalization – from concept to action”. The following definition was provided by Hudzik:

Comprehensive internationalization is a commitment, confirmed through action, to infuse international and comparative perspectives throughout the teaching, research, and service missions of higher education. It shapes institutional ethos and values and touches the entire higher education enterprise. It is essential that it be embraced by institutional leadership, governance, faculty, students, and all academic service and support units. It is an institutional imperative, not just a desirable possibility. Comprehensive internationalization not only impacts all of campus life but the institution’s external frames of reference, partnerships, and relations. The global reconfiguration of economies, systems of trade, research, and communication, and the impact of global forces on local life, dramatically expand the need for comprehensive internationalization and the motivations and purposes driving it”.

Though it may seem more complex and longer than the definition provided by Knight (2004) - see above - still, this definition in fact reflects almost the same issues. Knight saw the internationalization as an ongoing process whereas Hudzik, right from the start of his definition, prefers to use the word commitment. The process of internationalization of higher education institutions not necessarily has to go through the same patterns in all of them. Had it been the same in all institutions, then it signals that there is something not right out there. Even among higher education institutions, similar in size and fields of research, located in the same country under the same legislative framework, the internationalization approach is different. This is impacted by the approach towards the internationalization, the way how the leadership of the institution considers it to be crucial for institutional development, recognition, internationalization, embracing cross-cultural competencies.

Another factor that will impact the “commitment through action to infuse international and comparative perspectives” is the willingness, the understanding, the approach of the responsible institutional structures, in a top to bottom approach. While the leadership of the higher education institution may have the commitment or the willingness to engage in adding, infusing, undertaking an internationalization process, they have to make sure that the all dependable structures, faculty members, researchers, and also the administrative and back-up staff share the same vision. If not, the effort in such a commitment and process is deemed to fail. While the European Commission is pushing hard to facilitate, encourage, and financially support all international cooperation and activities, as stated in the Erasmus+ Guide

2023, the legislative framework in many countries, under which the higher education activity operates, quite understandably, varies from one country to another.

An issue, which somehow escapes the theoretical part of the internationalization, but plays a crucial role in this commitment or process, is the capacity and the role of international relations offices. These offices appeared and were formed at a wide scale only after year 2000 and on. This goes in line with the globalization development and it is at this point that higher education institutions saw the need to make room for such a new structure to exist within their organization. The existence of such offices also pushed higher education institutions to start conceptualizing their internationalization strategies. Though their content and structure might change from one institution to another, at the core they contained the same key words and notions. One can easily notice key words such as: “create new partnerships, exchange staff and students, exchange curricula, exchange information, joint publications”. The implementation of such internationalization strategies is a different issue depending on the capacity of the higher education institutions to achieve all the goals and objectives stated.

Internationalization at home

Furthermore, global developments have also impacted the approach and the need of the higher education institutions to commit or engage in such a process. As Hudzik (2011) stated: “...the global reconfiguration of economies, systems of trade, research, and communication, and the impact of global forces on local life, dramatically expand the need for comprehensive internationalization and the motivations and purposes driving it”, the higher education institutions, but not only, responded to such developments. Companies and businesses moving out of their national boundaries to exploit new grounds in an ever more competitive world increased the demand for new talent and a more qualified workforce. Higher education institutions had to also up their efforts to such demand for a more qualified workforce and innovation needs and it is here where the internationalization plays a crucial role.

In Europe, the Erasmus program, which in 2022 celebrated 35 years of its existence, played a crucial role in supporting the internationalization processes and mobility of students and staff. The approach towards internationalization took pace under the influence of the Erasmus+ program in Europe but also considering the pressures from the globalization process. Van der Wende (2001) stated that internationalization in a globalized environment when combined with the requirements of knowledge economies had in the view of some led to an environment that is inherently competitive across institutions, region, and among countries. It is clear that the globalization did not affect the same regions and countries the same, with some of them seeing a rapid influence under the pressure and forces of globalization whereas the others affected not at all or at a lesser extent. Therefore, the drive to push forward and develop internationalization strategies influenced more the higher education institutions in those regions and countries affected at large by globalization.

On the other hand, “internationalization at home” is another definition and process of internationalization in higher education institutions. It is also supported by the European Commission which in turn is financially supporting capacity building projects across countries in the European Education Area. That was firmly stated in the Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions back in July 2013. Initially the term was first mentioned and coined by Paul Crowther (Crowther et al. 2001) and was quite simple: “Any internationally related activity with the exception of outbound student and staff mobility.”

The communication of the European Commission to the European Parliament stated among other that mobility will always be limited to a relatively small percentage of the student and staff population: higher education policies must increasingly focus on the integration of a global dimension in the design and content of all curricula and teaching/learning processes (sometimes called “internationalization at home”), to ensure that the large majority of learners, the 80-90% who are not internationally mobile for either degree or credit mobility, are nonetheless able to acquire the international skills required in a globalized world. This observation by the Commission tried to support and expose to internationalization of the majority of learners who could not attend the mobility and unable to acquire international and cross-cultural competencies in a globalized world.

Internationalization at home, which in Albanian is translated word for word, implies adding that international dimension in all aspects of academic and research aspects without having the need for physical mobility. This implies first of all that higher education institutions had to update the curricula in the sense of internationalization providing them in foreign language to attract foreign students and teachers but also introduce new authors. However, there are also other components, even from the smallest details, that need to be updated to have a truly international campus. Still, the presence of foreign students and teachers does not necessarily mean that an institution is internationalized and internationalization at home is complete.

As above mentioned that internationalization is not a static model, the definition of the internationalization at home was redefined in 2015 by Jos Beelen and Elspeth Jones (Beleen & Jones 2015). They argued that Internationalization at home offered a valuable reminder that internationalization of the curriculum is not simply about providing mobility opportunities, but that it is also crucial in domestic learning environments, emphasizing the need to reach all students, not simply the mobile few. At the same time, it provided a framework for incoming student mobility to support internationalization of teaching and learning, and also focuses on incorporating local intercultural learning opportunities into curriculum internationalization. Beelen and Jones (2015) defined internationalization as follows: “Internationalization at Home is the purposeful integration of international and intercultural dimensions into the formal and informal curriculum for all students within domestic learning environments.”

This definition was also referred to by the Erasmus+ Guide 2023. Indeed, it provides a comprehensive understanding of the internationalization at home activities. This

definition does not only include the mere internationalization process of the curricula or certain other academic and research activities but it also focuses on insertion and integration of international and intercultural dimensions. These dimensions would also serve better to the core missions of the higher education institutions in responding better to the globalization demands, inter-institutional cooperation, attracting of talents, and society needs as well.

Myths and misconceptions about internationalization

Higher education institutions choose their pathways toward internationalization and still, some misconceptions may arise regarding their approach to what internationalization is. Jane Knight (2011) listed some general misconceptions about internationalization. She considered the following to be myths about internationalization “more foreign students on campus will produce internationalized institutional culture and curriculum”.

The number of international students does not necessarily indicate that an institution is internationalized but still, I think it is an indication of a high level of internationalization on a specific institution. Having a large number of international students is an indicator of a comprehensive foreign language curriculum which in certain cases might be followed by the presence of international teachers who speak that specific language. Of course, one may not claim that an institution with a large number of international students is completely internationalized but not necessarily true. This in fact is a matter of another discussion which is related to the measurement and qualitative and quantitative assessment of internationalization. But the presence of international students will have an impact on increase of cross-cultural skills of students and exchange of views and creating an open-minded environment in the class. So, on this point I do not fully agree that the large number of foreign students in the campus to be considered as a myth which in my opinion is a result of many other factors related to internationalism.

The next myth stated by Knight (2011) stated as follows: “the greater number of international agreements or network memberships of a university the more prestigious and attractive it is”

Indeed, this is more than true. An institution may sign a high number of bilateral agreements, MoUs, partnerships, and networks but still with no follow up they mean nothing. Also, in my personal experience, working with colleagues from international relations offices, I have seen many examples in which a certain university had even more than 300 hundred cooperation agreements but still had nothing to indicate on what outcome those agreements produced. It sounds like universities would love to showcase a large number of partnerships as a sign of their internationalization but that is not always the case.

Another myth highlighted by Knight (2011) is: “The more international accreditation stars an institution has the more internationalized it is and ergo the better it is”.

Universities besides bilateral cooperation agreements enter into large partnerships and networks, to mention a few here, EUA (European University Association), IUA (International Universities Association), and UNICA (Network of Universities from

Capitals of Europe), etc. Again, as in the case of bilateral agreements, the participation in such prestigious networks does not necessarily mean that internationalization is fulfilled. I have had the chance to work with colleagues from the secretariat of UNICA and EUA and there were a large number of universities which besides the payment of their participation fees did not do anything else. However, even in the case of very active universities, participation in such groupings and alliances does not represent the whole picture of internationalization. Indeed, it is only a piece in the entire structure of the process.

The last myth on internationalization underlined by Knight (2011) is: “an international marketing scheme is the equivalent of an internationalization plan”.

Given the pressure and effects of globalization, universities besides embracing an internationalization strategy, which as explained above comes as a response to meet global demand, follow an international marketing strategy. The completion among higher education institutions to cater to a broad and large base of a global clientele pushes them towards such international marketing. Nonetheless, an international marketing strategy is completely different from an internationalization strategy with different objectives and mission.

The internationalization process, due to its very nature, is quite changing and taking different shapes and meanings responding to both globalization and institutional needs. It is important to clearly understand myths and misconceptions about internationalization and certain elements which make up a complete and comprehensive internationalization are not misunderstood.

According to De Wit (2013), the changing landscape of international higher education as a consequence of globalization of our societies and economies is a manifest in many ways increasing competition for international students and academics. He added that for internationalization of higher education it is important to go back to the basis and look carefully at the why, how, and what of internationalization in the current global knowledge economy. This is important and will help higher education institutions to avoid myths and misconceptions about internationalization. There are many factors which impact the internationalization in a certain institution but a thorough understanding of the process by all structures from bottom to top will help avoid the myths and misconceptions. For his part, De Wit (2013) identified several misconceptions about internationalization while a few were common to the myths presented by Knight (2011). Below some of the misconceptions presented by De Wit:

“Internationalization is education in the English language”.

Having classes and the curricula in English, of course, will attract international students and help creating a multicultural environment in the class and campus. But in no way that means and determines the internationalization of the institution. This is just one aspect of internationalization and one must acknowledge the massive effort and work done to complete the process for the classes to take place in English. Classes with international students and in English language may as well pose a risk to the quality in the sense that all students and teachers need to possess an appropriate level of English language. On the other hand, having classes in English may as well

cause some controversy as in the example of the Polytechnic University in Milan, Italy, when they announced back in 2014 that their entire graduate course will be taught in English causing a backlash from certain political groups, academicians, and media. The reasoning provided by the university top leadership was that there was no point having and publishing research in a language that the other people in different countries across the world would not understand. There should be a balance of classes in English and classes in native language. This should come after a careful review of the internationalization goals, capacities, benefits, etc.

Another misconception provided by De Wit (2013) is: “Internationalization is studying or staying abroad”

This is one of the most common misconceptions which once again highlight the importance of a clear and comprehensive internationalization strategy. Under the influence of exchange programs, such as the Erasmus+ programs, higher education institutions are putting extra efforts to encourage mobility of teachers and students. This is also supported by the requirements of the program itself, which in the criteria for awarding the Erasmus+ Charter for Higher Education, assesses the level of support an institution provides to the mobility of teachers and students. Institutions would like to boast their numbers of both outgoing and incoming mobility. Still, while focusing on the numbers it seems that there is a shifting of the attention focusing only on numbers and leaving aside the quality.

Higher education institutions need to understand the plus side of the mobility projects and materialize the benefits, otherwise they risk turning it into a sort of academic tourism and just a multicultural experience for students. In this regard, universities need to have an assessment after certain period of time to try and understand how the mobility projects helped teachers upgrade their skills, update their knowledge, how did the interaction with colleagues from hosting institutions helped them. The same can apply to students where universities need to understand how the mobility did help them to get better education and cross-cultural skills and whether did it help them to better integrate in an ever-global labor market. Without such assessment universities would end up putting resources on mobility programs and providing figures to accreditation bodies but without having a clear view on the benefits of mobility programs

Conclusion

The internationalization of higher education institutions is an ongoing process which dates back in time and it has continuously evolved. Its evolution has been a result of many international and global developments in an endeavor to better respond to the society and business needs. Though it may sound that internationalization of higher education institutions originated in response to globalization, I consider that is sharing some of the traits of its early origin. One of the main drivers for it, is the exchange of ideas and knowledge. The reasons driving forward the needs for internationalization may vary from institution to institution and from country to country.

Furthermore, regardless of which of the above-mentioned definitions the higher education institutions refer to or base their internationalization strategies, in one way or another, the entire process brings benefits to them. In this regard, based on a set of conditions, higher education institutions may decide which strategy to pursue by integrating in their internationalization the concept and definition provided by Knight (2004), Hudzik (2011), or internationalization at home. Still, the definitions in certain points overlap each other therefore it would not be wrong for an institution to choose one over the other.

Of course, there are limitation to the extent an institution applies its internationalization and at a large extent many local factors will play a role in it. Still, there are common traits on such definitions that apply to all of them, regardless of considering internationalization as a commitment to infuse international and cultural elements, a process of integrating an international, intercultural or global dimension, or internationalization at home. At the end, these definitions and approaches to internationalization, if applied at a large extent, will serve to the core mission of the institutions and society needs.

Concluding this paper, the Council of European Union on its official document dated April 6 2022 stated on conclusions on a European strategy empowering higher education institutions for the future of Europe, which supports the above mentioned and the strive for more internationalization among higher education institutions: “Transnational cooperation between European HEIs adds to their attractiveness to international students, researchers and global partners and increases the quality of educational offers and research and innovation potential”. The report stated that existing European programs, such as Erasmus+, the Union’s external action instruments and Horizon Europe, should be used within the remit of the actions included in their legal bases and evaluated according to their respective evaluation criteria to support alliances of HEIs such as the ‘European Universities’ and the Knowledge and Innovation Communities (KICs) in developing joint internationalization activities and strategies across higher education, research and innovation.

The report of the Council of the European Union highlights once again the importance given to international cooperation among higher education institutions and research centers. Recently, as the report stated, the universities are encouraged to create “European Universities Alliances”: and “Knowledge and Innovation Communities” (KICs). But still, no action and initiative can be implemented without universities and research centers having a clear pathway towards internationalization.

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MICROFINANCE- CHALLENGES AND POTENTIALS OF SOCIALLY RESPONSIBLE INVESTMENTS

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Abstract

The economic recession, triggered by the crisis in the international banking and financial system, raises new questions about the way banking is conducted. Investments in securities or credits for clients have exposed previously unnoticed risk profiles before the crises of 2008-2012 and the COVID-19 pandemic, which are not supported by adequate capitalization. Investments in microfinance institutions in developing countries, traditionally characterized by low profit returns, have demonstrated a weak correlation with international markets, resulting in a limited risk profile. The demand for ethical finance, also in response to a generalized perception of a values crisis, opens up new avenues and unexplored markets in an increasingly globalized economy, where problems and opportunities, for better or worse, are shared. Microfinance, when developed properly, can provide a sustainable and self-sustaining contribution as a renewable resource in addressing poverty.

Key words: *financial system, Microfinance, local credit companies, rural cooperative bank, microfinance institutions, small businesses, Microfinance Models*

Early Experiments with Microcredit in the 18th and 19th Centuries

The concept of providing small loans to the poor without formal collateral is by no means a recent phenomena. It has been practiced for centuries in various forms and contexts, often by informal financiers such as moneylenders and merchants. However, these sources of credit were often exploitative, charging excessive interest rates and imposing harsh conditions on borrowers.

Some social reformers and philanthropists sought to create alternative sources of credit that would be more accessible, affordable, and fair for the poor. Some examples of such initiatives include:

- **Irish Loan Funds:** This network of local credit companies was established in Ireland in the late 18th and early 19th centuries by Jonathan Swift and other well-meaning individuals. The loan funds provided small loans to poor farmers and artisans at low interest rates and flexible repayment terms. The loan funds were managed by local committees, which assessed the creditworthiness and character of borrowers and collected repayments. Additionally, they were self-sustaining, as the income from interest covered operational costs and losses from bad loans. By the mid-19th century, there were over 300 loan funds in Ireland, serving over 20% of the rural population.

- **German Cooperative Movement:** This social and economic movement emerged in Germany in the mid-19th century, inspired by the ideas of Friedrich Wilhelm Raiffeisen and Hermann Schulze-Delitzsch. The movement aimed to create cooperative associations of farmers, artisans, and workers to pool their resources and provide mutual aid and support. One of the main activities of the cooperatives was lending to their members, based on the principles of mutual assistance, self-responsibility, and self-governance. The cooperatives were organized into local, regional, and national federations, which provided oversight, regulation, and liquidity support. The cooperative movement quickly spread in Germany and other European countries and influenced the development of cooperative banks and credit unions worldwide.
- **Raiffeisen Banks:** These were a distinct type of rural cooperative bank founded by Friedrich Wilhelm Raiffeisen in Germany in the late 19th century. Raiffeisen, the mayor of his town and a local social activist, witnessed the dire conditions of poor farmers in his region, as they were exploited by moneylenders. He decided to create a cooperative credit system which would allow farmers to access low-cost loans and escape the debt trap. Raiffeisen Banks were founded on the values of solidarity, trust, and mutual aid. The banks were owned and controlled by their members, who were required to save regularly and pledge their land as collateral. The banks set minimal interest rates, sufficient to cover costs and create a reserve fund. The banks also provided other services, such as education, healthcare, and insurance. Raiffeisen Banks became a model for rural development and poverty reduction, and inspired similar initiatives in other countries, such as Cr dit Agricole in France, Groupe Desjardins in Canada, and Rabobank in the Netherlands.

These early experiments with microcredit demonstrated the feasibility and potential of providing small loans to the poor based on their character and social capital rather than their material assets. They also highlighted the importance of creating local, democratic institutions that would serve the needs and interests of their members and foster a culture of thrift, cooperation, and self-reliance. However, these microcredits also faced certain limitations and challenges, such as the lack of economies of scale, reach and diversity, reliance on external grants and donations, and vulnerability to political and economic shocks. Therefore, an examination of the emergence of modern microfinance in the 1970s and 1980s is warranted, which sought to overcome some of these challenges and expand the reach and impact of microcredit.

Early Forms of Microfinance

Microfinance refers to the provision of financial services to low-income individuals excluded from the formal banking system. These services can include loans, savings, insurance, remittances, and other products that help the poor manage their money and improve their livelihoods. Microfinance has a long and rich history that spans different regions, cultures, and periods. This section explores some of the earliest forms of microfinance that emerged before the modern era of microfinance institutions and NGOs.

Some of the earliest manifestations of microfinance can be traced back to ancient times, characterized by prevalent informal lending and savings practices within various communities. Some examples include:

- **Ancient India:** Various forms of lending and community savings groups were established, such as dhana, chit funds, and bisi. These groups allowed members to pool their money and provide each other with low or zero-interest loans, depending on the purpose and relationship. These groups also served as social networks and sources of mutual support for their members.
- **Ancient China:** Similar savings and credit associations, known as hui or hei, were based on trust and reciprocity. These associations allowed members to access lump sums of money by contributing a fixed amount periodically. The order of receiving the money was determined by lottery, auction, or rotation. These associations were particularly popular among merchants and migrants seeking capital for business or travel.
- **Ancient Rome:** Various forms of societates or collegia existed, which were voluntary associations of people with a common profession, interest, or religion. These associations provided financial assistance to their members, such as loans, grants, pensions, and funeral expenses, as well as social and religious benefits. These associations were regulated by the state and had legal status and privileges.
- **Medieval Europe:** Different forms of guilds or craft guilds existed as associations of artisans, merchants, or professionals practicing a specific trade. These guilds offered financial services to their members, such as loans, insurance, and welfare benefits, as well as training, quality control, and market access. These guilds also had political and social influence and often served as intermediaries between the state and society.
- **Islamic Societies:** Various forms of waqf or habs existed, which were charitable endowments of land, property, or money dedicated to a specific cause or beneficiary. These endowments provided financial support to the poor, needy, orphans, widows, travelers, students, scholars, and mosques. These endowments also supported the development of education, healthcare, culture, and infrastructure in the Islamic world.

These are just a few examples of the early forms of microfinance that existed in different parts of the world. These forms of microfinance were based on local customs, traditions, and values and reflected the needs and preferences of the people who used them. They also demonstrated the potential and challenges of providing financial services to the poor and marginalized. These early forms of microfinance laid the foundation for the development of modern microfinance, which emerged in the late 20th century with the rise of microfinance institutions and NGOs.

Grameen Bank and the Birth of Modern Microfinance

One of the most influential and successful examples of microfinance in history is Grameen Bank, founded by Nobel Prize winner Muhammad Yunus in Bangladesh in 1983. Grameen Bank, meaning "village bank" in Bengali, originated from Yunus's vision of providing small loans to the poor, particularly women, who lacked access to formal financial institutions. Yunus believed that credit was a human right and that by giving the poor the means to start their businesses, they could escape poverty and improve their social and economic conditions. The Grameen Bank microfinance model has inspired and influenced many other organizations and initiatives worldwide and is recognized as a key factor in the development of the modern microfinance sector.

Microfinance in Albania - The Social Impact of Microfinance

Decades ago, microfinance in Albania began as a model for poverty alleviation and providing financial access to underserved segments of the population, such as farmers and small businesses, particularly in rural areas. Microfinance institutions (MFIs) were established, expanded, and consolidated as lending institutions and savings and credit associations.

Microfinance encompasses non-banking financial services, including small loans, group savings collection for financing, and often free financial advice. The financial institutions that are members of the Albanian Microfinance Association are divided into two main groups. Firstly, the Non-Bank Financial Institutions; Secondly, there are Savings and Credit Associations, which are financial cooperatives represented by their respective unions, such as FED Invest SHKK and UniFin SHKK.

Albania continues to have a strong demand for microfinance products. Most Albanian NBFIs follow a responsible social policy targeting financially excluded individuals and underserved geographic areas. The microfinance sector supports a wide range of individuals, micro and small businesses, and other market segments, with a strong focus on job creation, narrowing gender gaps in entrepreneurship, and providing financial solutions in a sustainable manner.

In recent years, microfinance has transformed into the main formal financing mechanism for modest-income families, low-income families, and those living below the poverty line. These groups represent the most vulnerable segments of the population, with the highest levels of informality and risk, making them more exposed to sudden crises and being more severely affected by the pandemic. This harsh impact caused a decline in microcredit loans in 2020 for the first time since 2015.

The microfinance industry, which employs 1,737 individuals, including 832 financial advisors, with 285 offices spread across the country, recovered quickly during 2021 and 2022. According to data from the Albanian Microfinance Association, the volume of new credit increased by 91 percent last year compared to 2020. In the total new credit for the economy in 2021, microfinance contributed 11 percent, confirming a rapid recovery in lending.

Why do Albanians turn to microfinance? There are several reasons:

- **Rural Presence:** A significant portion of the 285 microfinance offices are located in rural areas, where farmers trust these offices with 85 percent of the money borrowed from the formal sector of the economy.
- **Accessible Communication:** The communication between the employees of these offices and the clients is open and does not require extensive documentation to prove income, providing trust and quick service to citizens in need. Loans up to 200,000 lek can be obtained from microfinance offices within minutes, after electronic confirmation from the central bank that there is no problematic credit history with other financial institutions.
- **Objective Decision-Making:** Lending and microfinance services involve no subjective decision-making. Advanced technology is applied for credit risk assessment through algorithms and scoring in consumer fintech loans.
- **Loan Restructuring:** Microfinance offers favorable restructuring options for loans if clients face temporary difficulties in their small business or employment, extending the repayment period of microcredit installments. For loans in severely struggling economic sectors, microcredit is provided with an initial repayment period for interest only, not the principal.
- **Consumer Microcredit Growth:** In the last four years, the segment of consumer microcredit, primarily linked to quick fintech loans, has gained increasing importance. The predominance of individuals, with 52 percent of the total new credit given by microfinance, reflects the rapid expansion of these loans and their direction during these hot summer months. The significantly increased prices in tourist destinations, including Albania, are driving the increase in consumer loans for family vacations in our tourist areas.
- **Non-Performing Loans:** Last year, problematic loans (over 90 days overdue) experienced a significant decline, nearing the level of 6.5 percent, very close to bank loans which reported a 5.65 percent level of these loans.

By providing financial tools to low-income groups, those on the poverty line, and citizens living in poverty and extreme poverty, microfinance has become a key promoter in the fight against poverty, socio-economic development, and financial education for citizens, farmers, and small entrepreneurs. With over 260,000 loans issued in 2021, microfinance has facilitated the creation and maintenance of approximately 170,000 jobs, supported women-led enterprises, and improved financial inclusion and living standards for citizens and their families.

Microfinance institutions operate extensively in villages, with their microcredit officers visiting farmers at their places of activity, ready and adaptable to the farmers' needs and demands. The maximum duration for granting a loan by microfinance is up to one week, while for loans ranging from 7,000 to 10,000 euros, the decision is made within a few days. Microfinance institutions offer entrepreneurs and citizens operating in the most challenging sectors a period where only the loan interest is paid, providing them with flexibility according to the seasonality of their activities.

This industry is represented by a consolidated association. In cooperation with sister associations in the Balkans and beyond, efforts are being made to include the Western Balkans in the list of countries supported through financing and guarantee schemes for microcredit, utilizing dedicated financial instruments, and projects with development banks such as the European Investment Bank, the European Fund for Southeast Europe, and the European Bank for Reconstruction and Development. However, due to the relatively short experience of these institutions in our country, their operations have encountered various difficulties and issues that require increased attention. This is especially prevalent in the legal and regulatory frameworks that govern the functions and cooperation between these institutions, bad debt collection agencies, enforcement institutions, and borrowing clients. Additionally, it is necessary to conduct better market studies to determine the focus of future loans, based on sectoral developments and emerging professions. The regulation and governance of microfinance are essential to ensure the sustainability, efficiency, and social impact of microfinance institutions and their clients. These aspects can be considered from different perspectives, such as the legal framework, supervisory authority, self-regulating mechanisms, and corporate governance practices.

Why Traditional Banks Are Unsuitable for the Poor

Traditional banking systems are not suitable for the poorest individuals, especially those who are uneducated and lack proper guarantees. Conversely, ad hoc products tailored to the needs of unconventional borrowers can succeed in expanding access to financial services, with positive side effects in terms of reducing inequalities and encouraging economic development.

In today's market, failures play a significant role in credit rationing, which severely harms the poor, including small entrepreneurs, vendors, farmers, and artisans. These individuals are trapped in an informal economic context that neither encourages nor leads to development. Governance issues and information asymmetries, which have always characterized the relationships between lenders and borrowers, are even more pronounced in poorer countries. These challenges are accompanied by high transaction costs, lack of collateral, difficulty in mobilizing savings, and challenges in contract enforcement within legal systems with uncertain rules. Such conditions are intolerable for traditional banks.

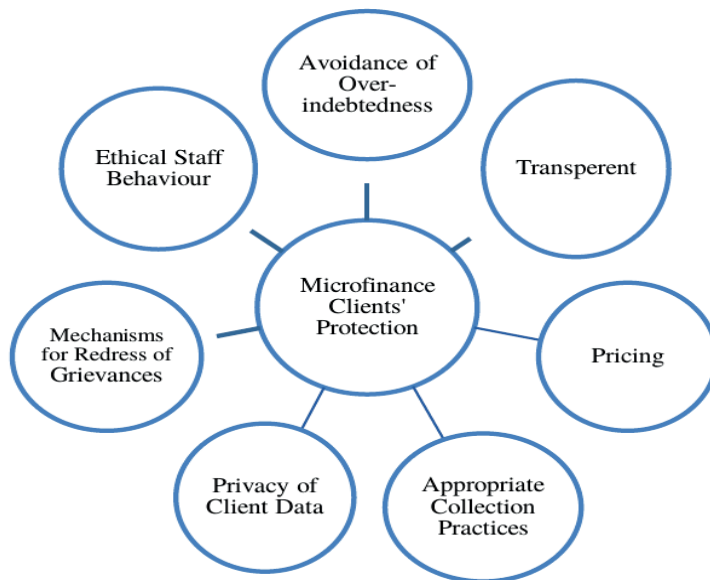
Financial Inclusion, the Engine of Development

The difficulty in accessing traditional sources of financing is often a critical factor in perpetuating income inequality and hindering growth. Financial inclusion, achieved by gradually removing barriers that impede access to financial markets, can significantly benefit large segments of the population, with widespread advantages typical of development models. Financial development reduces income inequalities and lays the foundation for new consumer markets by transforming the poorest at the base of the social pyramid from a problem into a source of opportunities.

Several barriers and limitations hinder the poorest individuals and the smallest businesses in developing countries from using financial services. These limitations include both micro and macro factors, such as:

- Geographical access, if bank branches are too far or too dispersed, as often occurs in underdeveloped and economically unattractive areas.
- Lack of documentation (property certificates, other legal, personal, or health documents), which is common in poor countries.
- Lack of assets that can be collateralized and have independent value.
- Lack of stable jobs with regular wages.
- Illiteracy or other severe educational deficiencies.
- Health issues or malnutrition.
- Political and social instability, accompanied by widespread corruption.
- Prejudices and discrimination against the poorest.
- Lack of infrastructure in transport, supply of communal services (including electricity and drinking water), and internet, which affects the poorest.

Addressing these barriers is essential for fostering financial inclusion and enabling economic development.



Client Protection and Microfinance Regulation

From Microcredit to Microfinance

According to the UN, "Microfinance can be understood as the provision of small-scale financial services such as savings, credit, and other financial services which are fundamental for the poor." Microfinance is a broader concept than microcredit, encompassing not only the provision of credit to poor borrowers but also a wider range of financial products and services, including savings distribution, insurance policies, and sometimes money transfer services.

The difference is significant considering that the poor, who rely on subsistence incomes, often cannot save, especially in difficult times (wars, epidemics, droughts, or floods). When they can save, they often have no secure place to deposit their money. The ability to save for difficult periods generally represents a form of security that influences consumption stabilization. Micro-deposits are, in many cases, even more familiar than microcredits and represent a partial form of collateral guarantee compared to credit lines.

Furthermore, microcredits are more widespread than micro-deposits due to several factors:

- **Regulatory and compliance requirements:** Traditionally, these are much more restrictive for institutions that collect deposits.
- **Trustworthiness:** It is much more challenging to persuade clients to deposit their money than to borrow it.
- **Time and flow of monetary streams:** Debt repayments are made regularly, while deposits are made randomly.

The predecessors of microfinance institutions include money changers, often similar to lending or borrowing institutions, credit unions, or group lending. More formal microfinance institutions resemble traditional banks, though they have distinct characteristics.

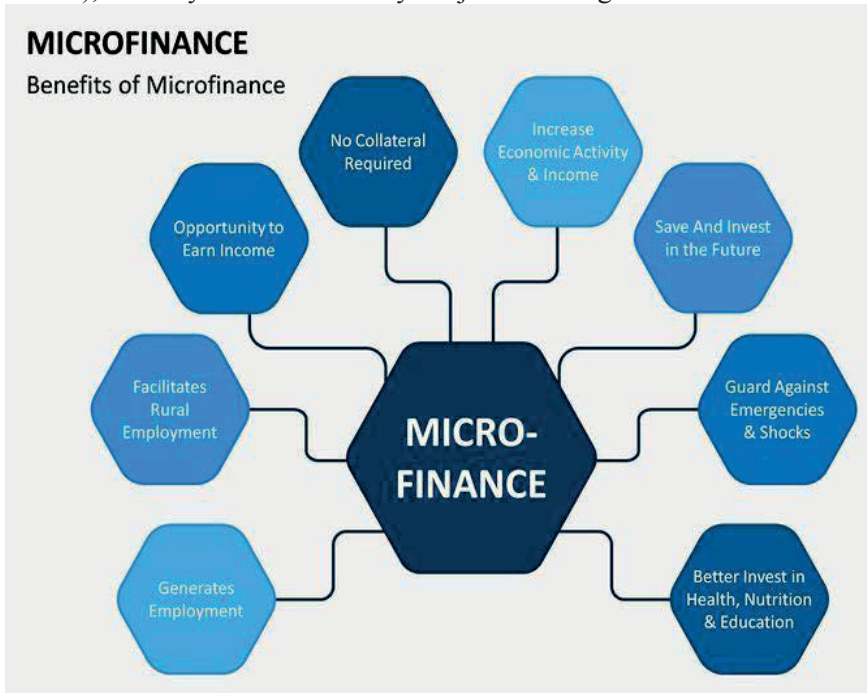
Microfinance is proving to be a useful tool for "pooling" the risk of borrowers, which is a significant success, as even the poorest can prove to be reliable debtors. The availability of products such as micro-deposits or insurance products allows a transition from microcredit to microfinance, which acts as a "parachute" against the endemic disasters of developing countries.

The high interest rates applied by microfinance institutions to cover high operational costs (due to the business model based on a high intensity of work distributed in many small loans) make borrowing more difficult for the poor and can worsen their situation. However, microfinance allows institutional investors and individual investors, especially through Microfinance Investment Vehicles, to exploit investment opportunities with social responsibility by offering reasonable risk-return profiles with effective diversification compared to other investments.

The most ambitious objective of microfinance is to reduce poverty with a self-sustainable mechanism, without requiring continuous donations. Sustainability without subsidies or donations for the poor, accompanied by reasonable benefits and penetration among this stratum, represents the most ambitious and difficult objective.

Traditional informal microcredit relies on individual loans on a voluntary and reciprocal basis, from individuals with temporary excess funds or from money changers who provide small loans with high-interest rates. Direct knowledge of the borrower reduces information asymmetries, while flexible and fast access is particularly appreciated by borrowers who often lack real alternatives. "Lenders" often act in multiple roles, such as creating other economic relationships with borrowers, renting out workable land, homes, or tools, buying their products, or employing them as labor. This increases their bargaining power and the "incentives" for the borrower to meet their commitments. Abusive and predatory financing practices, using deceptive methods, cause significant harm to the poor, often greater than the high-interest rates themselves.

Group lending represents another embryonic form of microfinance and historically constitutes the model of the Grameen Bank founded by Muhammad Yunus. These "primitive" forms of intermediaries are based on the simplicity of relationships, direct monitoring, and the lack of alternatives (which certainly do not stimulate innovation), but they are unfortunately subject to strong conflicts of interest.



The approach of Grameen Bank to microfinance is based on several key principles and characteristics, including:

- **Group lending:** Grameen Bank provides loans not to individuals but to groups of five borrowers who form a network of solidarity and support each other. Group members are collectively responsible for loan repayment and also receive training and education on various topics such as financial literacy, healthcare, and social issues. This collective loan system reduces the risk of default, increases pressure and motivation for repayment, and promotes a sense of community and empowerment among borrowers.
- **Targeting women:** Grameen Bank focuses on lending to women, who constitute about 97% of its borrowers. Muhammad Yunus, the founder, believes that women are more reliable and responsible in repaying loans and have a greater impact on the well-being of their families and communities. By providing women access to credit, Grameen Bank aims to improve their economic and social status and challenge patriarchal norms and structures that oppress them.
- **No collateral:** Grameen Bank does not require any collateral from its borrowers, trusting in their honesty and integrity. Instead, it relies on the group lending system and personal relationships between borrowers and bank staff, who regularly visit villages and monitor the progress and problems of borrowers. Grameen Bank also sets a reasonable interest rate, which covers its operational costs and allows it to be financially sustainable and independent.
- **Graduation and diversification:** Grameen Bank encourages its borrowers to move from one loan cycle to another and diversify their sources of income and skills. It offers a range of products and services, such as housing loans, education loans, health loans, and insurance. It also helps borrowers form cooperatives and businesses and access markets and technology. The goal of Grameen Bank is to help its borrowers achieve self-sufficiency and prosperity and escape poverty.

Some of the Microfinance Models that Have Been Used or Experimented With:

Group Lending: This widely used microfinance model, especially prevalent in rural areas, involves forming groups of borrowers who are collectively responsible for repaying their loans. Group members guarantee each other, assist one another, and exert pressure for timely repayment. The benefits of this model include reduced risk and cost of borrowing, strengthened social capital and cohesion, and promoted collective action and empowerment. However, the disadvantages are that it may exclude the poorest and most vulnerable individuals who cannot join or form groups, create conflicts and tensions within groups, and limit the individual choice and flexibility of borrowers.

Individual Credit: In contrast to group lending, this model assesses and treats each borrower individually, making them solely responsible for repaying their loan. The lender may require collateral, guarantors, or other forms of security to mitigate the risk of default. The advantages of this model are that it allows for more autonomy and customization for borrowers, meets diverse needs and preferences, and avoids potential issues with group dynamics. The disadvantages include increased risk and cost of borrowing, exclusion of the poorest and most marginalized individuals who lack collateral or credit history, and reduced social benefits and impact of microfinance.

Village Bank: This hybrid model combines elements of group lending and individual loans. It involves forming larger groups of borrowers, typically between 20 and 50, who constitute their village bank. The village bank receives a general loan from the microfinance institution and then distributes smaller loans to its members based on their needs and abilities. The village bank also collects savings from its members and uses these as a source of funds and security. The benefits of this model include leveraging local knowledge and borrower participation, creating a sense of ownership and empowerment, and encouraging savings and financial education. However, the disadvantages are that managing and monitoring such large groups can be challenging, power imbalances and elite control within the village bank can arise, and borrowers may face greater risks and obligations.

Reciprocity Groups (RG): Originating from India, this variant of group lending involves forming small groups of borrowers, usually between 10 and 20, who are linked to a formal financial institution through a network of intermediaries such as NGOs, cooperatives, or federations. RGs regularly save and pool their savings into a common fund, from which they can lend to each other or take larger loans from the formal institution. The advantages of this model are that it builds on existing social and cultural norms and practices of borrowers, enhances their bargaining power and access to formal financing, and creates opportunities for collective action and empowerment. However, the disadvantages are that it may rely heavily on the quality and availability of intermediaries, create dependency relationships and favoritism, and limit the expansion and scaling of microfinance.

Community Banks: This model allows borrowers to own and manage their own microfinance institution by forming a cooperative or credit union that provides financial services to its members and the community. Members contribute capital and savings to the institution, elect their own management board, and decide on the institution's policies and procedures. The advantages of this model include promoting local ownership and control, encouraging democratic participation and accountability, and generating social and economic benefits for the community. The disadvantages are that it may require high levels of capacity and commitment from members, face regulatory and operational challenges, and be susceptible to conflicts of interest and governance issues.

Regulation and Governance of Microfinance

Microfinance faces numerous challenges and risks, such as indebtedness, high interest rates, fraud, and social damages. Therefore, the regulation and governance of microfinance are essential to ensure the sustainability, efficiency, and social impact of microfinance institutions (MFIs).

Legal Framework: The legal framework establishes the rules and standards that regulate the operations and activities of MFIs and their clients. This may include laws, regulations, policies, guidelines, and standards covering various aspects of microfinance, such as licensing, registration, reporting, disclosure, consumer protection, taxes, and anti-money laundering. The legal framework may vary depending on the type and size of MFIs, such as banks, non-bank financial institutions, cooperatives, non-governmental organizations, or informal groups. It may also evolve over time, reflecting developments in the microfinance sector and the macroeconomic environment.

Supervisory Authority: The supervisory authority is the body or agency that monitors and supervises the work and behavior of MFIs and their clients. This may be a central bank, a financial regulator, a ministry, or a specialized agency. The supervisory authority may have different functions and powers, such as licensing, inspection, auditing, enforcement, sanctions, and resolution. It may also provide advice, support, and capacity building for MFIs and their clients.

Self-Regulatory Mechanisms: Self-regulatory mechanisms are voluntary initiatives and arrangements that MFIs and their clients adopt to regulate themselves and each other. These may include codes of conduct, standards, certifications, accreditations, assessments, audits, reporting, disclosures, complaint procedures, and peer reviews. Self-regulatory mechanisms may complement formal regulation and supervision by filling gaps, strengthening compliance, and improving transparency and accountability. They may also foster cooperation, coordination, and learning among MFIs and their clients, as well as with other stakeholders, such as donors, investors, networks, associations, and policymakers. The effectiveness and credibility of self-regulatory mechanisms depend on their design, implementation, and application, as well as the incentives, engagement, and participation of stakeholders involved.

Corporate Governance Practices: Corporate governance practices are the structures, processes, and systems that guide the direction and control of MFIs and their clients. These may include the board of directors, management team, staff, shareholders, members, clients, and other stakeholders. Corporate governance practices influence the vision, mission, strategy, objectives, values, culture, policies, procedures, and performance of MFIs and their clients. They affect risk management, internal control, accountability, and sustainability. Corporate governance practices vary depending on the size, type, and maturity of MFIs, as well as the legal and regulatory environment, market conditions, and expectations of interested parties.

Innovations in Microfinance Technology

Microfinance entails providing financial services to individuals or groups with low incomes who generally lack access to formal banking systems. Over the years, microfinance has evolved from its origins as a social movement into a diverse and dynamic industry that leverages technology to reach more clients, improve efficiency, and reduce costs.

Mobile Money and Digital Payments: One of the most significant innovations in microfinance technology is the use of mobile phones and digital platforms to facilitate transactions such as deposits, withdrawals, transfers, payments, and remittances. Mobile money and digital payments offer several benefits for both microfinance institutions (MFIs) and their clients, including convenience, security, speed, transparency, and reduced operational costs. For example, M-Pesa has revolutionized how people access and use financial services, especially in rural areas where bank branches are scarce. M-Pesa allows users to send and receive money, pay bills, buy airtime, and access other financial products like savings, loans, and insurance through their mobile phones. M-Pesa has also enabled a wider reach to clients, reducing the risks associated with cash transactions, and lowering transaction costs.

Cloud Computing and Data Analytics: Another innovation in microfinance technology is the use of cloud computing and data analytics to store, process, and analyze large amounts of data. Cloud computing and data analytics enable MFIs to improve their decision-making, risk management, product development, and customer service.

Biometric Identification and Verification: A third innovation in microfinance technology is the use of biometric identification and verification to authenticate and register clients, especially those without formal identity documents or with low literacy levels. Biometric identification and verification offer several benefits for MFIs and their clients, including convenience, accuracy, security, and inclusion.

Future Trends in Microfinance

Some of the future trends in microfinance include:

Digital Transformation: The rapid advancement and adoption of digital technologies such as mobile phones, the internet, biometrics, blockchain, artificial intelligence, and big data have opened new opportunities and challenges for microfinance. On one hand, digital technologies can enable microfinance providers to reach more clients, reduce costs, improve efficiency, enhance customer experience, and offer more diverse and tailored products and services.

On the other hand, these technologies also present risks and threats, such as cyber-attacks, data breaches, privacy violations, fraud, exclusions, and competition from new entrants like fintech and platform-based businesses. Therefore, microfinance providers will need to invest in digital infrastructure, capabilities, and governance. They must also collaborate with other stakeholders such as regulators, telecommunications operators, and technology providers to leverage the benefits and mitigate the risks of digital transformation.

Social and Environmental Impact: Microfinance has always been driven by a dual mission of financial and social inclusion and has contributed to various development goals such as poverty alleviation, gender equality, education, healthcare, and entrepreneurship. However, it has faced criticism due to its current and potential negative impacts, such as over-indebtedness, high interest rates, coercive collection practices, and debt degradation.

Therefore, microfinance providers will need to measure, monitor, and manage their performance on social and environmental issues, as well as align their strategies and operations with the global sustainable development agenda, such as the United Nations Sustainable Development Goals. Additionally, microfinance providers will need to respond to new and urgent social and environmental issues and challenges, such as climate change, migration, inequality, and pandemics. They should design products and services to help their clients cope with these challenges and adapt to them.

Diversification and Innovation: Microfinance has evolved from a simple model of providing small loans to poor entrepreneurs into a more complex and diverse sector offering a range of financial and non-financial services. These services include savings, insurance, remittances, payments, education, healthcare, energy, and agriculture, catering to different client segments such as women, youth, farmers, refugees, and small and medium enterprises.

This trend of diversification and innovation is likely to continue and accelerate as microfinance providers seek to meet the diverse and dynamic needs and preferences of their clients, differentiate themselves from the competition, and create new markets and opportunities. However, diversification and innovation also entail risks and costs, such as shifting priorities, loss of quality, regulatory uncertainty, and market failure. Therefore, microfinance providers will need to balance their efforts for diversification and innovation with their core competencies, mission, and values. They should also test and validate their hypotheses and assumptions, and learn from their failures and successes.

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THE IMPACT OF USER-FRIENDLINESS OF ONLINE APPLICATIONS AND WEBSITES IN ALBANIA ON THE DECISION MAKING OF ONLINE/ON STORESHOPPING

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Abstract

This paper examines the impact of user-friendliness of online applications and websites on influencing the decision making of online versus on store shopping in Albania. Through a carefully designed questionnaire, various shoppers in the Tirana area were surveyed, and their behavior and preferences were analyzed.

In an era where e-commerce is on the rise, understanding how consumers perceive and utilize online platforms is critical for companies looking to enhance their online presence. The results of this study indicate that the ease of use and navigation of online applications and websites is a key factor influencing consumers' decisions to shop online. Consumers prefer simple and intuitive platforms that provide an easy shopping experience. Additionally, security and the protection of personal data are crucial concerns for online shoppers in Albania. Awareness of these issues has an impact on consumers' trust in online platforms.

If consumers encounter technical difficulties or problems during the online shopping process, they tend to step away from this experience and may revert to traditional in-store shopping.

In conclusion, this paper provides an in-depth insight into the influence of the user-friendliness of online applications and websites on promoting online shopping in Albania. The findings of this research can serve as a guide for companies aiming to improve the online shopping experience and expand their presence in the e-commerce market in Albania. Age and education level are two factors with moderate influence in this case.

Keywords: *E-commerce, user-friendliness, website, online application, online shopping*

Introduction

According to official data released by Eurostat and the Albanian Institute of Statistics, there has been a notable surge in the use of the Internet and online shopping in recent years. According to INSTAT, between 2021 and 2022, the percentage of people using the Internet climbed from 79.3% to 82.6%, staying at the first level, or 91.7% of people who use it daily. (INSTAT, 2022).

The amounts of internet usage has changed from the start of COVID-19. Mehmeti and Luga assert that there has been a notable surge in consumer internet usage. A significant portion of Internet users choose to take advantage of this chance to finish an online transaction. (G.MEHMETI, E.LUGA, 2021)

According to EUROSTAT, Albanians use the internet 21.44% of the time to conduct online transactions in 2021, despite the fact that this percentage may seem high.

Albania comes in last in this ranking of European nations. (EUROSTAT, 2023) Because of this, it is still essential to build the infrastructure needed to facilitate the growth of internet commerce in our nation. While there has been a noticeable rise in the overall number of Internet users and their usage, the rate of increase in the volume of online purchases has remained relatively moderate.

Many small and medium-sized businesses have websites, but the only things they provide are details about their product line and the ability to place orders; payment is collected when the goods are delivered. The nation's extremely low degree of financial services further promotes the use of this hybrid sales strategy. Nonetheless, characteristics like age and educational attainment affect how people shop online.

However, user friendliness affects creating trust in an online site and this is intended to have a positive impact on increasing customer satisfaction and building a long-term relationship with the customer. However, the relationship between trust and satisfaction is highly complex and still vague. Some studies found trust to positively affect satisfaction (Bhaskar, P.P.Kumar, 2016) some found it to be positively affected by satisfaction (Flavián,C.; Guinalíu,M.; Gurrea,R.2006) while others did not find a direct relationship between the two (Faisal, C.M.N.; Gonzalez-Rodriguez,M.; Fernandez-Lanvin,D.; de Andres-Suarez,J. 2017)

For these reasons, the central premise of this research is that a customer's ability to complete their purchase process is influenced by how simple a website is to use when it comes to online purchasing. The absence of this component has a detrimental effect on the customer's ability to finish the online purchase process, particularly when there are issues with online payment processing.

Methods

For the goal of this study, information was gathered from 141 adults who were, however, relatively young and belonged to various educational groups. The requirement for access to banking services restricts the age at which one can choose. The respondents in question are situated in Tirana. There are no limitations on the participants' income levels or the kind of things they can buy online.

The purpose of the poll was to examine how respondents behaved when faced with a match in difficulty when they were purchasing online. The questions are designed to account for the following scenarios: having trouble locating product information online, lacking comprehensive information about the business or its terms, having trouble making payments online. The following behavior patterns were examined: choosing not to buy the product online, looking for a comparable product at a competitor's website, or asking for online help to buy the product from the same vendor. Regarding the attitude toward the development of online or cash-on-delivery payment methods, the respondents were also interviewed. The influence of the respondents' age and educational attainment on their decision to purchase a product online or in person was examined using correlation analysis. The correlation coefficient's interpretation reveals which situations this association appears weak and in which it is moderate.

Results and discussions

Participant profile

The table below shows the profile of the participants in the survey and their division by categories based on the main indicators studied:

Table 1

	Profile	Number	%
Age	18-25	82	58.2
	25-30	22	15.6
	30-35	37	26.2
Residence	Tirana	141	100
Education level	Student	41	29.1
	Bachelor	43	30.5
	Master+	57	40.4

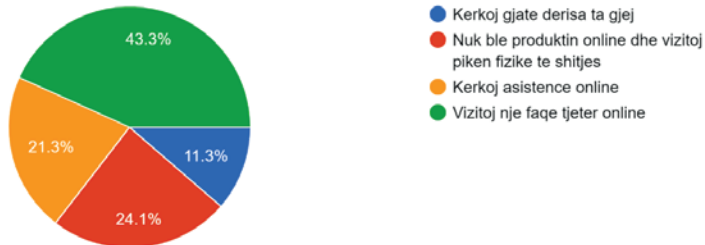
Table 1 makes it evident that, in comparison to the other two, the largest proportion of respondents (58.2%) fall within the 18–25 age range. The proportion of responders in the 25–30 and 30-35 age categories is 15.6% and 26.2%, respectively. Every respondent (100%) is a Tirana resident. Three categories are identified based on the distribution of education levels. Of the responders, 29.1% are students. Thirty-five percent of people are titled "Bachelor". Approximately 40.4% of people hold "Master's or higher" titles.

Decision making in conditions of difficultys about finding information about online products

When a consumer wants to buy a product but can't find it or find all the information they need, we've listed the solutions in four levels, starting from the first person who goes to a physical store instead of buying it online to the fourth person who asks for help on the website and ends the online purchase process. The data are shown as shown in graph 1, which is below, without any age or educational level structuring:

Nese ju ndodh te mos gjeni artikullin e kerkuar ne faqe, si veproni?

141 responses



The following graph shows that the majority of respondents claim they quickly navigate to another page to hunt for a product when they are having trouble finding it online. The second most favored choice is for the buyer to further disassociate himself from the moment's purchase by delaying it for an additional moment. In the first scenario, the seller loses the buyer right away, but in the second, there's a good possibility he won't because: if an impulsive purchase is made, it might not be followed through later, or it might be tough to decide in person if the buyer is presented with a greater range of options. The group that exhibits the highest level of security is the one in which the customer uses the company's available contact ways to request online support directly from the page where he wishes to complete the purchase. The data analysis indicates that age and education level characteristics have a moderate influence specifically on this group.

We may determine the Pearson correlation coefficient as follows by analyzing the respondents' ages in respect to the three defined categories and rating their responses in the aforementioned scenario, which ranges from rejecting the online purchase to requesting online help.

$$r = \frac{n \sum X Y - \sum X \sum Y}{\sqrt{(n \sum X^2 - (\sum X)^2) \cdot (n \sum Y^2 - (\sum Y)^2)}}$$

where: X will be age data by three categories

Y will be the level of online customer response

In the analysis of the above data, the Pearson Correlation Coefficient takes the value:

$$r = 0,444$$

In this instance, a positive coefficient value indicates that the correlation between age and the degree of online problem-solving response is accurate. when a result, when consumers age from the first group (18 to 25 years old) to the third (30 to 35 years old), they are more determined to solve their problems online and not put off making their purchase at the physical location for a later time. In this instance, the age rise up to the study's last age group signifies a better likelihood of finishing the

purchasing procedure. However, other than age, there are a lot of other factors that affect a person's decision to buy a product at that specific time and on that particular website. This is why the 0.4 value of the coefficient is found in the segment 0.3 to 0.7 where the association between the variables appears modest. Similarly, we recognize that most young responders tend to abandon the process of making a purchase as soon as they run into problems with the website, which results in a lost chance for the vendor to make a sale and bring in a new customer.

In the second step, we calculated the same coefficient, but taking into account the data on the level of education and again the determination to complete the online purchase process. In this case, Pearson's coefficient results:

$$r = 0,378$$

Once more, the partnership seems reasonable and balanced. The decision to finish the purchase process is demonstrated to be more influenced by age than by education level, therefore a rise in education level has a minor impact on the customer's drive to solve the challenge of supplying online information.

Decision-making in the conditions of the difficulty of making an online payment

Making decisions given the challenges associated with making an online payment
The second scenario we examined was when a prospective client was unable to finish the online payment procedure on the website because of issues with the site's functionality or because they had not supplied the necessary information regarding the available payment options. Within the overall context of this scenario, we have a life component that has a broad impact in addition to the effect of the low level of online shopping in our nation. In the region, Albania seems to be the nation using banking services the least. This low indicator, which primarily influences the reaction of online consumers, is also a reflection of the extremely low level of confidence in the financial system. As of this point in the investigation, we can claim with generality that the great majority of respondents would ask for the option to pay on delivery as soon as the website allows it. The outcomes are displayed in Chart 2 as follows:

Nese keni paqartesi per te kryer pagesen online, si veproni:

141 responses



In the sections that follow, we examined the correlation between age and educational attainment to see whether these variables affect a potential customer's propensity to use a credit or debit card for payment and to look for help online. Again, this indicates a positive and moderate link in the lower limits. The Pearson correlation coefficient in the relationship between age and the reaction to the difficulty of making an online payment is:

$$r = 0.352$$

Even the relationship between educational attainment and response to the challenges of completing an online payment yields the following results:

$$r = 0.301$$

so encouraging yet still within the bounds. Once more, age, up to the point when the 30- and 35-year-old age group is reached, and education level indicate a propensity to look up information online and find solutions to issues in order to complete the purchase transaction. When it comes to the challenges associated with making payments online, this correlation appears to be less strong than the correlation between age and education and the intention to buy in terms of how hard it is to locate products and information about them.

In conclusion

The results of the study indicate that most respondents, who are between the ages of 18 and 35, choose to purchase the product immediately at the physical point of sale because they are currently having trouble finding online information about products or payment options on websites that are disorganized. Age and educational attainment have a moderate impact on the portion of the respondents who decide to use the internet to search for information regarding the issues they are having and insist on finishing the online buying procedure. Up to the age of 35, there is a good correlation between growing older and making wise decisions like completing the buying process and asking for online help. Even when we compare this link to

education level, it remains positive but has a smaller coefficient. Furthermore, although it is less pronounced than in the first instance, age or educational attainment are positively correlated with the willingness to search the internet for information in order to get past obstacles and complete the online payment.

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DIGITALIZATION OF THE TAX ADMINISTRATION PROCES IN ALBANIA (FISCALIZATION)

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Abstract

Revenue from taxes as the main source of the budget, is used by the government to finance public goods and services. Consequently, it is relevant how the state defines their structure and collection process. Digitization is now an inevitable process which has influenced the tax reform in Albania, with the purpose of reducing informality and fiscal consolidation. The introduction of fiscal cash registers into the business activity was considered as very important tool in the assessment of business turnover, a process which should show results in the reduction of the level of grey economy. Meanwhile, starting from the trend of regional countries and most of the EU countries that use fiscalization for real-time reporting of tax information, Albania undertook this reform during these last years. Fiscalization is a set of measures, devices and software that taxpayers must apply to issue invoices for the supply and sale of goods and services. The transition from manual to electronic invoice processing defines a new relationship between government and the taxpayer, which has its own advantages and disadvantages at different stages of implementation of this process.

This new form of tax reporting, aims to reduce the level of informality without the need to exercise continuous controls in the business, reducing the operating costs of government and reduce informality. Fiscalization in the economy of a country like Albania faces problems directly related to the level of digitization of sales processes. The purpose of this paper is to understand, identify and analyze the the challenge of implementing fiscalization in Albania. This paper is based on data, publications, legal framework, and regulatory acts of fiscalization process in our country.

Key Words: *Fiscalization, Fiscal Reform, Digitalization, Taxpayers, Informality.*

JEL Code: H26

Introduction into digitalization of tax administration process

Government today requires new instruments to generate value by stimulating the production of goods and services and indirectly to improve fiscal consolidation. Taxes are mandatory, non-irreversible payments on account of the state budget, resulting from the performance of an economic activity. Many countries have a fiscal system that reflects all business transactions to the authorities for managing and avoiding the risks of fiscal evasion. This process is the focus of this paper. In 2015,

the European Parliament and the Council of the European Union (EU) introduced a general procedure for providing information in the field of technical regulation and rules for information society services as a basis for recommendations on fiscal regulation, stimulating integrity and accessibility in business environment (European Parliament, 2015). Meanwhile, the EU countries approved the recommendations in the European Parliament and implemented their fiscal laws. This new concept came because of the lack of technical and intellectual resources, the diversity of the operating environment, the difference in the availability of public and private services, electronic government instruments and their security aspects in fiscal laws. According to a United Nations report between 2014-2018 the percentage of countries offering digital services has increased to 71%, depending on the type of service (UNITED NATIONS, 2022). This percentage is expected to increase further thanks to a global trend for e-government platforms. E-governance involves the use of technology and the Internet to increase the productivity of administration and implementation of electronic transactions, which eliminates the physical controls. These initiatives consist in reduction of service costs and the time spent by citizens to receive a service, as well as in the improvement of service quality. According to the publication of the Economic Commission for Latin America Caribbean UN (ECLAC), it results that digitization as a process recently updated by the Covid-19 pandemic, has encouraged the government to be participants in many projects related to the digitization process procedures and services they offer (ECLAC, 2021). This phenomenon highlights the effect that the digitization of such processes in business, government and citizens. Different countries have implemented different projects and initiatives, depending on the challenges that the country faces in some specific situations.

This new system will create a real-time monitoring mechanism of fiscal equipment that operate with cash and non-cash. It enables citizens to verify in real time if the invoice they received was reported to the tax system and for tax administration effective control and accurate and in-depth analysis of tax data. The new system enables every citizen to verify immediately after issuing the invoice whether it is reported to the central tax system. This process is carried out by scanning the Bar Code by phone unique invoice and sending it immediately to the relevant tax department. IN once the tax department receives the code, it will respond confirming whether the relevant code exists in the database together with the details of the relevant invoice. This verification enables citizens to know if the bill they paid for has been reported to the tax system, this whole process increases transparency in doing business and helps the government to fight tax evasion, being easily verifiable tax fraud or non-declaration of invoices.

For the Tax Administration, the new system provides the possibility of centralized and effective analysis for it modeled the approach of the risk module. This means that suspicious behavior will be identified easily and would guide the real identification of abusers, avoiding inspections and generalized controls, which penalize regular businesses.

Technology change is necessary, as long as current equipment relies on 2G/3G technology and are being replaced across Europe. To ensure that it is avoided dependence on a specific technological model, the new system does not rely on a concrete model (eg Hardware or Software equipment), but in open standards provided by Internet access. This technological approach means that Fiscalization is based on software and the process can easily have implemented in all existing POS devices (without the need for a HW device secondary only to operate within the fiscalization system). In the long term this reduces technology costs significantly to taxpayers.

The new Albanian model of fiscalization has been chosen based on the analysis of different models applied today in the world. Experts from the Ministry of Finance, the General Directorate of Taxes, AKSHI and other institutions evaluated various technical and financial options. The model based on this fiscalization system has been selected as it guarantees the application of the latest technology, based on European Union standards and with better adaptation possibilities for the structure of the Albanian economy. The same model has been applied in many EU countries in recent years, such as in Croatia, Slovakia, the Czech Republic, Slovenia, etc.

Literature Review

Various studies on fiscalization have been implemented in different countries. In 2015, Peter Casey and Patricio Castro studied taxpayer compliance and administrative efficiency. In this paper the focus was fiscalization as an independent process with controls established by government agencies to examine the effects of such a strategy for fiscal devices such as Electronic Cash Register (ECR), Electronic Fiscal Device (EFD), Electronic Fiscal Printer (EFP). Fiscalization as a process represents a strategy based on the individual technical regulations and legal framework of each country. However, studies do not take into account the effectiveness and risks of the technologies used. There are no arguments in favor of selecting specific hardware instruments. Also, issues of interaction between countries are not properly considered (Casey, P., ; Castro, P., 2015). Different authors come to the conclusion that the efficiency of the fiscalization process can be improved by deploying fiscal devices in which the collection of information is automated. Studies related to digital security are needed to manage cyber risk situations even in fiscal systems. Another work on fiscal equipment was done by Milan Prokin and Dragana Prokin, in 2016 who published two articles, one with the necessary information about the fiscalization process and the implementation of the infrastructure of a fiscal system (Prokin & Prokin, 2016).

Also, the authors Larios and Ceballos from the Innovation Center for "Smart Cities", in their paper conducted a model that promoted governance in a "Smart City". The fiscalization process in a digital city, based on the authors' findings, can be driven by market rules and stakeholders. Changing the fiscalization strategy can contribute to sustainable economic development, while the latter can become an integral part of the services offered in "smart cities" (Larios, V. M. & Ceballos, G.R., , 2016). The economic and financial crises of recent years have exerted a lot of pressure on the decisions of the government of many countries. The decrease in revenues in the

state budget and social policies related to unemployment, early retirements and such trends that increase public spending. The result is an increase in the budget deficit. Initial Fiscal devices are compared to enhanced fiscal devices, whose module contains additional services, such as fiscal software for authentication and exchange of security codes, control software server with point of sale (POS) communication module. Later, Milan Prokin, with a group of authors (2018) conducted another study on the cyber security of enhanced fiscal devices with and without a General Packet Radio Service (GPRS). The authors provided an overview of the security of cyber-attacks, which are carried out to steal personal data. Authors conclude that Internet and mobile network communication protocols can cause erroneous information to be sent, causing problems for service providers. (Prokin, et al, 2018).

Among other things, special attention will have to be paid to fiscal consolidation and support programs that are stable even in crisis situation, with a good relationship with citizens. In addition to these trends, many countries have had and encountered additional problems as a consequence of the existence of the informal economy. To avoid part of the tax burden, businesses retain unregistered employees, illegal activities, agricultural and construction products for personal consumption or reporting lower income especially in retail industries and a large proportion of cash transactions. Previous studies have shown that at the end of the 20th century about 8-9% of Croatian GDP was generated in this officially unregistered sector (Lovrinčević, Z., et al, 2011).

Although, similar procedures were recently introduced in other Western Balkan Countries, the first country to introduce fiscalization was Italy in the 1980s, and the obligation to fiscalize exists in several other countries, such as Poland, the Czech Republic, Slovakia or Sweden (Cobović, M., et al, 2013). Countries in transition have significantly more problems in tax collection and administration. Having a clear principle that the state budget needs money to provide goods and services, fiscalization is considered as a tool that enables more effective and efficient collection of income, mainly from taxes and fees.

The main goal of the fiscalization process is to minimize tax evasion and in this way achieve a better balance in the financing of public expenditures and therefore improve fiscal consolidation. To achieve this, each of the taxpayers is required to provide hardware, software and a digital signature certificate. Customers are also part of the monitoring process, as they are the ones who must always ask to be provided with a tax voucher. A few days before the start of the first phase of fiscalization, a large number of taxpayers were skeptic and believed that servers could not afford to control all the amount of input bills. They also feared that poor internet connections would lead to longer billing times, which would make customers uncomfortable. There are three popular approaches to fiscalization hardware-based, software-based, and both hardware and software-based. Hardware fiscalization instruments perform transaction reporting, printing fiscal invoices, processing relevant data, their storage functions, while software instruments perform fiscal operation validation, fiscal data signing, data storage and archiving functions. Fiscalization includes three stages until its full implementation:

The first phase includes the electronic compilation of tax invoices for entities that have sales relations with state institutions "B2G". The implementation of this phase started on 01.01.2021. The issuance of tax invoices to public entities, by all registered taxpayers, is carried out through the fiscalization system.

The second phase includes the electronic compilation of tax invoices between private entities that have a sales relationship and payment/collection is made without cash (bank only) "B2B". The implementation of this phase started on 01.07. 2021. All registered taxpayers who will issue a tax invoice to another private entity will be realized through the fiscalization system.

The third phase includes the electronic compilation of tax invoices for entities that have sales relations with private entities and final customers "B2C". The implementation of this phase has started on 01.09. 2021. All registered taxpayers who will issue a tax invoice to the private entity and the private entity as the end consumer will be realized through the fiscalization system.

Transaction data of taxable items is first generated by the software and verified by hardware security modules (HSM) devices. Transaction data is stored locally or in the cloud and then reported to authorities, providing additional access to confirmed transactions and security procedures to control data integrity (Talikovs, K., et al, 2021). The new law No. 87/2019, "On the electronic invoice and circulation monitoring system" (known as the fiscalization law) was approved by the Parliament of Albania on December 18, 2019. The law provides for a combination of technology and regulations that enable Albanian tax authorities to monitor the flow of taxpayers in real time and, according to the tax authorities' website, "fiskalization" is a reform project aimed at reducing the size of the informal economy. The Fiscalization Law is a completely new law that does not replace any similar existing legislation. The law on fiscalization is partially harmonized with EU directives on electronic invoicing in public procurement (Ligji 87/2019, 2019).

Challenges of fiscalization process in Albania

During technological revolution period coincides with the beginning of a reform known as Fiscalization. Through this system, the aim is to create an electronic invoice and report in real time every transaction. Initially, this process starts with the concept of the Fiscal Treasury, which was invented by the Ritty brothers immediately after the end of the American Civil War. As the owner of a barbershop in Dayton, Ohio, James Ritty created this device to prevent employees from stealing from his business. The first design was created in 1879 and turned into a commercial patent. In the region, Greece implemented it first in 1988 and then it spread to Romania and Bulgaria. The implementation of fiscal cash registers was an early effort of the Albanian state after the 90s. The first steps were taken in 1994 but failed. In 2007, the tax administration in our country decided to create a cash payment control system, in which data from receipts are transferred to the central system at the end of the working day (MacGillis, A. , 2021).

Currently, the "Nexus" cash register system does not provide a real-time tracking of transactions, on the contrary, it turns out that this system is quite clumsy and performs daily report transmissions. The "Nexus" system is unclear in terms of the

access rights of authorized companies that sell cash registers, whose actions are not identifiable by the tax administration when these companies register data for new cash registers. For example, authorized technicians fiscalize incorrect data of subjects at the fiscal cash register. Address changes of fiscal cash registers do not match according to the data of the E-Tax system. The "Nexus" system of fiscal cash registers has some problems that even if all businesses reported correctly, this business behavior would not be reflected until the end of the reporting chain. Now the cutting of the tax coupon has turned into a disturb for businesses and the fiscal agents. The use of fiscal cash registers has shown he losses of the budget from not using cash registers. General Directorate of Taxes does not carry out any analysis of the impact of the fiscal treasury. Given that a part of the business has not been very cooperative by not cutting a tax coupon or cutting a "half" coupon (with a value lower than the transaction). On the other hand, the tax administration with the controls exercised so far has scared the business, pushing it towards fiscal evasion. The problems during the time Albania used fiscal cash registers help to understand the new system of fiscalization, which as a concept is very innovative and includes more transparency in the economic activity of the subjects. But, the fact that we are dealing with innovation and digitalization, the implementation of this system becomes more difficult, especially in the structure and nature of business in our country, where digitalization has not yet affected every unit that deals with economic activity. In fact, the electronic invoice is an innovation for the European Union itself and has begun to be applied gradually in the EU countries, through a financial assistance of the European Union. Italy was the first country to apply the fiscalization system. In 2013, Italy made B2G (business-to-government) electronic invoicing mandatory for the central administration and in 2014 for the entire administration. In 2017, the electronic invoice became mandatory for all businesses with VAT to report electronically to the tax administration, once every four months. The use of e-invoice in B2B (business to business) was optional until 2019, when it became mandatory for both B2B and B2C. The Italian electronic invoice system is called the "Exchange System" with a 2.5 million cost. The General Directorate of Taxes within the framework of informing taxpayers regarding the four certificated of IT companies as well as the continuation of the use of existing fiscal equipment, within the framework of Law No. 87/2019 "ON THE INVOICE AND MONITORING SYSTEM OF CIRCULATION" (LIGJ Nr. 87/2019).

In 2008, the flat or proportional tax was introduced for the first time, which in some way reduced the fiscal burden. In the first year of implementation, we had an increase in fiscal income by over 16% and an increase in the registration of new businesses by over 12%, of course this increase did not come only as a result of the flat tax. But let's say that it also contributed to the reduction of evasion, however this positive trend decreased in the following years (Mapo, 2021). In 2010, fiscal cash registers were introduced to the market, which made a very important contribution to decrease informality, as they primarily served to raise awareness of commercial activities, but they never solved the problem of "printing" the tax coupon. Fiscal cash registers, beyond the current debates about costs or efficiency, were and are a very important

tool for measuring business turnover, fiscal cash registers were simple to make and tax control simpler. However, they did not solve the intersection of information, this still remained difficult even though there were about 100,000 cash registers on the market out of almost 160,000 active businesses. In 2021, the government implemented electronic invoices and currently fiscalization is done in real time (Dosja, 2021).

Albanian businesses, through the existing fiscal hardware and software that issue fiscal invoices, can generate tax invoices that are registered directly on the server tax center. Fiscalization represents a strategy based on the legal and regulatory framework of Albania. However, even though in this case we can say that the tax control or the reconciliation of information has been facilitated, the problems of evasion cannot be claimed to have been completely defined. Fiscalization as a process is also facing a number of other problems, some of which are the administration of servers in the General Directorate of Taxes, weak monitoring or malfunctioning of the central system, causing delays and failure of fiscalization. So a good technical management of the central system is needed so that businesses do not have problems with issuing invoices. New software, or updated fiscal cash registers, today offers the possibility of automatic registration of invoices and their transmission online. The accountant don't need to record manually invoices. However, this relief should be accompanied by an awareness campaign for taxpayers or final buyers, so how can it be possible to reduce tax bills and reduce fiscal evasion?! Businesses today complain about the fiscalization process as they encounter many technical obstacles that are not related to the software architecture, their complaints are related to complementary elements of the process and equally important to its success. The three most important of them are: The weakness of the Internet in peripheral areas, the overloaded servers of AKKSHI, the subject's computer equipment. So, in this case, if we want fiscalization, a solution must also be found for these problems, otherwise the fiscalization process will present problems in the future. It is necessary to resolve the reconciliation of customs codes with those of manufacturers and sales, because one is the customs code and the other is the sales code, so the correct inventory will not be generated if we have different registration codes.

However, having said this, we must be convinced that if we really want to fight tax evasion, it is not enough to just tax, we must make the subjects aware, cut coupons and we must punish tax evasion and above all we must. Instruments can also be found to stimulate consumers to request a fiscal invoice, due to the fact that VAT remains the tax with the highest evasion. The General Directorate of Taxes reported that by the end of January 2022 the electronic certificate uploaded in the portal has been withdrawn by 77% of taxpayers. Meanwhile, until that time, 57% of all businesses issued fiscalized invoices. At the end of December 2021, the government approved amendments to the Normative Act to remove fines only for small businesses until June 30, 2022. The 1st phase of fiscalization began to be implemented on January 1, 2021 for cashless transactions between enterprises and public entities. In the final stage, which is considered more delicate, 90 thousand

small businesses were involved in cash sales. By the end the year, half of the process should be completed. Fiscal equipment in Albania includes: cash register/fiscal printer, fiscal memory, customer display (optional), GPRS device. Entities that must issue invoices and implement procedures e fiscalisation are legal person who is subject to income tax or income tax simplified on profit for small business. Also, any other person, who is not subject to the aforementioned taxes, is subject to VAT, regardless of whether it is registered in the tax system value added (VAT) and who must invoice the supplies with VAT, because it realizes circulation below the defined limit. It is important to be active economic independently, and in that case, for any supply of goods or services is obliged to issue an invoice and implement the fiscalization procedure.

Billing has a positive effect on the entire economy as this process saves time and is more secure. It enables the reduction of informality, as well as the increase of the efficiency of the Tax Administration, since for the first time the Tax Administration will have in its systems all the invoices that are issued to the subjects, and all the elements of the invoice. The goal of avoiding fiscal evasion and a more transparent economy would have been to minimize the negative effects in Albanian economy. Reducing informality will lead to increased efficiency of tax revenue collection. Fiscalization will bring a fictitious increase in the deductible VAT, because the mandatory reporting of all invoices issued through the central system that ensures the confirmation of all transactions in the market. The formalization of Albanian economy will enable the expansion of the circle of taxpayers, thus creating real chances for tax reduction. Business modernization, pushing the entire Albanian economy to use less paper (and bureaucracy) minimizing paper costs, towards a modern economy, increasing its efficiency. The Ministry of Finance is expected to implement fiscalization in our country to increase revenues by 2-3 percentage points of GDP. Regarding the first phase, the fiscalization reform has had a positive progress (Tatime.gov, 2020).

Conclusion

In this paper, the fiscalization process is analyzed and compared as an integrated process through digital infrastructure, within the objectives of reducing informality and improving fiscal consolidation. Previous studies on fiscalization are limited to detailed summaries of the market impact of the correct implementation of fiscal policies, both fiscal devices and programs. There are also limited studies related to the risk that this process reflects.

Identifying all technical problems and solving them by making the necessary changes to the IT fiscalization platform. In addition to the online service platform, the General Directorate of Taxes in Albania should have an office dedicated to fiscalization, with tax and IT specialists, to serve taxpayers for solving concrete problems. Tax inspectors should give a specialized effort to the businesses in the first stages of fiscalization.

This process has opportunities and weakness. The opportunity for the taxpayer are related to ease and time saving in the use of electronic invoices and the real-time

extraction of data through the electronic invoicing system. Weakness is related with implementation costs and access infrastructure.

The government should assess the possibility of covering the cost, even partially, as was done in the case of securing the fiscal coffers through the compensation of various tax obligations.

The fiscalization system that is being implemented is unique and comprehensive, including large and small businesses, and Albania is the only country in the region and Europe that is implementing such a system.

The implementation progress of the fiscalization system can be slow and difficult and with the involvement of small business the challenges is evident. As long as the cash economy will be present in the majority of transactions in Albania, we are still far from the goal of digitizing processes within the framework of alleviating informality.

Fiscalization will lead to the opening of markets for new software producers and the liberalization of the market in the direction of services. Promotion and development of new jobs and the IT sector in The Republic of Albania, which represents one of the main generators of growth in many developed countries.

With the introduction of e-Invoice in transactions between businesses, the cost of administration and billing will be further reduced, and the benefits of which have already been recognized by many countries, including the European Commission, thereby introducing e-Invoicing obligation in all EU member states in public procurement procedures.

The fiscalization process accomplishes its goal only by tracking the products/goods from entry to customs to the final consumer, thus minimizing the possibility of non-declaration of transactions and evasion.

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EVALUATING THE IMPACT OF TELEMEDICINE SERVICES ON PATIENT MANAGEMENT AT KORÇA REGIONAL HOSPITAL: A COMPARATIVE ANALYSIS OF TRANSFERRED AND NON-TRANSFERRED CASES ACROSS VARIOUS MEDICAL SPECIALTIES

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Abstract

Background: Launched in 2009, Albania's integrated telemedicine aims to enhance patient management at facilities like Korça Regional Hospital, offering critical remote services in various specialties and assessing their impact through detailed success metrics.

Methods: This quantitative retrospective cohort study examined the use of telemedicine services among 290 consecutive patients at Korça Regional Hospital, Albania, from January to December 2023. Data were meticulously extracted and analyzed from the hospital's medical records, focusing on variables such as age, gender, medical specialties, time periods of consultations, season and patient outcomes in terms of transfer versus treatment at the referring hospital. To assess the association between patient demographics, medical specialties, time of day, and seasonal variations with the rates of patient transfers, we utilized the Chi-squared and Fisher's Exact test for statistical analysis.

Results: Out of a total of 870 cases, 290 patients (33%), predominantly elderly with an average age of 62 years, utilized teleconsultation services, while 580 patients (67%) were directly referred for further medical treatment without using teleconsultation. About 57.8% of telemedicine consultations result in patient transfers, with notable differences across specialties such as endocrinology 62.5% (transfer rate), neurology at 81.8%, neurosurgery at 48.4%, neurotrauma at 43.3%, and abdominal surgery at a high 83.3% transferred ($p < 0.05$). Transfer rates differ also by gender, with 66.1% of males being transferred compared to an even 50% for females. Additionally, usage patterns reveal a preference for afternoon consultations, particularly during winter. However, the transfer rates were predominantly in the evening (79.3%) and summer (85.0%).

Conclusions: The study demonstrates that while telemedicine at Korça Regional Hospital effectively initiates patient management, particularly for elderly patients. Specialties such as neurosurgery and neurotrauma showed comparatively lower transfer rates, indicating that telemedicine can successfully handle more complex consultations and potentially reduce the need for transfer.

Keywords: Telemedicine, Patient Management, Transferred, Non-Transferred, Efficiency

Introduction:

Since 2007, Albania has been classified as an upper-middle-income country, experiencing significant transitions not only economically but also epidemiologically (1). With the rise of non-communicable diseases and the aging of the population in Albania, a phenomenon both European and global, there has emerged a need to provide the Albanian population with a healthcare service that is high-quality, efficient, easily accessible, and cost-effective (2). The futuristic yet current approach to remote healthcare, through telemedicine, strives to possess all the aforementioned qualities. In this direction, since 2009, Albania has implemented the integrated program of telemedicine and electronic health, including secondary and tertiary hospital services, with the National Center of Telemedicine in Tirana (3). This program was conceived and developed through the successful strategy of implementing "Start-Build-Operate-Transfer" programs (4). With the launch of this program, there was also noted an increase in public access to this service, where the most frequent specialties in response to patient demands were radiology, neurotrauma, and cerebral vascular accidents, with about 82.9% of all requests (5). Given that some very important specialized services, such as cardiac surgery, neurotrauma, and neurosurgery, are located only in the capital, Tirana, hospital telemedicine can serve well in bridging the gap in accessing these services, especially in peripheral and rural areas. Often, the main bottleneck in expanding hospital telemedicine services is the operational phase, which ideally culminates in the development of telemedicine experts and "local champions," and is closely tied to the transfer phase where the health institution must ensure long-term sustainability according to appropriate telemedicine and remote care standards (6). In this phase, we can say that the Korça Regional Hospital is a successful model of sustainability in conducting teleconsultations, especially with University Hospital Center "Mother Teresa" and University Trauma Hospital. The aim of this study is to evaluate the impact of telemedicine services on patient management at Korça Regional Hospital, assessing the success metrics for both transferred and non-transferred cases across various medical specialties, thereby highlighting the effectiveness of teleconsultations in a regional healthcare setting.

Methods

This research project is part of quantitative scientific research, conducted as a retrospective cohort study on the target population—patients who have used telemedicine services in Korca Region Hospital, Albania during January 2023- December 2023.

During this period, we selected 290 patients who have utilized telemedicine services at the Korçë Regional Hospital in a "consecutive" manner from 807 patients who were target for tertiary hospital referral. Data extraction and analysis were conducted according to the 'desk review' model of the medical records of this hospital.

From the review of these documents and data obtained from the registries, a series of variables have been defined such as: age (in years), gender (males vs. females), medical specialities (neurosurgery vs. neurotrauma vs. endocrinology vs. imagery vs. neurology vs. surgery vs. orthopedics), time periods (morning vs. afternoon vs. evening vs. night), seasons (spring vs. summer vs. autumn vs. winter) and (transferred vs. treated in the referring hospital). The entire study was conducted in accordance with the declared principles of the Helsinki Declaration for scientific research in the medical field involving human subjects. Firstly, we had secured permission from the Ethics Committee at the Ministry of Health and Social Protection to conduct this study. Participants in the study were ensured the confidentiality and privacy of their information.

Results

The analysis of telemedicine service utilization at Korça Regional Hospital reveals that the average age of patients is 62 years, with a standard deviation of 14.8 years, indicating a predominance of elderly users. Seasonal variations in service use are evident, with autumn seeing the highest engagement at 32.6% and spring the lowest at 19.6%. Daily usage patterns show a preference for afternoon consultations, accounting for 45.2% of all sessions, followed by morning and evening, whereas night usage is minimal. Importantly, 57.8% of telemedicine cases resulted in patient transfers, suggesting that a significant number of consultations require follow-up for more specialized care. (Table 1)

Table 1: Descriptive Statistics of Telemedicine Service Utilization at Korça Regional Hospital, January-December 2023

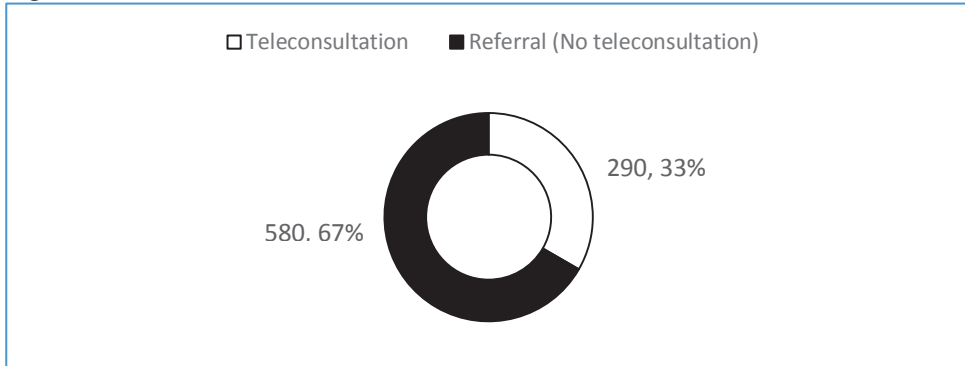
Variables	Descriptive N** (%)	Statistics
Age (Mean, SD*)	62±14.8 years	
Season		
Spring	44	(19.6)
Summer	51	(22.8)
Autumn	73	(32.6)
Winter	56 (25.0)	
Time periods		
Morning	50	(22.6)
Afternoon	100	(45.2)
Evening	52	(23.5)
Night	19 (8.6)	
Transfer status		
Transferred	63	(57.8)
Non-transferred	46 (42.2)	

*SD-Standard Deviation

**N-Numbers

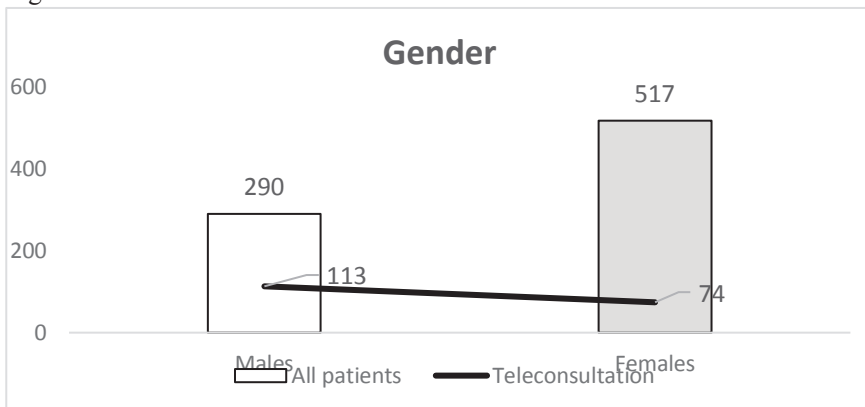
Out of a total of 870 cases, 290 patients (33%) utilized teleconsultation services, while 580 patients (67%) were referred directly for further medical treatment without the use of teleconsultation. (Figure 1)

Figure 1: Distribution of Teleconsultation vs. Referral Cases



There are 290 male patients in total, with 113 of them utilizing teleconsultation services. This represents approximately 39% of all male patients. There are 517 female patients in total, with only 74 of them utilizing teleconsultation services. This represents about 14% of all female patients. (Figure 2)

Figure 2: Gender Distribution of All Patients vs. Teleconsultation Patients



The distribution of medical specialties utilized in teleconsultation services at Korça Regional Hospital varies, with neurotrauma (31%), neurosurgery (27%), and neurology (14%) comprising the majority of consultations, followed by

endocrinology (16%) and surgery (8%), while ENT (1%), orthopedics (1%), pneumology (1%), and radiology (1%) show minimal usage rates. (Figure 3)

Figure 3: Percentage Distribution of Teleconsultations Across Medical Specialties

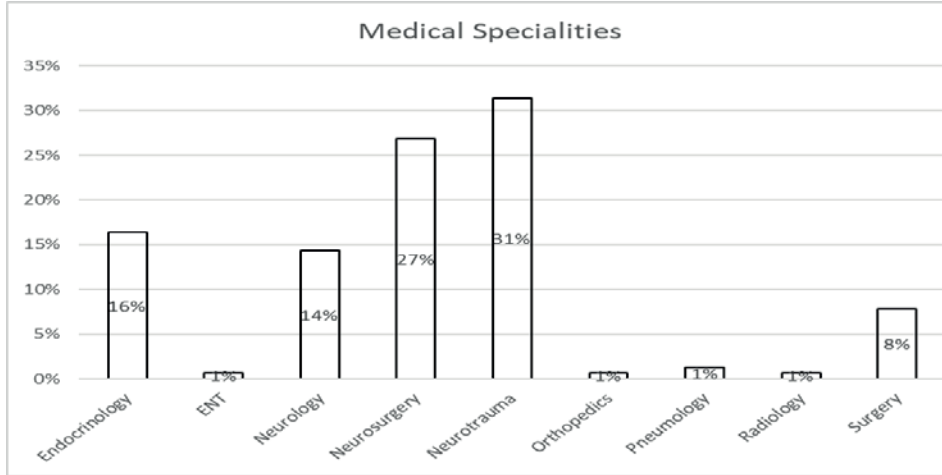
Table 2: Comparison of Transfer Rates by Gender, Medical Specialty, Time Period, and Season

Variables	Non-transferred Count (%)	Transferred (%)	Count	p-value (Chi-Square Test)*
Gender				
Males	19 (33.9)	37 (66.1)		P=0.1
Females	21 (50.0)	21 (50.0)		
Medical Specialities				
Endocrinology	3 (37.5)	5 (62.5)		P<0.05
Neurology	4 (18.2)	18 (81.8)		
Neurosurgery	16 (51.6)	15 (48.4)		
Neurotrauma	17 (56.7)	13 (43.3)		
Surgery	1 (16.7)	5 (83.3)		
Time periods				
Afternoon	20 (50.0)	20 (50.0)		P<0.05
Evening	6 (20.7)	23 (79.3)		
Morning	14 (50.0)	14 (50.0)		
Night	2 (28.6)	5 (71.4)		
Seasons				
Winter	12 (37.5)	20 (62.5)		P<0.01
Spring	9 (39.1)	14 (60.9)		
Summer	3 (15.0)	17 (85.0)		
Autumn	22 (64.7)	12 (35.3)		

*Significant

at

p<0.05



For gender, males had a higher transfer rate of 66.1% compared to females, who had an even split at 50% each, but the difference was not statistically significant (p=0.1). In medical specialties, variations were evident: Endocrinology had a transfer rate of 62.5%, Neurology at 81.8%, Neurosurgery closely balanced at 51.6% not transferred and 48.4% transferred, Neurotrauma with 56.7% not transferred, and Surgery at a high 83.3% transferred (p<0.05). Time periods showed different patterns as well: the afternoon and morning were evenly split, while the evening showed a higher transfer rate of 79.3% (p<0.05). Seasonal analysis indicated variations, with winter showing a higher transfer rate of 62.5% and significant differences (p<0.01), whereas summer had the highest rate at 85.0%, and autumn showed the lowest at 35.3%. (Table 2)

Discussion

The utilization of telemedicine services at Korça Regional Hospital has provided valuable insights into its effectiveness in managing patient care, particularly for the elderly and those requiring specialized medical interventions. The analysis reveals a significant reliance on teleconsultation services among a substantial segment of the patient population, with a notable 33% of total cases opting for this mode of initial consultation. This preference likely reflects the accessibility and convenience of telemedicine, which is crucial for elderly patients who may face mobility challenges or reside in remote areas. Indeed, telemedicine leverages technological advancements to improve geographical and temporal accessibility to healthcare, reducing costs, and overcoming financial, sociocultural, and infrastructural barriers, thereby promoting health equity and enhancing health outcomes through efficient, round-the-clock remote consultations, monitoring, and diagnosis (7).

However, the high transfer rates, especially in critical medical specialties such as neurology and abdominal surgery, raise important considerations. It aligns with findings from other studies indicating that while telemedicine can facilitate initial

assessments and postoperative care, it often necessitates in-person interventions for complex surgical conditions. This notion is supported by the use of telemedicine in the management of abdominal surgeries where, despite its benefits for follow-up and less urgent care, the necessity for surgical intervention typically requires patient transfer or direct treatment at specialized facilities (8). Furthermore, the pattern of telemedicine usage peaking in the afternoon during winter months and the higher transfer rates observed in the evenings and during summer suggest that patient demand for telemedicine varies according to time of day and season. This variability could be attributed to several factors, including differences in staffing levels during these periods, the nature of medical emergencies that might be more common in certain seasons, and perhaps the availability of specialists during off-peak hours. Studies exploring the variability in telemedicine usage across different times of day and seasons indicate that such patterns are influenced by numerous factors. For instance, a survey on telehealth utilization highlighted how environmental factors and the nature of healthcare demand can vary, leading to fluctuations in telemedicine use at different times and seasons (9). Additionally, a global review on the adoption of telemedicine during the COVID-19 pandemic pointed out that the rapid integration and utilization of telemedicine were influenced by immediate healthcare needs, which varied significantly over time and were impacted by the pandemic's waves and corresponding public health measures (10).

Another study, a protocol involving telemedicine consultations in neurotrauma care demonstrated an 84% reduction in transfer rates, indicating that telemedicine can play a crucial role in managing such cases locally (11). This is consistent with our findings in terms of telemedicine's capability to manage complex cases within neurosurgery and neurotrauma effectively, reducing the frequency and necessity of patient transfers. The limitations of this study are primarily related to its design and scope. First, as a retrospective cohort study, it is subject to inherent biases such as selection bias and information bias, which could affect the accuracy of the findings. The data were extracted from medical records, which might not always capture the full extent of patient interactions or the nuances of telemedicine consultations. Additionally, the study only included patients from Korça Regional Hospital, limiting the generalizability of the results to other regions or healthcare settings. This study highlights the critical role of telemedicine in enhancing healthcare accessibility and initial patient management at Korça Regional Hospital. Nevertheless, it also emphasizes the need for ongoing evaluation and adaptation of telemedicine practices to better support the management of complex cases, ensuring that telemedicine can complement rather than substitute for comprehensive in-person care where necessary. As telemedicine continues to evolve, its integration into routine healthcare practice must be dynamically adjusted to meet the changing needs and challenges of patient management.

Conclusions

The study conducted at Korça Regional Hospital reveals that telemedicine significantly aids in managing patient care, especially for the elderly, by providing initial consultations and diagnosing from a distance. Specialties such as neurosurgery and neurotrauma showed comparatively lower transfer rates, indicating that telemedicine can successfully handle more complex consultations and potentially reduce the need for transfer. This success points to the capability of telemedicine to not only extend healthcare access but also effectively manage specialized medical care remotely, enhancing patient outcomes while alleviating the burden on hospital resources.

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HOW DOES ARTIFICIAL INTELLIGENCE AFFECT FINANCIAL STATEMENTS

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Abstract

Artificial Intelligence (AI) is playing an increasingly important role in the analysis of financial statements and how companies take information from these analyzes to make informed decisions. In today's rapidly evolving digital landscape, artificial intelligence (AI) is revolutionizing industries across the globe, and the realm of finance is no exception. As organizations seek innovative ways to enhance efficiency, accuracy, and decision-making processes, AI technologies are increasingly integrated into financial systems and practices. The adoption of AI has profound implications for financial statements, the cornerstone of a company's financial reporting. From optimizing revenue generation to streamlining operations and mitigating risks, AI's influence on financial statements is extensive and multifaceted. This study explores the various ways in which AI shapes financial statements, illuminating its transformative impact on the financial landscape.

Keywords: *financial statements, artificial Intelligence, decision making*

Introduction

Artificial intelligence (AI) is reshaping the world of financial accounting, transforming the way businesses approach digital strategy, gain insights and find solutions, but generative AI presents challenges on the way to opportunities. As organizations study this transformative technology, it is important to consider all potential impacts and ensure that it is used responsibly and effectively. Artificial intelligence technologies are successfully used to solve such problems so it is necessary to evaluate the impact of artificial intelligence on the financial results.

The cornerstone of AI's generating value for financial accounting lies in its ability to process large amounts of structured and unstructured data rapidly. This enables employees to create broader views than previous systems and use advanced analytics to predict market trends, better assess risk and make more informed decisions. Like almost any new technology, the adoption of generative AI presents new challenges for IT security and compliance. Data usage violations, privacy regulations, and the potential for biased algorithm results are some of the key concerns to consider when designing generative AI governance policies. To minimize these risks, organizations should use established frameworks to help ensure compliance with industry standards and data protection laws.

The accounting system collects and processes all financial information for an organization and then reports that information to all interested parties who want to make decisions about the company. Financial accounting reports include periodic financial statements and other supporting documents for external decision makers. Decision makers can be investors, creditors, suppliers, customers, union

representatives and all other interested parties. The accounting system also provides management accounting reports, including detailed plans and ongoing performance reports. These reports are used by internal decision makers throughout the organization to make decisions about pricing, production, quality, and many other day-to-day activities.

The integration of AI technologies into financial reporting processes represents a significant leap forward in the quest for more efficient, accurate, and transparent financial disclosures. By automating routine tasks, analyzing vast datasets, and ensuring compliance with regulatory standards, AI empowers organizations to elevate the quality of their financial reporting while enhancing stakeholder trust and confidence. Looking ahead, the continued evolution of AI-driven financial reporting holds tremendous promise for further innovation and advancement. As AI algorithms become increasingly sophisticated and capable of handling complex financial analyses, organizations can expect to see even greater improvements in efficiency, accuracy, and decision-making in the realm of financial reporting.

Methodology

This paper explores the impact of artificial intelligence on the financial performance of companies and the opportunities that its use brings for financial reporting. The research is focused on theoretical aspects through a literature search in the field of financial reporting. The methodology is descriptive and analytical, based on a review of contemporary literature on financial statement reporting. When studying the relationship between artificial intelligence and financial reporting, we should refer to some theories that can guide us. Referring to the current literature on artificial intelligence, a distinct set of research streams is presented that explain the importance of using AI.

The impact of artificial intelligence on financial statements

AI can be used to develop predictive models of a company's future financial performance. These models can use a wide range of data, including historical financial data, trading data, industry-related news, and much more. AI forecasts can help managers and investors make strategic investment decisions. Using Artificial Intelligence (AI) to develop predictive models of a company's future financial performance has great potential to bring significant benefits.

AI can be used to analyze a wide range of financial data, including historical data, trading data, industry-related news, and much more. Using sophisticated machine learning and deep learning algorithms, AI can identify patterns and trends that can be used to predict a company's future financial performance. AI can be used to develop predictive models of financial performance for a company, including revenue, profit, cash flow, and more. These models can use various algorithms such as linear regression, time-series, structured mode, and others to create accurate forecasts based on historical data. The use of AI can increase the accuracy and efficiency of predictive models by allowing the identification of hidden and complex patterns in financial data (Davenport, Thomas H., and Rajeev Ronanki, 2018).

Artificial intelligence algorithms can identify complex relationships and correlations between data that may be difficult to discover with traditional methods. With powerful predictive models, managers and investors can make informed decisions about investments, business strategies, and risk management. These models can be a powerful tool to identify new business opportunities and predict the impact of various factors on a company's financial performance.

Artificial intelligence (AI) can have several impacts on financial statements in particular on revenue generation. AI-driven algorithms play a pivotal role in revenue optimization by harnessing the power of big data analytics to dissect customer data, decipher market trends, and unravel intricate patterns in consumer behavior. Through sophisticated algorithms, AI empowers organizations to fine-tune their pricing strategies, personalize marketing campaigns, and enhance the accuracy of sales forecasting.

Firstly, AI enables dynamic pricing strategies that adapt in real-time to changing market conditions, demand fluctuations, and competitor pricing dynamics. By analyzing vast datasets encompassing historical sales data, competitor pricing, macroeconomic indicators, and even external factors like weather patterns, AI algorithms can determine optimal price points that maximize revenue while remaining competitive in the market.

Secondly, AI revolutionizes marketing efforts by delivering hyper-personalized experiences tailored to individual preferences, purchase history, and behavioral patterns. Through machine learning algorithms, AI sifts through troves of customer data, identifying key insights and segmenting audiences based on factors such as demographics, psychographics, and browsing habits. This enables organizations to craft targeted marketing campaigns, deliver personalized recommendations, and engage customers at various touchpoints along their purchasing journey, ultimately driving higher conversion rates and customer loyalty.

Moreover, AI augments sales forecasting accuracy by leveraging predictive analytics to anticipate future demand, identify emerging trends, and forecast sales performance with greater precision (Ransbotham, Sam, et al, 2017). By analyzing historical sales data alongside external factors such as economic indicators, seasonality, and promotional activities, AI algorithms can generate forecasts that reflect nuanced market dynamics and mitigate the impact of uncertainties.

AI serves as a catalyst for cost reduction initiatives within organizations by automating an array of repetitive tasks that traditionally require substantial human involvement. Through the deployment of AI-driven systems and algorithms, businesses can streamline operations, optimize resource allocation, and minimize overhead expenses across various departments.

One significant area where AI delivers cost savings is in automating routine administrative tasks, such as data entry, document processing, and report generation. By leveraging natural language processing (NLP), optical character recognition (OCR), and robotic process automation (RPA) technologies, AI systems can swiftly and accurately handle these mundane tasks, freeing up valuable human resources for

more strategic endeavors. This reduction in manual labor not only minimizes labor costs but also mitigates the risk of errors and enhances operational efficiency.

Furthermore, AI-driven analytics play a pivotal role in identifying inefficiencies within operational processes and workflows. By analyzing vast datasets encompassing operational metrics, transactional data, and performance indicators, AI algorithms can pinpoint bottlenecks, redundancies, and areas ripe for optimization. Armed with these insights, organizations can implement targeted interventions to streamline workflows, eliminate unnecessary steps, and optimize resource allocation, ultimately driving down operational costs. AI-enabled predictive maintenance systems help organizations proactively identify equipment failures, minimize downtime, and optimize maintenance schedules. By analyzing sensor data, historical maintenance records, and equipment performance metrics in real-time, AI algorithms can forecast potential equipment failures before they occur, allowing organizations to schedule maintenance activities during planned downtime periods, thereby reducing unplanned maintenance costs and avoiding costly production disruptions. (Yoo, Amy, 2021)

Additionally, AI-powered customer support systems leverage natural language processing (NLP) and machine learning algorithms to automate routine inquiries, resolve common issues, and provide personalized assistance to customers. By deploying chatbots, virtual assistants, and self-service portals, organizations can deliver round-the-clock support at a fraction of the cost of traditional call centers, while simultaneously enhancing the customer experience and reducing customer service overhead.

The cumulative effect of these AI-driven cost reduction initiatives is a tangible improvement in the organization's financial performance, as evidenced by lower operating expenses and increased net income reported on the income statement. By harnessing the power of AI to automate repetitive tasks, identify operational inefficiencies, and optimize resource allocation, organizations can achieve sustainable cost savings and gain a competitive edge in today's fast-paced business landscape.

AI-driven algorithms revolutionize the process of asset valuation by harnessing the power of big data analytics and advanced machine learning techniques to provide more accurate and insightful assessments of various asset classes. From inventory to property, plant, and equipment (PP&E), AI enables organizations to derive valuations that reflect the true economic value of their assets, thereby enhancing transparency and bolstering stakeholder confidence in the company's financial health.

One of the key advantages of AI in asset valuation lies in its ability to analyze vast and heterogeneous datasets encompassing a wide range of factors that influence asset value. By ingesting and processing data from diverse sources such as market trends, historical performance, industry benchmarks, and macroeconomic indicators, AI algorithms can discern patterns, correlations, and anomalies that may escape human perception. This holistic approach to data analysis enables AI to generate valuations

that are more comprehensive, nuanced, and reflective of underlying market dynamics.

AI augments traditional valuation methods by incorporating forward-looking insights derived from predictive analytics and demand forecasting models. By leveraging historical data alongside predictive algorithms, AI can anticipate future demand trends, market fluctuations, and regulatory changes that may impact asset values over time. This forward-looking perspective enables organizations to make more informed investment decisions, optimize asset utilization, and mitigate risks associated with market volatility and uncertainty. AI algorithms can also incorporate asset-specific metrics and performance indicators into the valuation process. For example, in the case of inventory valuation, AI can analyze factors such as inventory turnover rates, aging profiles, and obsolescence risks to derive more accurate assessments of inventory value. Similarly, in the case of PP&E valuation, AI can consider factors such as asset condition assessments, maintenance records, and depreciation schedules to determine the fair market value of tangible assets.

AI-driven valuation models can adapt and evolve over time as new data becomes available and market conditions change. Through continuous learning and refinement, AI algorithms can enhance the accuracy and reliability of asset valuations, providing stakeholders with timely and actionable insights into the company's financial position. AI's impact on asset valuation is profound, enabling organizations to derive valuations that are more accurate, transparent, and forward-looking. By leveraging advanced analytics and machine learning techniques, AI enhances the quality of financial reporting, facilitates better decision-making, and instills greater confidence among investors, creditors, and other stakeholders in the company's financial health.

In the dynamic landscape of modern business, effective *risk management* is paramount to the long-term success and sustainability of organizations. AI emerges as a powerful tool in this domain, empowering businesses to enhance their risk assessment and management practices through advanced data analytics and machine learning algorithms. At the core of AI-driven risk management is the ability to analyze vast amounts of data from diverse sources to identify, assess, and mitigate potential risks and opportunities. By leveraging techniques such as predictive analytics, anomaly detection, and sentiment analysis, AI algorithms can sift through terabytes of structured and unstructured data to uncover hidden patterns, correlations, and emerging trends that may signal impending risks or opportunities. (Brynjolfsson, Erik, and Tom Mitchell, 2017).

One of the key advantages of AI in risk management lies in its capacity to process and analyze data at speeds and scales that far exceed human capabilities. Whether it's financial data, market trends, customer behaviors, or operational metrics, AI algorithms can ingest and process data in real-time, enabling organizations to identify risks and opportunities with greater speed and accuracy. AI-driven risk management systems can automate routine risk assessment processes, freeing up valuable human resources for more strategic endeavors. Through the deployment of AI-powered risk dashboards, alerts, and predictive models, organizations can

proactively monitor risk exposure, identify potential red flags, and implement timely risk mitigation strategies.

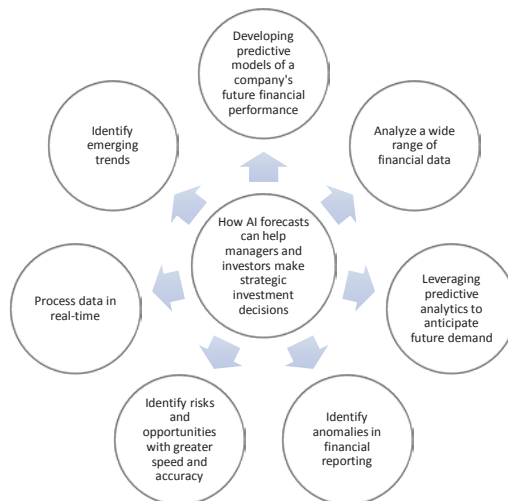
In the context of financial statements, AI's impact on risk management is profound, influencing the reporting of provisions for losses and contingencies. By providing more accurate and timely insights into potential risks and their potential financial impact, AI enables organizations to make more informed decisions regarding the recognition and measurement of provisions for losses and contingencies in financial statements.

Overall, AI's role in risk management is transformative, empowering organizations to navigate complex risk landscapes with greater agility, foresight, and resilience. By harnessing the power of AI-driven analytics and machine learning, businesses can proactively identify and mitigate risks, seize opportunities, and enhance their overall competitiveness in today's uncertain and rapidly evolving business environment.

AI-driven automation is revolutionizing financial reporting processes, ushering in an era of increased efficiency, accuracy, and transparency in the preparation and dissemination of financial statements (Lee, Irvin T., et al. 2020). By leveraging advanced algorithms and machine learning techniques, AI enables organizations to automate mundane tasks, streamline workflows, and enhance the overall quality of financial reporting.

One of the key benefits of AI in financial reporting lies in its ability to automate repetitive tasks such as data entry, reconciliation, and consolidation. Through the deployment of robotic process automation (RPA) and intelligent data extraction technologies, AI systems can extract relevant data from disparate sources, validate its accuracy, and populate financial statements with minimal human intervention. This not only accelerates the reporting process but also reduces the risk of errors associated with manual data entry.

Fig. 1 How AI forecasts can help managers and investors make strategic investment decisions



AI-powered analytics play a pivotal role in data analysis and interpretation, enabling organizations to derive actionable insights from vast and complex datasets. By employing techniques such as natural language processing (NLP) and sentiment analysis, AI algorithms can analyze financial documents, regulatory filings, and market reports to identify trends, anomalies, and emerging risks that may impact financial performance. This data-driven approach enhances the accuracy and relevance of financial reporting, providing stakeholders with a more comprehensive understanding of the company's financial health.

In addition to automation and compliance, AI-powered financial reporting systems can also improve the timeliness and accessibility of financial information. By leveraging cloud-based platforms and real-time reporting capabilities, organizations can publish financial statements and performance metrics in near real-time, enabling stakeholders to access critical information whenever and wherever they need it. This enhances transparency, fosters stakeholder engagement, and facilitates informed decision-making at all levels of the organization.

AI can be used to identify anomalies in financial reporting. These anomalies may indicate possible manipulation of financial information. Using artificial intelligence algorithms, such as machine learning, can help detect unexpected or unconventional patterns in financial data (Bell, Timothy B., and Joseph V. Carcello, 2020). Using AI to identify anomalies in financial reporting is important to detect illegal behavior or possible manipulation of a company's financial calculations. This can help protect investors and ensure the transparency and integrity of the financial market (Beneish, Messod D., 1999).

Conclusions and recommendations

Using AI in developing predictive models of a company's future financial performance can provide a competitive advantage by allowing companies to make informed decisions and adapt to changes in the market and business environment.

The cumulative effect of AI-driven initiatives is a significant uplift in revenue generation for organizations. This enhanced revenue stream is not only evident in the top-line figures reported on the income statement but also manifests in improved profitability ratios, such as gross profit margin and operating margin. By optimizing pricing strategies, maximizing marketing effectiveness, and refining sales forecasting accuracy, AI empowers organizations to unlock untapped revenue potential, driving sustainable growth and competitive advantage in today's dynamic marketplace.

AI's impact on asset valuation is profound, enabling organizations to derive valuations that are more accurate, transparent, and forward-looking. By leveraging advanced analytics and machine learning techniques, AI enhances the quality of financial reporting, facilitates better decision-making, and instills greater confidence among investors, creditors, and other stakeholders in the company's financial health. AI augments traditional risk assessment methodologies by providing a more holistic and nuanced understanding of risk factors and their interdependencies. By

considering a wide range of factors such as market volatility, regulatory changes, geopolitical events, and macroeconomic indicators, AI enables organizations to develop more comprehensive risk models that capture the multifaceted nature of modern risk landscapes.

AI-driven financial reporting systems can enhance compliance with regulatory standards and reporting requirements. By incorporating built-in validation checks, audit trails, and regulatory compliance modules, AI systems help ensure that financial statements adhere to accounting principles and regulatory guidelines. This reduces the risk of non-compliance penalties and litigation, while also instilling greater confidence among investors, creditors, and other stakeholders in the integrity of the financial reporting process.

AI's impact on financial reporting is transformative, enabling organizations to streamline processes, enhance accuracy, and improve transparency in the preparation and dissemination of financial statements. By harnessing the power of AI-driven automation and analytics, businesses can elevate the quality of financial reporting, strengthen compliance, and build trust with stakeholders in an increasingly complex and data-driven business environment.

it is essential to recognize that AI is not a panacea and comes with its own set of challenges and considerations, including data privacy concerns, algorithmic biases, and regulatory complexities. Therefore, organizations must approach the adoption of AI in financial reporting with careful planning, robust governance frameworks, and a commitment to ethical and responsible use.

Ultimately, the journey towards AI-driven financial reporting is one marked by continual learning, adaptation, and refinement. By embracing the transformative potential of AI technologies and leveraging them to enhance financial reporting practices, organizations can unlock new opportunities for growth, innovation, and value creation in the ever-evolving landscape of finance.

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ASPECTS OF CORPORATE GOVERNANCE

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Abstract

The issue of corporate governance has become increasingly prominent amidst evolving regulatory landscapes, changing stakeholder expectations, and notable corporate scandals. Christine Mallin's book, "Corporate Governance"⁶, emerges as a crucial resource in understanding the intricacies of corporate governance structures, practices, and challenges faced by modern businesses. As a distinguished researcher in this field, Mallin offers valuable insights into theoretical frameworks, empirical evidence, and practical considerations, serving as a guide for researchers, practitioners, policymakers, and students alike. Mallin's work highlights the pivotal role of effective corporate governance in upholding organizational integrity, accountability, and sustainable performance. By exploring topics such as board composition, executive compensation, shareholder activism, and regulatory compliance, Mallin navigates through the complexities of corporate governance with precision and rigor. Notably, Mallin's global perspective acknowledges the diverse corporate governance practices and regulatory contexts worldwide, providing readers with a comprehensive understanding of governance dynamics and their implications for organizational success and stakeholder trust. Building upon Mallin's seminal work, this paper aims to offer an in-depth scholarly analysis within the framework of corporate governance. The research hypothesis of this paper is that effective corporate governance practices significantly contribute to creating an environment conducive to investment and competition. The research objectives include examining the theoretical foundations of corporate governance, analyzing empirical evidence on its impact, identifying key research questions, and employing literature review. In conclusion, the paper seeks to provide valuable insights into the intricate relationship between corporate governance, investment climate, and competitiveness, thereby contributing to both academic discourse and practical applications in the corporate world.

Key-words: *corporate governance, regulatory framework, social responsibility, stakeholder engagement, risk management.*

Introduction

In today's global business landscape, corporate governance and social responsibility have emerged as fundamental pillars shaping organizational behavior and performance. With increasing scrutiny from stakeholders and regulatory bodies, corporations are under pressure to adopt robust governance frameworks that ensure transparency, accountability, and ethical conduct. Simultaneously, societal

expectations for businesses to contribute positively to environmental and social well-being have intensified, highlighting the importance of integrating sustainability principles into corporate strategies.

At the forefront of analyzing these dynamics is Mallin, whose comprehensive examination of corporate governance practices provides invaluable insights into navigating the complexities of modern business environments⁷. Through his meticulous analysis, Mallin delves into the regulatory frameworks, evolving standards, and best practices that underpin effective corporate governance⁸. Moreover, his exploration extends to the integration of social responsibility considerations, emphasizing the imperative for corporations to go beyond mere compliance and actively contribute to societal advancement.

This paper aims to elucidate Mallin's analysis and its profound significance in enhancing our understanding of corporate governance in contemporary contexts. By synthesizing key insights from Mallin's work, this paper seeks to shed light on the challenges, opportunities, and best practices associated with corporate governance and social responsibility integration. Through a structured examination of Mallin's findings, this paper will delineate the regulatory landscape, discuss the evolution of governance practices, and explore the implications for stakeholder engagement and risk management.

Regulatory Framework of Corporate Governance

In the realm of corporate governance, regulatory frameworks serve as the bedrock upon which organizations build their governance structures and practices⁹. Mallin's analysis offers a deep dive into these frameworks, encompassing the intricate web of laws, regulations, and standards that govern corporate behavior. This section of the paper aims to elucidate Mallin's examination of these regulatory landscapes, shedding light on their nuances, implications, and evolving nature.

At the heart of corporate governance regulation are governmental and non-governmental entities tasked with overseeing corporate conduct and ensuring compliance with established norms. Mallin meticulously dissects the roles and responsibilities of these entities, ranging from legislative bodies crafting laws to regulatory agencies enforcing them. Moreover, he delves into the interplay between national and international regulatory bodies, highlighting the complexities that arise in a globalized business environment.

Central to Mallin's analysis is the exploration of how regulatory frameworks shape corporate behavior and decision-making processes¹⁰. By dissecting key regulations and standards, Mallin offers insights into the mechanisms through which governance practices are influenced and enforced. From financial reporting requirements to

board composition guidelines, Mallin's examination encompasses a broad spectrum of regulatory provisions that impact corporate operations.

Furthermore, Mallin's analysis extends beyond traditional regulatory bodies to include non-governmental entities, such as industry associations, standard-setting organizations, and advocacy groups. These entities play a pivotal role in shaping governance norms and practices, often through the promulgation of voluntary standards and guidelines. Mallin's scrutiny of their influence provides a holistic understanding of the regulatory landscape, capturing both mandatory compliance requirements and industry-driven best practices.

As regulatory frameworks continue to evolve in response to shifting societal expectations and economic dynamics, Mallin's analysis offers invaluable insights into the future trajectory of corporate governance regulation¹¹. By examining trends in regulatory reform, emerging areas of focus, and the implications for corporate behavior, Mallin equips stakeholders with the knowledge needed to navigate an increasingly complex regulatory environment.

Historical Development of Corporate Governance Practices

Mallin's analysis delves into the historical evolution of corporate governance practices, tracing the trajectory from traditional models to contemporary norms and standards. This section of the paper aims to unpack Mallin's exploration, shedding light on the key drivers of change and the emergence of new governance paradigms. Corporate governance, as we understand it today, has undergone a profound transformation over the decades, shaped by a myriad of internal and external factors. Mallin meticulously examines these historical dynamics, unraveling the intricate interplay between economic, social, and regulatory forces.

One of the pivotal drivers of change identified by Mallin is the shifting landscape of corporate ownership and control. Historically, corporate governance was predominantly centered around the interests of shareholders, with a focus on maximizing shareholder value. However, as ownership structures evolved, with the rise of institutional investors and diversified shareholding, governance practices began to adapt to accommodate a broader array of stakeholder interests¹².

Simultaneously, regulatory pressures and corporate scandals have played a significant role in shaping governance norms. Mallin's analysis scrutinizes landmark events such as corporate collapses and governance failures, highlighting their catalytic effect on regulatory reform and the establishment of new governance standards. From the Sarbanes-Oxley Act in the United States to the UK Corporate Governance Code, Mallin elucidates how these regulatory responses have reshaped governance practices worldwide.

Moreover, Mallin explores the influence of broader societal trends on corporate governance, such as the growing emphasis on sustainability and corporate social responsibility. As stakeholders demand greater accountability and transparency,

corporations are compelled to integrate environmental, social, and governance (ESG) considerations into their governance frameworks. Mallin's analysis captures this paradigm shift, examining how corporations are navigating the complexities of ESG integration and stakeholder engagement.

In essence, Mallin's analysis offers a nuanced understanding of the historical forces that have shaped corporate governance practices. By unraveling the complex interplay of economic, regulatory, and societal factors, Mallin provides valuable insights into the evolution of governance norms and standards.

Challenges in Regulatory Adherence and Effective Governance Practices

Mallin's analysis meticulously identifies the multifaceted challenges that corporations encounter in their endeavor to comply with regulatory requirements and implement robust governance practices. This section of the paper delves into Mallin's insights, shedding light on the complexities and nuances inherent in navigating the regulatory landscape and fostering a culture of effective governance.

At the forefront of the challenges faced by corporations is the dynamic nature of regulatory frameworks¹³. Mallin underscores the complexity and ever-evolving nature of regulatory requirements, which often span multiple jurisdictions and encompass a diverse array of legal and compliance obligations. Corporations grapple with the formidable task of interpreting and adhering to these regulations while simultaneously ensuring alignment with their strategic objectives and operational realities.

Moreover, Mallin elucidates the inherent tension between regulatory compliance and operational agility. While regulatory requirements are designed to safeguard shareholder interests and mitigate risk, they can sometimes impose rigid structures and bureaucratic hurdles that stifle innovation and impede organizational agility. Mallin's analysis delves into the delicate balance that corporations must strike between compliance and flexibility, navigating the fine line between adherence to regulatory mandates and fostering a culture of innovation and adaptability.

Another significant challenge highlighted by Mallin is the proliferation of regulatory oversight and enforcement mechanisms. As regulatory bodies intensify their scrutiny of corporate conduct, corporations are confronted with heightened compliance burdens and increased exposure to regulatory scrutiny. Mallin's examination explores the implications of this regulatory landscape, analyzing the potential impact on corporate decision-making, risk management strategies, and overall governance effectiveness.

Furthermore, Mallin identifies cultural and organizational barriers that impede effective governance practices within corporations. From entrenched hierarchies and siloed decision-making structures to resistance to change and lack of accountability, corporations grapple with internal dynamics that hinder the implementation of robust governance frameworks. Mallin's analysis probes into these organizational challenges, offering insights into the systemic reforms and cultural shifts necessary

to foster a governance culture that prioritizes transparency, accountability, and ethical conduct.

In essence, Mallin's exploration of the challenges in regulatory adherence and effective governance practices underscores the complex interplay of external regulations, internal dynamics, and organizational culture. By unpacking these challenges, Mallin provides valuable insights into the barriers that corporations must overcome in their pursuit of governance excellence and regulatory compliance.

5. Integrating Social Responsibility into Corporate Governance

Mallin's comprehensive analysis delves into the integration of social responsibility principles into corporate governance frameworks, illuminating the significance of ethical conduct, sustainability, and stakeholder engagement in contemporary business practices¹⁴. This section of the paper explores Mallin's insights, highlighting the transformative potential of embedding social responsibility within corporate governance structures.

Central to Mallin's analysis is the recognition that corporations play a pivotal role in shaping societal outcomes beyond their immediate economic interests. Mallin underscores the imperative for corporations to adopt a broader conception of corporate purposes that extends beyond profit maximization to encompass the ethical, environmental, and social dimensions of their operations. By integrating social responsibility principles into corporate governance frameworks, corporations can align their business strategies with broader societal goals, fostering sustainable value creation and long-term resilience.

Ethical conduct lies at the heart of Mallin's exploration, emphasizing the importance of integrity, transparency, and accountability in corporate decision-making. Mallin's analysis underscores the ethical imperative for corporations to uphold high standards of conduct, adhere to legal and regulatory requirements, and act in the best interests of their stakeholders. By embedding ethical principles into governance structures, corporations can cultivate a culture of trust and integrity, bolstering their reputation and fostering stakeholder confidence.

Moreover, Mallin's analysis delves into the concept of sustainability and its integral role in corporate governance. Mallin emphasizes the need for corporations to adopt sustainable business practices that minimize environmental impact, promote social welfare, and ensure long-term viability. By integrating sustainability considerations into governance frameworks, corporations can mitigate risks, capitalize on opportunities, and create shared value for stakeholders and society at large.

Stakeholder engagement emerges as another cornerstone of Mallin's analysis, underscoring the importance of inclusive decision-making processes that consider the interests of all stakeholders. Mallin advocates for meaningful dialogue and collaboration with stakeholders, including employees, customers, investors, and communities, to foster mutual understanding, trust, and cooperation. By actively engaging with stakeholders, corporations can gain valuable insights, anticipate emerging trends, and build resilient relationships that enhance their social license to

operate. In essence, Mallin's insights into the integration of social responsibility principles into corporate governance frameworks offer a compelling vision for responsible and sustainable business practices. By embracing ethical conduct, sustainability, and stakeholder engagement, corporations can not only enhance their reputations and mitigate risks but also contribute positively to society and create enduring value for all stakeholders.

Stakeholder Engagement and Accountability in Corporate Governance

Mallin's nuanced discussion on stakeholder engagement and accountability within the realm of corporate governance offers valuable insights into the evolving dynamics of corporate responsibility and transparency¹⁵. This section of the paper will delve into Mallin's analysis, with a particular focus on the pivotal roles of boards and executives in fostering transparency and responsiveness to stakeholders' interests. At the core of Mallin's examination lies the recognition that corporations operate within complex ecosystems comprising diverse stakeholders, including employees, customers, investors, communities, and regulatory bodies. Mallin underscores the imperative for corporations to engage with these stakeholders in meaningful ways, acknowledging their interests, concerns, and perspectives in decision-making processes. By fostering transparent and inclusive dialogue with stakeholders, corporations can build trust, enhance legitimacy, and foster mutually beneficial relationships that contribute to long-term sustainability and value creation. Central to Mallin's analysis is the role of boards of directors in overseeing stakeholder engagement and ensuring accountability within corporate governance structures. Mallin emphasizes the fiduciary duties of boards to act in the best interests of the company and its stakeholders, underscoring the importance of board composition, independence, and diversity in driving effective governance practices. Through diligent oversight and strategic guidance, boards can play a crucial role in embedding stakeholder considerations into corporate strategy, risk management, and performance evaluation processes.

Moreover, Mallin examines the responsibilities of executives in driving stakeholder engagement initiatives and fostering a culture of accountability within organizations. Executives are tasked with translating board directives into actionable strategies, policies, and practices that prioritize stakeholder interests and uphold ethical standards. Mallin highlights the importance of executive leadership in setting the tone from the top, championing transparency, and fostering a culture of openness and integrity throughout the organization.

Mallin's analysis underscores the need for robust mechanisms for stakeholder engagement and accountability within corporate governance frameworks. This entails establishing clear channels of communication, conducting regular stakeholder consultations, and integrating stakeholder feedback into decision-making processes. By embracing transparency and responsiveness, corporations can

enhance their resilience, reputation, and social license to operate in an increasingly interconnected and scrutinized business environment.

In conclusion, Mallin's discussion on stakeholder engagement and accountability within the context of corporate governance offers valuable insights into the evolving role of boards and executives in fostering transparency and responsiveness. By embracing their fiduciary duties and embracing stakeholder-centric approaches, corporations can build trust, foster resilience, and create sustainable value for all stakeholders.

Corporate Governance Practices: Enhancing Risk Management and Sustainability

Mallin's analysis delves into the intricate relationship between corporate governance practices and the management of risks, particularly those pertaining to environmental, social, and governance (ESG) factors¹⁶. This section of the paper will scrutinize Mallin's insights, elucidating how corporate governance frameworks contribute to risk management and sustainability efforts by identifying and mitigating ESG risks. Central to Mallin's examination is the recognition that effective corporate governance is indispensable for safeguarding the long-term interests of stakeholders and mitigating various risks that can undermine organizational resilience and sustainability. Mallin emphasizes the importance of robust governance structures, processes, and oversight mechanisms in identifying, assessing, and addressing ESG risks that have the potential to impact business operations, reputation, and financial performance.

Mallin underscores the role of boards of directors in overseeing risk management practices and ensuring that ESG considerations are integrated into strategic decision-making processes. Boards are tasked with establishing risk management frameworks, setting risk appetite and tolerance levels, and monitoring the effectiveness of risk mitigation strategies. By fostering a culture of risk awareness and accountability, boards can help organizations anticipate and respond to emerging ESG risks proactively.

Moreover, Mallin explores how executive leadership drives sustainability efforts and ESG risk management within organizations. Executives are responsible for embedding ESG considerations into corporate strategy, operations, and stakeholder engagement initiatives. Mallin highlights the importance of aligning executive incentives with sustainability objectives and fostering a culture of responsibility and innovation to address ESG challenges effectively.

One of the key insights gleaned from Mallin's analysis is the interconnected nature of ESG risks and their potential to impact organizational resilience and value creation. Mallin emphasizes the need for holistic risk management approaches that consider not only financial risks but also environmental, social, and governance dimensions. By integrating ESG risk assessments into decision-making processes,

organizations can identify emerging threats, capitalize on opportunities, and enhance their overall sustainability performance.

Mallin's analysis underscores the imperative for corporations to adopt proactive and forward-looking approaches to ESG risk management, guided by principles of transparency, accountability, and stakeholder engagement. By embedding ESG considerations into corporate governance frameworks, organizations can enhance their resilience, reputation, and long-term value creation potential.

Integration of Governance and Social Responsibility: Best Practices and Case Studies

Mallin's analysis provides valuable insights into how effective governance practices and socially responsible initiatives can positively impact organizational performance and enhance stakeholder relations.

Mallin's examination emphasizes the importance of aligning governance principles with social responsibility objectives to create value for both the organization and its stakeholders. By adopting best practices in governance and integrating social responsibility into core business strategies, organizations can cultivate trust, strengthen reputation, and drive sustainable growth.

Through case studies, Mallin illustrates how leading companies have effectively integrated governance and social responsibility into their operations, thereby reaping tangible benefits. These case studies showcase innovative approaches to governance, ethical leadership, and stakeholder engagement, which have resulted in improved financial performance, enhanced brand reputation, and increased stakeholder trust.

Furthermore, Mallin's analysis highlights the role of governance structures, such as boards of directors and executive leadership, in driving the integration of social responsibility into organizational decision-making processes. By championing ethical conduct, sustainability initiatives, and stakeholder engagement, boards and executives can foster a culture of responsibility and accountability throughout the organization.

The case studies examined by Mallin provide compelling examples of how organizations have leveraged governance and social responsibility to mitigate risks, seize opportunities, and create shared value for stakeholders. From implementing sustainable business practices to engaging with local communities, these case studies offer valuable lessons for organizations seeking to enhance their social and environmental impact while driving long-term success.

By synthesizing Mallin's analysis of best practices and case studies, this paper aims to underscore the importance of integrating governance and social responsibility in contemporary business contexts. Through effective governance structures and socially responsible initiatives, organizations can not only achieve financial success but also contribute positively to society and the environment, thereby building stronger, more resilient businesses for the future.

Conclusions: Insights and Future Directions in Corporate Governance

In conclusion, Mallin's analysis offers valuable insights into the intricacies of corporate governance and its intersection with social responsibility. By synthesizing key findings from Mallin's work, this paper has shed light on several critical aspects: Firstly, Mallin's examination of regulatory frameworks underscores the importance of legal and regulatory compliance in corporate governance. Understanding and adhering to regulatory requirements are essential for organizations to maintain legitimacy and trust among stakeholders.

Secondly, Mallin's exploration of the historical development of corporate governance practices highlights the evolving nature of governance norms and standards. This historical perspective provides valuable context for understanding current governance challenges and opportunities.

Thirdly, Mallin's identification of challenges in governance implementation underscores the complexities involved in effectively managing governance processes within organizations. Addressing these challenges requires a nuanced understanding of organizational dynamics and stakeholder expectations.

Furthermore, Mallin's analysis of stakeholder engagement and accountability emphasizes the crucial role of boards and executives in fostering transparency and responsiveness. Engaging with stakeholders and demonstrating accountability are essential for building trust and legitimacy in governance practices.

In light of these findings, future research in corporate governance could explore several avenues:

1. Cross-cultural perspectives: Investigating how governance practices vary across different cultural contexts and the implications for global business operations.
2. Technological Disruption: Exploring innovative approaches to stakeholder engagement and accountability that go beyond traditional governance mechanisms.
3. Sustainability integration: Investigating strategies for integrating sustainability principles into governance frameworks to address pressing environmental and social challenges.
4. Board diversity: Examining the role of board diversity in enhancing governance effectiveness and organizational performance

By addressing these research areas, scholars and practitioners can further advance our understanding of corporate governance and contribute to the development of best practices that promote ethical conduct, sustainability, and stakeholder value. Ultimately, the insights gleaned from Mallin's analysis serve as a foundation for future research and practice in corporate governance, guiding organizations toward more responsible and sustainable forms of governance.

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LEVERAGING ARTIFICIAL INTELLIGENCE FOR RISK MANAGEMENT IN ALBANIAN SMES: OPPORTUNITIES AND CHALLENGES

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Abstract

Small and medium-sized firms (SMEs), which significantly contribute to GDP and employment, are the backbone of the Albanian economy. However, these entities often face major challenges in risk management due to their limited resources and lack of access to the most recent technical solutions. SMEs in Albania are relatively new to using artificial intelligence (AI), despite the fact that AI has the ability to completely transform risk management approaches. This article explores the possible advantages and disadvantages of implementing AI in risk management strategies within this framework.

The study specifically emphasizes how AI may reduce operating costs, provide automated risk assessments, enable real-time risk monitoring, and provide customized solutions. We also identify important roadblocks, like a lack of understanding about artificial intelligence, a poor technological infrastructure, and cultural resistance to technology adoption. In order to increase the resilience and competitiveness of Albania's SME sector, the report ends with strategic recommendations for companies and policymakers to support the adoption of AI technologies.

Keywords: *Artificial Intelligence, Risk Management, Albanian SMEs, Technological Adoption, Real-time Monitoring, Automated Risk Assessment, Infrastructure Development, AI Implementation Challenges, Economic Resilience, Policy Reform*

Introduction

Risk management is one of the ongoing issues that SMEs deal with in their day-to-day operations. These businesses frequently have trouble effectively detecting, evaluating, and managing risks because they lack the necessary resources and experience. Financial instability, market competition, regulatory compliance, and cybersecurity risks are common difficulties in risk management. Rapid changes in the state of the global economy and technological developments amplify these risks, rendering traditional risk management strategies ineffective and subjecting SMEs to serious vulnerabilities.

For SMEs, artificial intelligence (AI) offers a game-changing chance to improve risk management. Through the use of AI technology, these businesses can improve their capacity for risk prediction and mitigation by utilizing automated decision-making systems, predictive modeling, and sophisticated analytics. In order to help SMEs, make wise decisions and preserve their competitive edge, artificial intelligence (AI)

can offer greater insights into consumer behavior, market trends, and operational inefficiencies. This article aims to investigate the use of artificial intelligence (AI) in risk management for small and medium-sized enterprises (SMEs) in Albania and assess its possible influence on improving operational resilience and strategic planning. The goal of this investigation is to offer SMEs in Albania a road map for incorporating AI solutions that have the ability to revolutionize their risk management strategies.

Literature review

Basic financial controls, following the law, and crude operational risk assessments are common traditional risk management techniques in Albanian SMEs. Owing to the scarcity of sophisticated instruments and the emphasis on pressing operational issues, these approaches are typically reactive as opposed to proactive. Risk mitigation typically entails standard insurance and contingency planning, whereas risk detection is typically accomplished by straightforward observation and reporting procedures. However, the dynamic and unpredictable nature of global corporate environments is rapidly challenging the efficacy of these old methods, requiring a shift towards more complex risk management methodologies. [1]

AI has been significantly advancing risk management across a number of industries globally. The use of AI for predictive analytics, where machine learning models forecast probable failures or monetary losses based on historical data, is highlighted in literature. By examining purchasing trends and consumer behavior, artificial intelligence (AI) algorithms are utilized in the financial industry for fraud detection and credit scoring. AI-driven process automation, which not only detects possible disruptions but also suggests mitigating measures, is used to control operational risks. The literature also emphasizes AI's contribution to regulatory compliance, wherein natural language processing (NLP) applications track compliance and keep track of changes in legal frameworks. These uses highlight how artificial intelligence (AI) has the power to revolutionize risk management by providing more precise, efficient, and economical solutions. [2][3]

AI technology usage in Albanian SMEs is still in its early stages. According to research, even if people are becoming more aware of AI's advantages, there are still a number of obstacles preventing its widespread use. These include the expensive nature of putting AI ideas into practice, a dearth of qualified workers, and a limited technological infrastructure. Previous research has indicated that although a few forward-thinking businesses in industries like finance and telecoms have started experimenting with AI, the overall uptake in the SME sector is still quite low. In addition, there is a dearth of academic and industrial research on AI applications in SMEs in Albania, which suggests a serious lack of localized knowledge and experience. [4] Opportunities of AI in Risk Management for Albanian SMEs

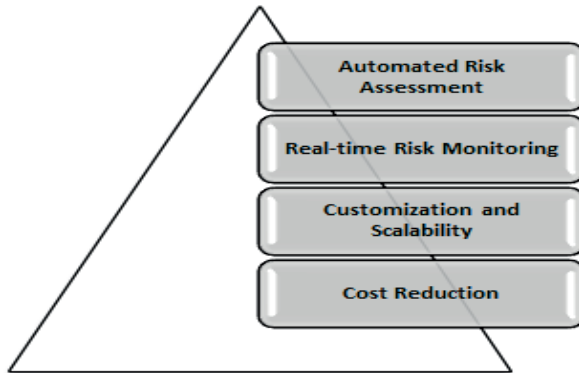


Figure 1 Opportunities of AI in Risk Management for Albanian SMEs

Because AI algorithms can automate the processing of large amounts of data, they are especially well-suited to improve risk assessment capacities in SMEs. These algorithms can sort through complicated datasets, including as financial transactions and consumer interactions, broader economic indicators, and social media trends, using machine learning and predictive analytics to find patterns and anticipate possible dangers. By evaluating historical market trends, corporate performance information, and external economic factors, AI, for example, can be used to forecast financial risks, enabling SMEs to more precisely predict credit risks or financial downturns. The capacity for prediction not only improves the accuracy of risk evaluations but also facilitates proactive risk management by lowering the probability and consequences of possible risks.

AI systems can provide real-time monitoring of several risk metrics, revolutionizing risk management for SMEs in Albania. Artificial intelligence (AI)-powered dashboards and Internet of Things (IoT) sensors are examples of technologies that may continuously monitor operational procedures and notify management of any irregularities that might point to new hazards, like equipment failures, supply chain interruptions, or strange financial activities. SMEs may respond quickly to reduce hazards before they become more serious problems thanks to this real-time capacity. Traditional approaches, which frequently depend on recurring reviews and assessments, are unable to match the dynamic tool for risk management that artificial intelligence (AI) systems offer in terms of immediacy.

AI solutions are unique in that they can be scaled and tailored to meet the unique requirements of small and medium-sized businesses. AI platforms can be created using modular architectures, in which parts can be changed, added, or withdrawn as needed to accommodate the needs of subject matter experts at any given time. For example, as a small business grows and its needs become more complex, it may eventually scale up to incorporate more sophisticated AI functionalities like predictive maintenance or advanced cybersecurity. Initially, the small business may use basic AI tools for monitoring cash flow and customer satisfaction. Because of its

scalability, AI solutions are guaranteed to be applicable to SMEs of all sizes and to stay relevant as their business needs change.

For SMEs, implementing AI in risk management might result in significant cost savings. Artificial intelligence (AI) can lower labor expenses by eliminating the need for significant human work by automating regular risk monitoring and assessment operations. Additionally, by foreseeing hazards and recommending preventative steps, AI's predictive nature helps avoid expensive mishaps and downtimes. AI's capacity to improve decision-making also results in more effective resource allocation and operational efficiency, which reduces waste and operating expenses. AI is a cost-effective solution for risk management in SMEs since, although the initial investment may be high, there may be long-term benefits from more effective risk management.

For Albanian SMEs, integrating AI into risk management offers game-changing possibilities: improved predictive skills, real-time monitoring, adaptable and scalable solutions, and substantial cost savings. AI is a key tool for these businesses as they manage the difficulties of a quickly shifting economic environment since it will help them remain resilient and continue to develop.

Challenges in Implementing AI

The status of the technology infrastructure in Albanian SMEs is one of the main obstacles to applying AI. Different industries have different levels of technology preparedness, and SMEs, who frequently lack the finances for tech improvements, are even less prepared. It's possible that modern or defunct gear, data storage capacity, and high-speed internet are missing or inadequate to support complex AI systems. This infrastructure gap may make it more difficult for AI technologies to integrate and operate effectively, which could result in inefficient performance and less reliable AI-driven insights.

AI system implementation success is largely dependent on the availability of qualified experts who can design, oversee, and understand these systems. Similar to many developing nations, Albania has a serious shortage of experts in data science, machine learning, and AI development. Additionally, SMEs face a wider problem with basic digital literacy, which may impede the successful adoption and application of AI technologies. SMEs may find it difficult to fully utilize AI if they do not have sufficient training and continued professional growth in these cutting-edge tech fields. This could result in less than ideal use of these tools or even expensive mistakes.

SMEs are not an exception to the rule that many firms exhibit resistance to change. When it comes to embracing new technology like artificial intelligence (AI), this cultural divide can be especially noticeable. There can be doubts about AI's dependability and efficacy, worries about jobs being lost, or just a preference for more conventional ways of doing things. Moreover, the dynamic, experimental approach necessary for successful AI integration may not be supported by the rigid or hierarchical organizational structures that are frequently seen in SMEs. Encouraging a more tech-forward mindset through education, leadership

development, and change management will be crucial to overcoming these organizational and cultural barriers.

A number of ethical and legal issues are also raised when implementing AI in corporate operations. It's possible that Albania's legislative framework for privacy, data protection, and the use of AI is still developing or isn't keeping up with how quickly technology is developing. These regulatory environments can be complicated and full of unknowns, and SMEs must negotiate them. Significant obstacles also arise from ethical concerns like bias in AI algorithms, responsibility for judgments made by AI, and transparency in AI procedures. Businesses can avoid legal ramifications and foster trust with stakeholders by ensuring ethical integrity and compliance while utilizing AI.

These difficulties highlight the difficulties Albanian SMEs face while implementing AI technology. A coordinated strategy involving infrastructure development, education and training programs, cultural change management, and a well-defined regulatory framework is needed to effectively address these issues and ensure that AI can be beneficially and responsibly incorporated into SMEs' risk management plans.

Discussion

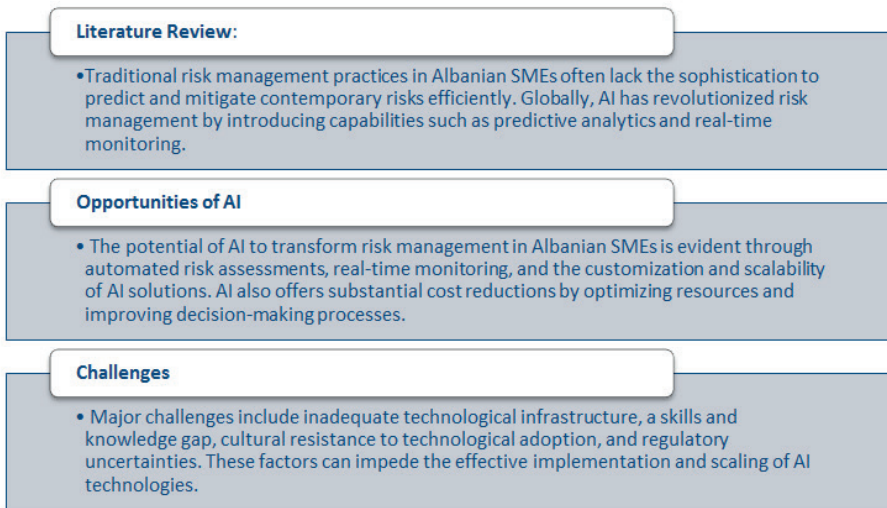


Figure 2 Synthesis of Findings

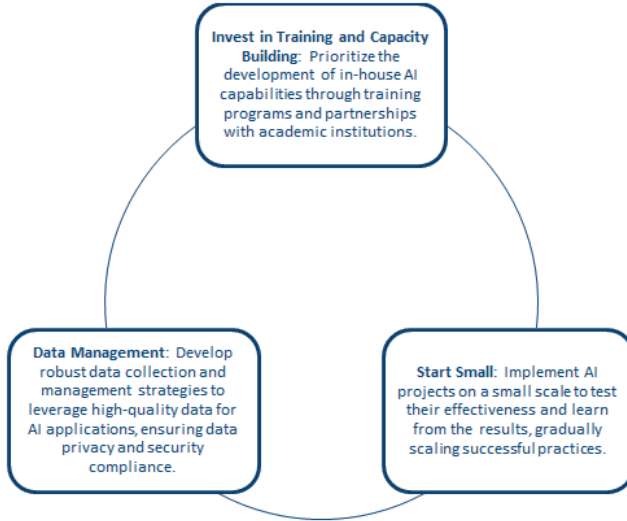


Figure 3 Recommendations for SMEs

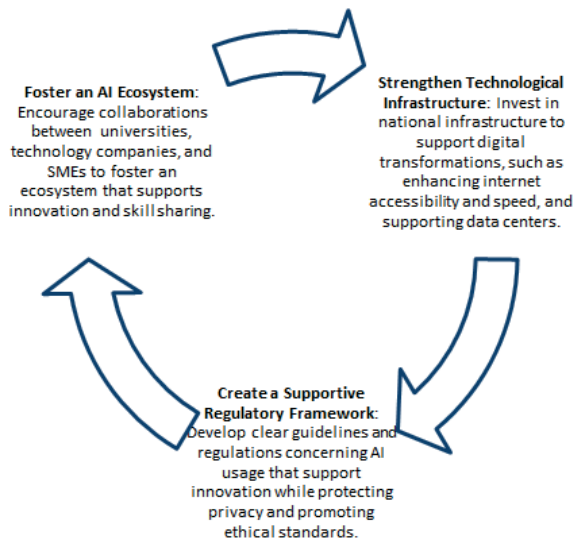


Figure 4 Recommendations for Policymakers

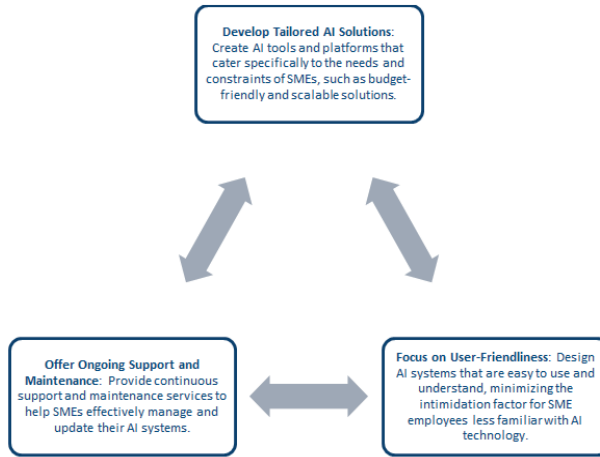


Figure 5 Recommendations for Technologists

Albanian SMEs may better negotiate the obstacles of implementing AI and realize its full potential to transform their risk management procedures by incorporating these insights and suggestions. Technologists and policymakers alike are essential in fostering an atmosphere that encourages the uptake and efficient application of AI technologies.

Conclusion

Several important conclusions have been drawn from the study on the application of artificial intelligence (AI) in risk management in Albanian SMEs:

Accounting for the great majority of jobs and economic activity in Albania, SMEs are essential to the country's economy. This emphasizes how crucial it is to increase their competitiveness and resilience through better risk management.

In Albanian SMEs, traditional risk management frequently falls short of being able to effectively handle contemporary, dynamic hazards. There is a heavy reliance on manual procedures, which are laborious and ineffective at anticipating and averting possible hazards.

By automating risk assessments, offering real-time risk monitoring, and enabling specialized and scalable solutions, AI offers a number of options to improve risk management in SMEs. AI can potentially contribute to large cost reductions by optimizing resources and boosting decision accuracy.

Although AI has many advantages, its adoption is hindered by a lack of suitable technological infrastructure, a skills gap in the workforce, cultural reluctance to new technology, and ethical and legal issues. Prospects for the Future;

The future success and spread of artificial intelligence (AI) in risk management will mostly rely on advancements in technical infrastructure and the creation of legal frameworks that facilitate AI adoption while upholding moral principles.

To develop local AI knowledge, more funding must be allocated to education and training. This will promote the wider adoption and customisation of AI technology as well as aid in closing the existing skills gap.

An inventive ecosystem can be promoted by enhancing partnerships between SMEs, technology suppliers, educational institutions, and governmental organizations. The creation and implementation of AI solutions suited to the particular requirements of Albanian SMEs would be accelerated in such an environment.

The capabilities of AI systems will advance along with technology. In order for SMEs to effectively respond to a constantly shifting risk landscape, future AI solutions will need to be more flexible and simple to connect with current systems.

To sum up, despite certain obstacles, the strategic integration of AI in risk management has the potential to greatly improve the operational robustness and competitive advantage of small and medium-sized enterprises in Albania. It will take sustained dedication from all parties involved—business executives, legislators, and technologists—to fulfill this potential and move Albania's SMEs in the direction of a more stable and successful future.

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Automation of the process and generation of statistical reports for scientific conferences and journals in the Republic of Albania

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Abstract

The importance of the application proposal that is intended to be built lies in facilitating the work of Higher Education Institutions and mainly scientific researchers, enabling complete automation of the process. Currently, referring to the way of managing scientific data from different sources, this proposal is an urgent necessity for university environments and not only, emphasizing the necessity of applicability in the Academy of Sciences. Taking into consideration the current situation of the Academy of Sciences regarding the lack of a centralized and automated system, the goal of this project is precisely the establishment of the system which will be put at the disposal of the universities and the Academy of Sciences, connecting and displaying in real time to all relevant publications, as well as will enable the reflection of all doctoral theses, which until now are published manually on the web pages of the respective faculties. It is also worth mentioning the activity of partner institutions for more than 15 years, which have undertaken initiatives in the framework of the inclusion of young scientific researchers in national and international projects.

Keywords: RPA, OCR

Introduction

The idea of this project is to build a web application, with the aim of managing data on scientific research, articles and applied studies published by Albanian scientific researchers inside and outside the country. It should be noted that one of the features of the operational capacity of the project is the emphasis on information security and cyber security, which give priority to the main objectives expressed in this project proposal.

This application will be made available to the Academy of Sciences of Albania, as the institution responsible for the management and control of scientific activities.

This application aims to increase efficiency and accessibility on these scientific data for a precise traceability on their history.

The system will be used by scientific publishers and the latter will proceed in this way:

1. The user will create a personal account;
2. The user will be logged into the system;
3. The user will post data on the conference paper, publication or scientific material (the material can be posted as a link that sends to the website where the publication is located or as a document in pdf format);

4. All information will be stored and managed by a database;
5. A search interface for this information according to some specified fields.

Problems to be solved and needs to be met

The problems that our application can solve are of different natures. More important is the fact that it will help users to upload in real time any of their scientific papers (articles with an impact factor categorized according to EU standards, dissertations/doctoral theses, etc.), made the data to be centered in a single system and not distributed, referring to the Law of Higher Education for Scientific Research in Albania, with the idea of having a functional and efficient system for the digitization of research/scientific works.

Who are the actors involved (final beneficiaries, target groups)?

1. Academy of Sciences of Albania
2. Private and state universities, university colleges, Academies in the Republic of Albania
3. Scientific researchers
4. Teachers
5. Students of different study cycles
6. End Users

What are the objectives and expected results.

Objectives:

1. The establishment of a unified system that will summarize all types of information and scientific findings from publishers/researchers/scientific researchers of the Republic of Albania, accessible online within a central database. Results:
2. Ease and quick orientation of users in a dedicated system for uploading scientific works;
3. Facilitating finding and accessing scientific information according to research fields;
4. Wide use of findings at the academic level, but also by business;
5. Ensuring the integrity of each work and non-infringement of copyright and reducing plagiarism to minimum levels;
6. The possibility of expanding the network of scientific collaborations between researchers of common fields of studies.

Methodology and stability

What are the main activities of the project? The main activities of the system are management, addition, editing, deletion, search, etc. of all published scientific works. Also, it is intended to include various organizations and activities of interest, as part of the training, on an ongoing basis for each member of the work group.

1. Who will be your main implementing partners, what is the duration of your relationship with them and how will they be involved in the project?

The main implementing partners will be the Mediterranean University of Albania and AKKSHI, with a cooperation duration of two years.

2. How will the project achieve sustainability?

The sustainability of the project is related to the full realization of its purpose, expressed and elaborated in point 2.4 of this document.

3. Will there be multiplier effects?

The system that is intended to be built will be updated all the time, to be expanded with new and different functionalities, to ensure adaptation to the specific demands and needs of users, institutions, legislation in force, etc., also achieving a level of international expansion.

Literature review

Robotic Process Automation (RPA) according to Allweyer (2016) is a software that supports people in performing certain tasks or completely replaces them. Van der Aalst et al. (2018, p. 269) describes RPA as a tool that operates on applications installed on computer systems through a graphical user interface, as a human would. RPA is not a physical machine, but a software system that automatically communicates with other digital systems, sends and receives data, manipulates it and inserts it into other applications. Ernst and Young report on the implementation of an RPA in an Australian university to cover several processes that cover backend data processing and processes that are carried out by having meetings with students. The report claims that cost savings along with service quality are the two factors that will drive the adoption of RPA across higher education institutions worldwide. Among the processes that occur in the office such as financial reporting, HR and payroll were the ones that were automated while part of the admission process was the first to be automated among student-facing processes.

Flinders University used RPA to automate the issuance of letters of commendation to distinguished students based on their academic performance. Here RPA was trained to review the performance of over 24,000 students, three times a year, calculate their GPAs and select the best students to receive letters of commendation. This resulted in the complete automation of 45 manual steps and involved 17,000 transactions. In some processes, up to 85% of manual work was saved. The report further estimates that approximately 65% of processes across institutions are suitable for automation **the** university saw a tremendous benefit from its RPA implementation. Automating student document uploads improved processing time by one and a half times, completely eliminated manual processes, and reduced process touch points from 40 to 1, saving the university 1,330 hours of manual effort per year and most importantly, improving service time and reducing errors. In 2017 the government of Libya together with its Libyan Academy (LA) decided to approve a system called Student Information System (SIS). This system was installed on

behalf of Sebha University in this country as a web-based application and hosted by a local Internet Service Protocol (ISP). The goal of the system was the automation of student services as well as the management of various processes related to students.

A web database named student data system (SDS) was used to collect and correct all student data at Sebha University. The output of the system was evaluated using a similarity algorithm (Euclidean distance). SIS uses as input, among others, student data from the Google Cloud Platform, G-suite, Google Apps platforms and through the Business Process Model and Notation (BPMN) manages to automate the processes. The results showed that the new data collected by SDS can fill in gaps and correct errors in old manual data records. The system will help this university produce various student reports and better manage student data from enrollment to graduation. This system as a whole currently automatically manages data for 19,000 students and has a margin of error of 0.3.

Romblon State University located in the city of Odiongan, Philippines in March 2022 has taken the initiative to create an application that uses what is called Augmented Reality (AR). This technology is the integration of digital information with the user's environment in real time. Unlike virtual reality (VR), which creates a completely artificial environment, AR users experience a real-world environment with perceived information generated and superimposed on it.

This study aims to automate and augment the process of locating campus buildings and offices by providing information as well as navigation by scanning infrastructure image trackers as well as using the augmentation process. The app will enhance the campus experience of students and visitors by providing a fun and efficient way to navigate through the addition.

The State of Saudi Arabia has set as its goal the implementation of systems that automate the generation of active data from the database, data that are used for university accreditation processes. The Ministry of Education of this State has announced as a strategic plan that by 2030 it will develop this system. Current data from AlMaarefa University was used for the implementation of this application. The programmers generated a dataset using Sql Server technology and the Php, JavaScript programming language to build the application and through Business Intelligence (BI) technology the automation of the generation of data formats which are already being used for accreditation processes was achieved. i

Information systems for University administration during the pandemic have resulted in China being very efficient. ii These systems have been implemented in Chinese universities to automate the control of current systems.

The automation of libraries in universities has been very efficient in reducing the order of services to a minimum. This process saves time, minimizes errors, increases the efficiency of the process compared to the traditional process.

Various private companies and, of course, state institutions have started implementing applications to automate various business processes since early times. In the times we speak of, investing in Information and Communication Technology resources is no longer an option but an obligation for businesses.ⁱⁱⁱ In recent years, many public and private organizations have changed the way of thinking about the solutions of their business processes in order to improve the quality of the services provided, achieving a better efficiency.^{iv}

Since the 1990s, the concept of automated business processes appeared, which with the development of technology have become indispensable in the stable and real-time management of the progress of a business.

Business Process Reengineering is "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical contemporary performance measures such as cost, quality, service and speed" (Hammer and Champy). Workflow Management System (WfMS) is another example of technology that enables improved process performance in a collaborative network environment (Georgakopoulos et al.) A Workflow Management System (WfMS) enables process automation through the integration, coordination, and communication of human and automated tasks of a business process (Workflow Management Coalition, 1996). The discipline of business process management (Business Process Management) investigates methods and techniques to organize business processes in an efficient and effective way (Dumas, La Rosa, Mendling, & Reijers, 2013).

In his research (Otieno, 2010) showed through experiments during concrete projects that defining systems such as Enterprise Resource Planning (ERP) systems will be very difficult, especially if the perspective of stakeholders is not taken seriously (Editors, 1998) attribute Information System Development (ISD) project failures to stakeholder dissatisfaction with either the way the project was undertaken or the final product. The National Agency of the Information Society (AKSHI), as a central public institution under the Prime Minister, exercises its activity based on the Decision of the Council of Ministers No. 673, dated 22.11.2017.

Through this application system, the Albanian government has realized the optimization and automation of processes in all government institutions. Another case study concerns a banking institution in Portugal regarding the use of the BPMN approach and process automation applications. It turned out that it was possible to predict some risks; for **example**, the fact that a poorly trained model can decrease the productivity of process execution and increase errors from unsupported or even wrong decisions. Madakam in 2015 concluded that the use of networked devices increases the quality of life for human beings, operational efficiency and handles situations where human intervention is not at all possible. Madakam studied the business processes in banks giving solution alternatives for these processes using smart devices. Through Digital Banking, Intesa Sanpaolo Bank is using the

computerization of business processes, using network equipment and the Internet in transactions and other activities that customers use. Recent advances in the field of Artificial Intelligence, Machine Learning, Cryptography and distributed systems have provided the foundations for new technologies, including robotic process automation (Aguirre & Rodriguez, 2017), chatbots (Shawar & Atwell, 2007), machines with self-driving (Daily, Medasani, Behringer, & Trivedi, 2017), smart objects (Beverungen, Müller, Matzner, Mendling, & vom Brocke, 2017), blockchains (Nakamoto, 2008) and the Internet of Things (Atzori, Iera, Morabito, 2010). Several recent papers discuss the implications of the emergence of these technologies for BPM (e.g., Beverungen et al., 2017; Mendling et al., 2017; Oberländer, Röglinger, Rosemann, & Kees, 2017).

These technologies are likely to influence the way organizations design and execute business processes in the future. However, it is not clear in what specific way they will change BPM. It is likely that new Human Resources management systems will realize the possibility of managing personnel costs and mapping business processes for each department. Such an advantage will help to automate the unified corporate system of the enterprise and bring it to a new level by reducing costs and increasing competition. In the Faculty of Natural Sciences at the University of Tirana, near the Department of Informatics, 300 new students are enrolled in the Bachelor studies every academic year. 200 students in the Bachelor's program of Informatics study, and 100 Bachelor's in the Information Technology Study program. During the period of the Covid-19 pandemic, in this university RPA was applied for the first time, which automates the application process for scholarships by students of this faculty. OCR technologies were used to automatically generate data from pdf file to excel file. Data generation was achieved through this technology by manual input by administrators. So, the students uploaded the pdf data and sent it via email with a subject of the type of scholarship requested in the application. The program used was UIPATH. The Mediterranean University of Albania is one of the private higher education institutions in the Republic of Albania accredited at 4 (four) levels of study, professional diploma, bachelor's, master's and doctorate. As an institution of higher education in Albania, as well as a private company and other institutions in various sectors, the Mediterranean University of Albania has to manage from time to time sensitive internal and external data in real and limited time. The Mediterranean University of Albania had about 17,000 books in pdf format, which needed to be in the web application. It was impossible to manually convert all the unstructured data of the books, such as title, author, etc., into data formats. structured. This is because each book was required to be opened manually and the above mentioned data stored in the database. To create the suggested application, which is presented in point 4 of this paper, technologies Neatbeans version 8.02 were used as compiler, MySql Workbench as database and Caliber as OCR application to generate structured data. HTML, CSS, PHP are used as programming languages.

Before this app was active, the physical library was active. The work process for receiving and returning books was entirely manual.

All management of this process is documented through management forms. Through this application, RPA and search of these books will be enabled by all university users who want to have digital books. There are many universities around the world using RPA for data analysis. Some of them are: University of California, Berkeley: The University of California, Berkeley has used RPA to automate data analysis tasks in many fields, including computer science, finance, and student development. University of Melbourne: The University of Melbourne has developed projects with RPA to automate data analysis in many aspects of university administration, including financial reporting, student performance analysis, and scientific data analysis.

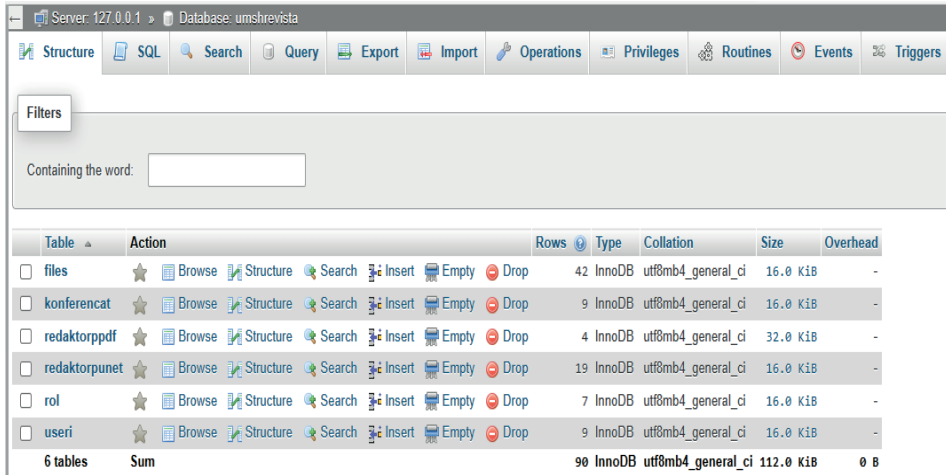
University of Texas at Austin: The University of Texas at Austin uses RPA for data analysis in many areas, including scientific research, financial analysis, and student data management.

University of Oxford: The University of Oxford is another institution that has explored the use of RPA for data analysis in some of its departments and research centers. This use includes scientific data analysis, social network analysis, and academic performance analysis.

Application

The application "Management system of scientific journals-SMRSH" has 6 tables which are created on a local server with server ip: 127.0.0.1, where the name of the database and the tables are specified and presented as in Figure 1. Each of the users are specified in addition to other fields such as first name, last name, email, password and role in the system. Each of the users has specified a unique field which is not repeated.

Image1:Application database tables from Xampp Control Panel



Server: 127.0.0.1 Database: umshrevista

Structure SQL Search Query Export Import Operations Privileges Routines Events Triggers

Filters

Containing the word:

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> files	★ Browse Structure Search Insert Empty Drop	42	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> konferencat	★ Browse Structure Search Insert Empty Drop	9	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> redaktorpdf	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci	32.0 KiB	-
<input type="checkbox"/> redaktorpunet	★ Browse Structure Search Insert Empty Drop	19	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> rol	★ Browse Structure Search Insert Empty Drop	7	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> useri	★ Browse Structure Search Insert Empty Drop	9	InnoDB	utf8mb4_general_ci	16.0 KiB	-
6 tables	Sum	90	InnoDB	utf8mb4_general_ci	112.0 KiB	0 B

Source: Generated by application from a personal HP ProBook 4540s laptop

XAMPP is the most popular PHP development environment. This environment is open source free and is usable in Windows, Linux and OS operating systems.

Image2:Application Source Code from Apache NetBeans IDE 20

Source: Generated by application from a personal HP ProBook 4540s laptop

assets	2/27/2024 4:25 PM	File folder	
lib	2/27/2024 4:25 PM	File folder	
Model	2/27/2024 4:25 PM	File folder	
sql	3/1/2021 4:54 PM	File folder	
vendor	2/27/2024 4:25 PM	File folder	
PDF (Absolute Essentials of Business and Eco...	3/20/2023 9:54 AM	Microsoft Edge P...	3,532 KB
PDF Amandeep Singh, Rohit Bansal, Sandhir S...	3/20/2023 9:54 AM	Microsoft Edge P...	33,816 KB
errors	1/24/2022 9:47 AM	PHP Source File	1 KB
f	1/19/2024 12:41 PM	PHP Source File	5 KB
help	3/31/2021 11:23 AM	PHP Source File	1 KB
home	3/31/2021 9:32 AM	PHP Source File	4 KB
index	6/3/2021 10:20 AM	PHP Source File	5 KB
login	3/31/2021 11:38 AM	PHP Source File	3 KB
logout	3/1/2021 3:52 PM	PHP Source File	1 KB
PDF Michael D. Hartline - Marketing Strategy...	3/20/2023 9:54 AM	Microsoft Edge P...	7,905 KB
nderfaqjaanekseve	1/27/2022 7:47 AM	PHP Source File	7 KB
PDF Outi Niininen (editor) - Contemporary Iss...	3/20/2023 9:54 AM	Microsoft Edge P...	2,149 KB
pedaglogin	1/20/2022 2:03 PM	PHP Source File	3 KB
pedagogu	1/20/2022 1:43 PM	PHP Source File	9 KB
phpSearchOption	3/31/2021 11:15 AM	PHP Source File	9 KB
PDF Robin Lowe, Isobel Doole, Alexandra Ken...	3/20/2023 9:54 AM	Microsoft Edge P...	22,394 KB
umsh (2)	3/1/2021 4:44 PM	JPG File	175 KB
user-registration	6/3/2021 10:18 AM	PHP Source File	7 KB
vi	1/19/2024 12:42 PM	PHP Source File	14 KB
PDF William M. Pride, O. C. Ferrell - Foundati...	3/20/2023 9:54 AM	Microsoft Edge P...	32,846 KB

Respectively, the file data uploaded by the authors to participate in a conference will be stored in the file table but also in a file of the project presented in Figure 2.

Figure 2 shows the application file which was built using the NetBeans compiler with the Php programming language and the MySQL database. Two directories have been created, respectively pdf and uploads. In these files, respectively, the papers uploaded by each author and the papers edited by the editors of the papers of each conference are stored

Figure 3 shows the registration and login interface of authors, editors and administrators. When a new user is registered, his role is automatically saved as USER. It is the administrator who creates the status policies for each user. As I have mentioned in the previous sections of this paper, this application is designed to be used by the academy of sciences and the university as an actor. Each of these actors must register in advance and then create conferences and manage scientific articles.

Image3:Registration and Login Interface



Source: Generated by application from a personal HP ProBook 4540s laptop
 Figure 4 shows the data management interfaces through the GUI as well as the functionalities that are active for each of the roles. In this system, it is possible to manage the payments that different authors have to make for each paper.

Image4: Interface of Administrator, Editor, Author and the functionalities of each

Kodi: 7
 Email: gerildqordja@umsh.edu.al
 Role: (ADMINISTRATOR)
 login

Administrator - Redaktor - Autor

Id	Emri	Mbiemri	Email	Statusi	Action
7	Gerild	Qordja	gerildqordja@umsh.edu.al	ADMINISTRATOR	✎ ✕
13	Dolantina	Hyka	dolantina.hyka@umsh.edu.al	REDAKTOR	✎ ✕
14	Ira	Gjika	ira.gjika@umsh.edu.al	REDAKTOR	✎ ✕
15	Besmir	Kanushi	besmir.kanushi@umsh.edu.al	REDAKTOR	✎ ✕
17	Jurgen	Mecaj	jurgen.mecaj@umsh.edu.al	REDAKTOR	✎ ✕
18	Besjana	Mema	besjana.mema@umsh.edu.al	AUTOR	✎ ✕
25	Dhimitri	Tole	dhimitri.tole@umsh.edu.al	ADMINISTRATOR	✎ ✕
29	Angjelo	Mehani	angjelo.mehani@umsh.edu.al	AUTOR	✎ ✕
30	Gerildzbxmgfvasc	Qordjanhasdvmas	jasdfkandsfav@yahoo.com	USERI	✎ ✕

Administrator ▾ Redaktor

- User Status
- Konferenca
- Rolet
- Punimet per Publikim

Redaktor ▾ Autor ▾

- Punimet
- Punimet e Mia

Autor ▾

- Hidh Punim
- Punimet e Mia

Source: Generated by application from a personal HP ProBook 4540s laptop

Image5: Functionality of uploading work to the system

Upload File

--Zgjidh Konference--

Source: Generated by application from a personal HP ProBook 4540s laptop
Figure 5 shows the user interface at the author level. The latter uploads the pdf file to the system and the work is saved in the database and displayed for downloading to the editor who is part of the conference chosen by the author

Conclusions

1. The use of this application will make it possible to access structured data on scientific works and filter data according to specific fields.
2. The application of OCR as a functionality will bring the possibility of creating reports directly from the PDF of each article.
3. The application of RPA through this application brings the possibility of connecting to work contracts for each lecturer.
So the lecturer automatically receives reports on the call paper that are left with the areas of expertise.

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Threads Dataset Analysis with Python: Analyzing User Reviews

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Abstract

The social network "Threads" has become an important platform for communication and collaboration between users. Users often share their opinions about products, services or different topics through reviews and comments. The analysis of this data can provide valuable insights into user attitudes, which can simultaneously be used to improve products or services. In this paper, a dataset of user reviews on threads will be analyzed using the Python programming language. The main objective of performing sentiment analysis on the Threads app is to evaluate user opinions about the app, which includes user reviews and comments, to gain meaningful insights from this data so that developers can use it to improve the functionality of the application. . To achieve this, advanced natural language processing (NLP) methods were used. Initially, the review data was processed to remove unnecessary elements and to prepare the text for analysis. Next, sentiment analysis was performed to determine whether ratings were generally positive, negative, or neutral. In order to visualize the most used words, a word cloud was built. The results show that the application "Threads" received generally positive feedback, with some concerns related to the functionality and stability of the application. Also, it can be said that users have a high brand loyalty, but also express concerns about privacy and data collection issues.

Key words: *dataset , sentiment analysis , wordcloud , library*

INTRODUCTION

Threads is an app designed to provide a more private and focused communication experience for friends and close contacts. The app aims to be a companion to Instagram, allowing users to share photos, videos and status updates specifically with a select group of people from their Instagram friends list. Threads offers features like automatic status updates based on a user's location and activity, making it easier to share updates with friends without having to type messages. However, not everyone is interested in it. Some appreciate it, while others criticize it. The main objective of performing sentiment analysis on the Threads app is to evaluate user opinions about the app, which includes user reviews and comments, to gain meaningful insights

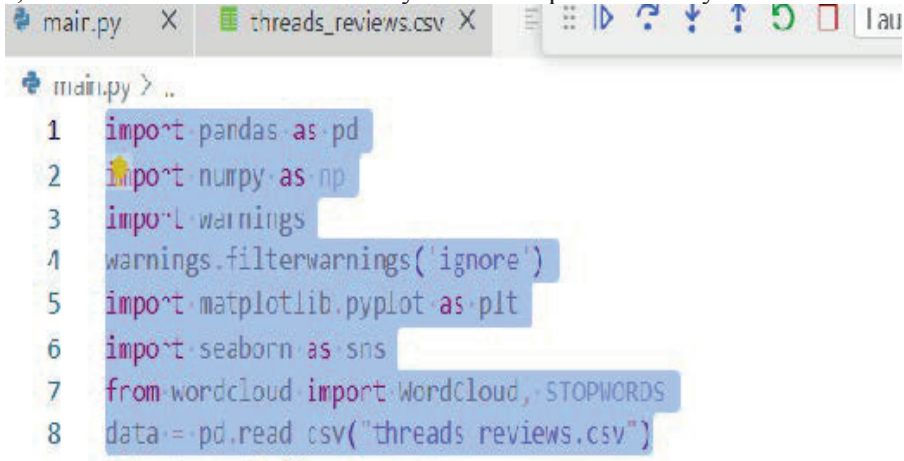
from this data so that developers can use it to improve the functionality of the application. . To achieve this, advanced natural language processing (NLP) methods were used. This paper represents an important step towards understanding user perceptions and can serve as a valuable resource for Threads developers and product managers. By better understanding the user experience, Meta can improve its services and ensure that Threads remains a preferred platform for users.

DATA AND METHODOLOGY

This study uses Python to analyze the data such as structured and unstructured data.. The purpose of this study is to identify the review of the Threads application. Data was collected from Kaggle. This study applies sentiment analysis to analyze the sentiment of the review from the users.

Importing libraries into Python

First, the libraries needed for the analysis were imported into Python.



```

main.py X threads_reviews.csv X
main.py > ..
1 import pandas as pd
2 import numpy as np
3 import warnings
4 warnings.filterwarnings('ignore')
5 import matplotlib.pyplot as plt
6 import seaborn as sns
7 from wordcloud import Wordcloud, STOPWORDS
8 data = pd.read_csv("threads_reviews.csv")

```

Figure 1. Importing libraries that use Python into Visual Studio Code.

Each of the libraries has a special function. Pandas is used to work with datasets making it possible to analyze, clean, explore and manipulate data. Numpy is used to work with vectors. Wordcloud is a library that creates a visual text based on the number of times a word appears. Stopwords are used to remove important words from the text. SentimentIntensityAnalyzer is a library that analyzes sentiment in text.

Reading data

The dataset that will be used in this paper is a collection of reviews for the Threads application downloaded from Kaggle based on the ratings received in the App Store and Google Play.

The dataset contains four columns: source, review description, rating, review date, which will be used in the analysis of this paper. Below is a portion of the dataset, after the command we entered in python.

```
DATE=P.S.read_csv("threads_reviewers.csv")
```

```
print(DATE.head())
```

```
source review_description rating review_date
```

```
0 Google Play Meh. Not the greatest experience on a Chromebo... 2 2023-07-08  
14:18:24
```

```
1 Google Play Pretty good for a first launch!! Its easy to u... 3 2023-07-19 20:52:48
```

```
2 Google Play For a brand new app, it's very well optimized.... 3 2023-07-06  
23:03:11
```

```
3 Google Play Great app with a lot of potential! However, th... 3 2023-07-10  
00:53:25
```

```
4 Google Play The app is good, but it needs a lot of functio... 3 2023-07-06 16:57:43
```

Data processing

Natural language processing (NLP) is a branch of artificial intelligence that can help computers understand the meaning of text like humans. NLP is used to pre-process the data, such as tagging, character transformation, filtering, tokenization and word root extraction. Tagging is a process of adding value by identifying each piece of data. This helps the model learn the data from the tag. In this paper, reviews are classified into three labels: positive, neutral and negative sentiment. The result of labeling is respectively:

Positive: Ratings of 4 or 5

Neutral: Ratings of 3

Negatives: Ratings of 1 or 2

This is one of the most important steps when performing sensitivity analysis. It involves cleaning and preparing the data for analysis, in order to achieve the highest possible accuracy of the results. Following this step, the removal of unwanted characters, such as punctuation marks, but also the removal of some words that are not essential for determining sensitivity, such as "the", "and", "is" and "and".

Other processing techniques include tokenization, which involves breaking text into individual words or phrases, and lemmatization, which involves reducing words to their basic form to account for spelling and usage variations. In general, proper data processing is essential for performing accurate and effective sensitivity analyses.

Next, we check with a single command in Python if we have NA values.

```
print(DATE.isnull().sum())
```

As you can see from the output, the dataset has no NA values in any of its columns. This fact facilitates the continuation of the analysis of the dataset.

```
PS C:\Users\User\Desktop\threads analysis> & 'C:\Users\User\AppData\Local\Microsoft\Windows\apps\python.python-2023.4.1\pythonFiles\lib\python\debugpy\adapter/./
```

```
source                0
review_description    0
rating               0
review date          0
```

DATA ANALYSIS

The Threads dataset is a comprehensive collection of user reviews from the Threads mobile app on Google Play Store & App Store, capturing valuable insights and sentiments. The dataset enables the understanding of user satisfaction, evaluation of app performance, and identification of emerging patterns.

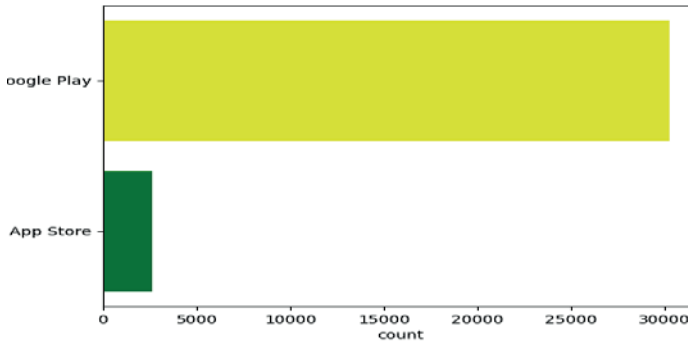


Figure 2. Application download sources

The sources of app downloads in the data set and their number show exactly where this product has made higher gains, namely with 30,270 downloads from the Google Play Store compared to 2,650 downloads from the App Store, making users of Android 90%-92% more likely to use this product than iPhone users. An interesting statistic, considering 29% of the global mobile market share belongs to the iPhone, a figure that doesn't reflect very well on downloads for this app.(Figure 2)

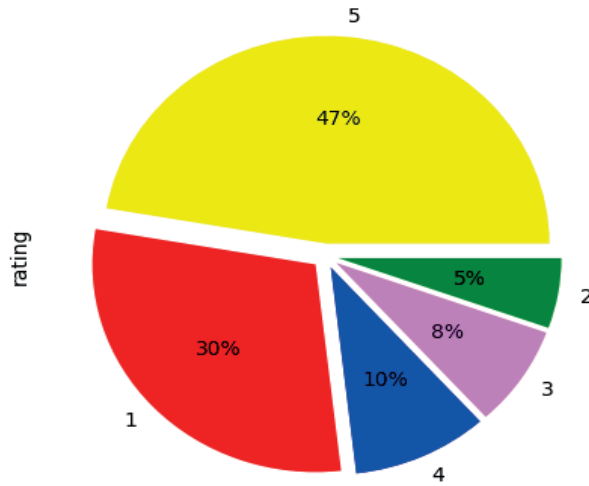


Figure 3. Distribution of ratings by number of star

Figure 3 shows that most of the evaluations, namely 47% of them, are 5 stars. But a significant percentage correspond to one-star ratings. While other assessments make up a small percentage.

WORDCLOUD

A *wordcloud* is a graphical representation of frequently used words in a text or set of texts. This technique is used to visualize word frequency and discover key themes or terms in a set of textual data. In a *wordcloud*, the size of a word is proportional to its frequency of occurrence in the analyzed text. The words that appear more frequently will be larger, while those that appear less often will be smaller. This type of visualization helps identify important terms or topics at a glance. As seen in the figure, the words Twitter, Google, thread, and Instagram dominate.

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