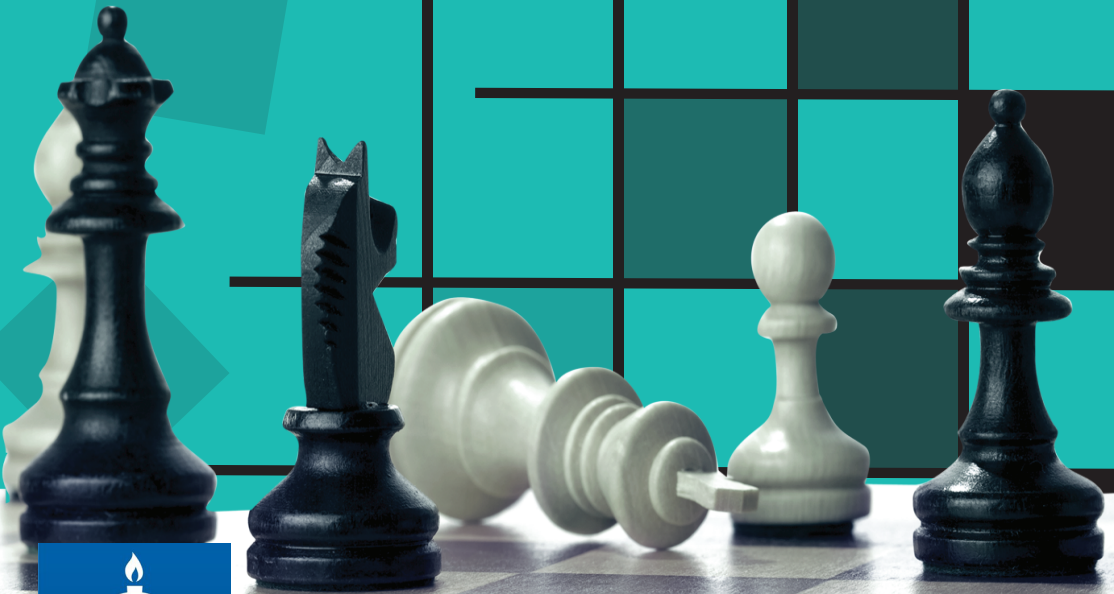


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DISCUSSIONS BETWEEN ECONOMIC AGENTS: Recent Issues



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DISCUSSIONS BETWEEN ECONOMIC AGENTS:

RECENT ISSUES

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PREFACE

The new subject of the series of “Discussion Between Economic Agents” is Recent Issues. This time we have papers from Turkiye, Nigeria, Poland, Afghanistan and Mexico. The dedication and seriousness of the authors raises the papers quality. The seventh book of the series has papers including the subjects economics, magamement, banking and finance. In addition, econometric methods are amazing and up to date to follow. There are fourteen valuable papers in the book. Let me discuss shortly about the articles.

In the first chapter of the book, Erinc BAYRI prepared a study named “An Assesment on Green Banking in The Turkish Banking Sector”. The author gives information about sustainable and environmentally friendly investments by addressing the Covid 19 pandemic period. In this framework, the effects of green banking practices in Turkey were examined.

In the second chapter Abigail Martínez MENDOZA, Cristina Bernal SANCHES and Alondra MENDOZA-NUNEZ in their work called “Indigeneous Housing in Mexico Otomi and Mazahuas in Precariousness”, aimed to learn whether housing in Mexico is ina good way or not. In the study on the housing sector in Mexico, the authors have interpreted the housing sector in a historical context with a critical point of view by taking the smallest details.

In the third part of the book, Ayse ERGIN UNAL and Serkan NAS, authors of the study called” Determination of Exchange Rate Determinants and Predictability with Machine Learnin Method”, analyzed Consumer Price Index, 5-Year Bond Yield, Industrial Production Index, Economic Confidence Index, Services Revenue, Tourism Revenue, and Foreign Trade Balance which were obtained from Turkish Statistically Data Service using monthly data. Author used machine learning algorithms to forecast the exchange rate in Turkey.

In the forth chapter of the book, Ramsés Daniel Martínez GARCIA conducted the study named “Political Trajectories of Enrique Pena Nieto and Andres Manuel Lopez Obrador: A Documentary Review”, in which he has aimed to provide information about the political history of two personalities who have left their mark in Mexican history in a historical framework.

In the fifth chapter, Kubra GOGER and Sebastian MAJEWSKA conducted a panel data analysis using 2002 and 2021 period in the study

named “Institutional Structure and Economic Growth in N11 Countries (2002-2021)”. The main objective of this study is to analyze the existence of the relationship between the economic growth and institutional structure, if any. Author used Emirmahmutoğlu and Köse causality test for the existence of the relationship.

In the sixth chapter of the book, Gustavo Adolfo PEREZ ROJAS prepared a study named “Beyond A Logo: City Branding For Local Governance”. The author gives information about city branding through sustainable development. An analysis is presented on the implications that the introduction of the concept of governmental marketing and its specialization for the construction of place branding or city branding has had.

In the seventh chapter Nursac DEGERLI, Findik Ozlem ALPER, Beata Zofia FILIPIAK in their work called “A Popular Concept of Sustainable Development with An Ecological Footprint: An Empirical Analysis of E7 Countries”, aimed to analyse the relationship between ecological footprint, economic growth and industrialization using annually data for the period 2000-2021. As a result of panel data analysis increased economic growth resulted in environmental pollution.

In the eighth part of the book, José Mauricio García MIRANDA, Alejandra Michel López DUARTE, Mijael ALTAMIRANO, authors of the study called “Impact on Competitiveness in The Face of Tax Reform in Mexico from 2020 to 2022 in Digital Services Case: Netflix”, analyzed tax reform in Mexico between 2020-2022. After the tax reform approved by the Mexican government in June 2020, foreign companies faced value added rates of 16%. This has caused companies such as Netflix to face a little more burden.

In the ninth chapter of the book, Mehmet Sinan CELIK conducted the study named “Factors Affecting Company Profitability the Case of Borsa Istanbul - 30”, in which he has aimed to determine risk types on firm performances. Author used financial data of the firms including BIST-30 index. To conclude dependent variable financial risk is explained using by interest rate, credit risk, liquidity risk, exchange rate risk and financial leverage ratio.

In the tenth chapter, Sergio Alfonso Tosca MAGANA , Germán Martínez PRATS, Verónica Vázquez VIDAL discussed the global economy during the Covid 19 pandemic in the study named “Analysis of the Global

Economy During the Covid 19 Pandemic”. The main objective of this study is to analyze global economic recession with a contraction in production, trade and investment.

In the eleventh chapter Nihal AKNUR and Serdar DUGAN in their work called “The Relationship Between Health Expenditures and Economic Growth in BRICS Countries”, aimed to analyse the relationship between health expenditures and economic growth using the data from BRICS countries. They conducted a panel data analysis using 2002 and 2022. The data were collected from World Bank. . A uni directional causality relationship was found between economic growth and health expenditures.

In the twelfth part of the book, Theresa Titilayo ADEKOYA, author of the study called” The Ever Evolving Nigeria Creative Industry and Its Landscape”, analyzed the Nigeria’s economy using the historical information via several sector such as Fashion Industry, Film Industry and Music Industry. Author used a fluent language to compare the current situation and former one. There are also report data given in the graphs.

In the thirteenth chapter of the book, Rahmatullah MAYAR and Agnieszka MAJEWSKA conducted the study named “Relationship Between Foreign Direct Investment and Human Development Index: An Empirical Analysis for Schengen Area”, in which they have aimed to conduct a panel data analysis usind the data of 21 vSchengen countries for the period 1995-2021. They found that foreign direct investments in 21 Schengen countries have a positive impact on human development.

“Entrepreneurship and Cities” is the last chapter of the book. The authors, Abdullah AYDIN and Aziz BELLI, discussed the concept of entrepreneurial city and explained the basic dynamics of it. Finally, a general evaluation is done and main subject and examples of it are summarized.

I would like to express my sincere gratitude to all the authors for their high-quality contributions. All errors and references used are the responsibility of the authors.

Prof. Okayay UCAN

CHAPTER 1

**AN ASSESSMENT ON GREEN BANKING IN THE TURKISH
BANKING SECTOR**

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INTRODUCTION

In the globalized world green banking has emerged as a new term and has started to gain importance and development in recent times. Green banking practices which appear as an element of ecological, sociological, and sustainable understanding have recently begun to show their impact in the banking literature. Banking is generally known as an environmentally friendly sector. However, the increasing energy consumption (electricity, climate control) and the rise in the use of resources (paper, etc.) by banks have highlighted the significance of this term in the banking sector as well. Moreover, although banks are perceived as an environmentally friendly sector, their collaboration with businesses and the provision of credit can indirectly affect the environment. With the spread of this term today, green banking practices have become highly important for institutions and organizations operating in various sectors, especially for companies supporting environmental and eco-friendly practices. This study examines the scope and impacts of green banking which has emerged as a new term in the banking sector in our country and has gained popularity in recent times. However, due to the limited number of previous studies on this topic in Turkey, it is believed that this study will contribute to a better understanding of the subject.

1. WHAT IS THE CONCEPT OF THE GREEN BANKING?

It is believed that the sustainable development model can only be achieved through the establishment of an economic and financial structure and the transfer of environmentally friendly practices to future generations. It is not possible to talk about sustainability and green banking practices in any economic model where the environmental factor is disregarded. It is known that green banking practices play an important role in supporting companies that consider environmentally friendly factors in line with climate conditions and emphasize renewable energy. Especially the impact and significance of renewable energy sources such as hydro, thermal, solar, wind turbines, and ocean waves will increase in the coming years. In this case, it is necessary to facilitate access to the credits that the banking sector needs for the growth of these businesses. Particularly recently, it can be observed that banks operating in the Turkish banking sector have been supporting projects that promote green banking and a sustainable future approach.

According to a report published by the United Nations Environment Programme (UNEP) in 2011, the concept of "green growth" emphasizes not only economic efficiency but also the necessity of fairness alongside efficiency. In this context, fairness refers to the achievement of global and national equality in the transition to a socially and individually inclusive economy, with low-carbon and high-efficiency resources (UNEP, 2011, s. 24).

When examining the literature, it is observed that green economy has multiple definitions, but the most common one describes it as a global and societal economic approach characterized by low carbon emissions and high efficiency. The logic behind the green economy is based on establishing low levels of carbon emissions, achieving income and employment growth, increasing resource efficiency through the reduction of environmental pollution and the use of natural energy, and enhancing public and private sector investments. Green economy aims to increase societal well-being, eliminate socio-economic injustices, and reduce environmental risks. Green banking, on the other hand, refers to supporting and promoting environmentally friendly practices to reduce the carbon footprint resulting from banking activities (Bahl, 2012, s. 176), (Ak Bingül & Türk, 2019, s. 82).

The banking sector can be considered as an environmentally friendly system due to its lack of involvement in any production activities. However, the financial products and services offered by the banking sector, as well as the loans provided to businesses, can cause negative impacts on both humans and the environment. For this reason, banks operating in our country are increasing their support for renewable and environmentally friendly energy projects in order to contribute to low carbon emissions. Moreover, it can be said that especially in recent years, banks have been reducing their support for coal-fired thermal power plant projects and view the promotion of renewable energy as a social responsibility. Considering that 2 billion people still lack access to clean drinking water, 3 billion people lack access to healthy food, and approximately 1.5 billion people lack access to electricity in today's world, the importance of sustainability with renewable energy can be seen in all areas. At this point, banks play important roles in providing necessary financial support to institutions and organizations serving in this field.

There are two perspectives on green banking in the world. The first one is careful utilization of all energy and resources and reducing carbon

footprints. The second one is promoting and supporting only environmentally friendly investments. In this regard, the understanding of green banking involves ensuring the sustainable use of resources and the fair distribution of loans in an environmentally friendly manner. One of the most important requirements of the green banking concept is thoroughly examining all projects to provide the necessary resources after evaluating their feasibility (Ahuja, 2015, s. 12).

In the United States during the 1980s, it was observed that banks were found to cause harm to the environment either directly or indirectly which leading to high monetary fines imposed by the courts. Following these severe penalties, the concept of green banking emerged. With the enactment of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) on November 11, 1980, by the American Congress business owners who endangered public health and contributed to environmental pollution as well as the banks that provided them with funding were found guilty and sentenced to pay compensation penalties. In fact, the fines imposed on some banks exceeded the amount of credit they had provided to those businesses (Güler & Tufan, 2015, s. 81-82). Especially banks operating in America started to give more importance to the concept of green banking compared to other countries after these penalties. Subsequently, the concept of green banking also gained significance in European and Turkish banks.

Banks are considered environmentally friendly financial institutions in terms of emission emissions and environmental sensitivity. Unlike the other sectors, banks can be described as having a more environmentally friendly structure in terms of energy consumption, paper consumption and use of water resources. However, the environmental impact of banks is known to be related to their customers rather than their banking activities. Therefore, banks can contribute to the development of more environmentally friendly businesses by acting as intermediaries in sustainable economic and development models which contributing to the understanding of sustainability. Taking into account environmental factors banks can support and promote environmentally friendly activities by offering support and incentives for "Green Banking." Banks that embrace the concept of green banking can be more sensitive to environmental issues, support low carbon emissions and provide more support and incentives to businesses that are transitioning to green industries. They

can further advance the concept of green banking and take it to even higher levels (Bahl, 2012, s. 177).

2. IMPORTANCE OF THE CONCEPT OF GREEN BANKING

In the past, concerns arising from environmental factors did not hold any significance for banks and financial institutions. According to the traditional banking perspective, banks did not have the means to intervene in the operations or the environmental damages caused by the companies they provided credit or financial support to. However, in today's world, although banks are not directly affected by the harm caused to the environment by businesses, this situation has started to create various costs for banks. For instance, if a company causing environmental harm is inspected by the country's regulatory authorities, its operations can be temporarily suspended or even completely halted due to its lack of environmental sensitivity. This situation poses credit and non-payment risks for banks' client companies, thus making environmental factors crucial for banks (Sahoo & Nayak, 2007, s. 84-85).

Since the implementation of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in the late 1980s in the United States, it has been observed that some banks have faced substantial compensations for the environmental damage caused by their customers to clean up. This has created significant financial burdens for certain banks operating in America and has enabled them to be more environmentally conscious compared to many other countries. It is also evident that banks operating in several European countries are held responsible for their clients' adoption of erroneous environmental policies. Giving greater importance to the concept of "Green Banking" worldwide and adopting a more environmentally conscious approach towards the activities of the customers they provide credit to, taking into account these risks, would provide a solution to these problems (Sahoo & Nayak, 2007, s. 84-85).

Given the rapidly increasing global population, the ongoing destruction of nature, the depletion of water resources and agricultural lands, and the occurrence of undesirable conditions such as scarcity, the importance of green banking becomes significantly crucial for a more sustainable future and the

continuity of future generations. Banks that financially support environmentally harmful businesses contribute to environmental destruction. This situation may lead to legal and financial penalties for banks and bank executives in the future. Considering this situation, bank executives should provide more support to environmentally conscious businesses. Embracing eco-friendly policies and leaving a cleaner environment for future generations should be supported to lay the foundations for economic development.

In today's world where resources are diminishing day by day, the concept of green banking is becoming more important than ever. In general, banks are a source of financing for businesses that generate maximum carbon emissions, such as paper, cement, fertilizer, and textiles, alongside their individual customers. Therefore, businesses embracing the concept of green banking play a critical role in promoting environmentally friendly and socially responsible investments. The banking sector, which has never been perceived as a sector that pollutes the environment, should closely monitor technologies and processes that reduce carbon footprints (Meena, 2013, s. 1182).

Some of the green banking practices are listed below:

1. **Green Loans:** Banks that embrace the concept of green banking should provide support and incentives to carbon-free, highly energy-efficient, and environmentally friendly renewable energy projects.
2. **Green Investment Funds:** Banks can issue funds that allow investment in environmentally friendly renewable projects.
3. **Green Bonds:** Banks that embrace green banking principles can issue bonds to provide necessary financial support for the development and sustainability of environmentally friendly projects that enhance energy efficiency.
4. **Environmental Risk Analysis:** Banks can conduct comprehensive environmental analyses to minimize environmental risks. This enables the identification of environmental factors that may impact the financial performance of banks in advance.
5. **Green Banking Services to Customers:** Banks can prioritize offering nature-friendly products and services to individual and corporate customers. Customers using these products may benefit from various exemptions and promotions. For example, a bank may offer incentives for electronic banking usage and provide fee

waivers for customers who choose to receive their account statements electronically instead of by mail.

6. Green Banking Information and Education Programs: Banks can provide education and seminars especially to their corporate customers who focusing on environmental factors, sustainability, and renewable energy. Various credit and support programs can be introduced for businesses participating in this program that make renewable and environmentally friendly energy investments.

7. Internet and Mobile Banking Usage: Banks should encourage individual and corporate customers to use internet and mobile banking for all types of banking transactions instead of going to branches. For example, it is known that conducting transactions such as credit card payments, transfers, account opening/closing through internet and mobile banking significantly reduces carbon emissions. Banks should exempt customers who perform these transactions online from transaction fees or keep the fees at a minimum level to encourage customers to use these channels.

3. LITERATURE REVIEW

Bingül and Türk (2019), discussed green banking practices in Turkey and their impact on the environment in their study. However, the authors mentioned that the level of encouragement for green banking services by banks operating in our country is not significant. They also emphasized that investments in green banking would make significant contributions to the banking sector and the national economy.

Salihoğlu (2019), studied the operation and objectives of green banking were examined. According to the author, the study discusses green banking practices based on different types of banks and renewable energy projects. The study concludes that the diversification and development of green banking and green financial products in Turkey can only be possible with support from all segments of society.

Kuloğlu and Öncel (2015), discuss the details of the term "green finance" and its applicability in Turkey in their study titled "Green Finance Application and its Applicability in Turkey." They also provide examples of green finance products and services implemented in Turkey.

Lalon (2015), examines why commercial banks in Bangladesh have embraced the concept of green banking and evaluates the implementation of green banking practices by these banks. The author also addresses the country's political and green banking regulations in his work.

Ullah (2013), investigates whether bank groups operating in Bangladesh have adopted the concept of green banking in his study. The author compares state banks, state-owned development banks, public commercial banks, and foreign commercial banks operating in the country. According to the findings, the author states that only public commercial banks and foreign commercial banks have embraced the green banking concept set by the Bangladesh Bank and provided financial support for various projects. However, there are no significant initiatives in terms of green banking from state-owned commercial banks and state-owned development banks.

Islam and Das (2013), conducted a study on green banking in Bangladesh. According to the authors, in 2012, banks in Bangladesh allocated an average of 657.67 million Taka for green banking. However, the authors found that the concept of green banking was relatively new in Bangladesh and had not yet shown the expected level of development. They also concluded that the implementation of green banking practices in Bangladeshi banks was not at satisfactory levels.

Sahoo and Nayak (2007), examined the concept of green banking and international experiences in India. According to the authors, banks operating in India have made significant contributions to the country's economic development. However, they noted that the banks in India had made limited efforts in the field of green banking. The authors also mentioned the need for more regulations and policy innovations in the country to promote the adoption of green banking.

4. GREEN BANKING IN TURKEY

The banking sector in Turkey is playing an important role in the country's economy, strengthening itself with each passing day. Currently, there are a total of 35 deposit banks in Turkey, including 3 state-owned, 8 privately-owned, 3 banks transferred to the Savings Deposit Insurance Fund, and 21 foreign-owned banks. Additionally, there are a total of 53 banks operating in

our country, including 18 development and investment banks. These banks have 9.561 active branches in Turkey and 72 branches overseas (TBB, 2023).

In recent times, especially with the occurrence of earthquakes, fires, floods, and decreasing agricultural areas, the banking sector, like all other sectors, has started to pay more attention to taking sustainable and environmentally friendly steps. In Turkey, Banks Association of Turkey (BAT) is currently engaged in various efforts to encourage banks to take sustainable and greener actions. In this regard BAT has been conducting various initiatives to promote sustainable practices and provide guidance in the banking and finance sector through its "Sustainability Guide for the Banking Sector," which was initially prepared in 2014. Furthermore, BAT updated this guide in March 2021 (TBB, Bankacılık Sektöründe Sürdürülebilirlik: Sektör Görünüm Raporu, 2022, s. 17).

Especially due to the concept of green banking, the more environmentally friendly and renewable energy projects should be comprehensively supported. Private banks operating in Turkey play an active role, particularly in the investment and financing of sustainable projects. In this context the Development Bank of Turkey, Turkish Eximbank and Industrial Development Bank of Turkey have taken on an active role. International financial institutions such as the World Bank, the European Bank for Reconstruction and Development, the French Development Agency, and the German Industrialization Fund play an effective role in providing green loans. In Turkey, the Small and Medium Enterprises Development and Support Administration (KOSGEB) offers the necessary green loans for supporting projects, apart from banks (Güler & Tufan, 2015, s. 82-83).

Green banking has started to make its presence felt in our country as well as abroad. According to a survey conducted by the Banking Association, member banks have indicated that they follow green banking and sustainable finance approaches to a rate of 90 %. Banks have mentioned that they have loans for projects within the scope of green finance, such as green bonds, energy efficiency, resource efficiency, and projects that support reducing the impacts of climate change (TBB, Bankacılık Sektöründe Sürdürülebilirlik: Sektör Görünüm Raporu, 2022, s. 20). This situation is an important indicator of how sensitive the banks operating in our country are towards green banking and environmental issues.

According to the concept of green banking, individual and corporate customers should be encouraged to use internet and mobile banking services more instead of visiting bank branches. This way, the use of paper and similar products will decrease in transactions carried out through internet banking, leading to a reduction in carbon emissions and the provision of a more environmentally friendly banking service. When the usage levels of internet banking by individual and corporate customers in Turkey are examined;

Table 1: Number of Individual and Corporate Mobile Banking Customers

Period	Retail Banking (in thousands)			Period	Corporate Banking (in thousands)		
	Registered Customers logged at least once in the system	Registered Customers logged at least once within the last year in the system	The Number of Active Customers		Registered Customers logged at least once in the system	Registered Customers logged at least once within the last year in the system	The Number of Active Customers
Mar. 2015	12.444	10.252	7.928	Mar. 2015	388	338	256
Jun. 2015	14.203	11.565	8.831	Jun. 2015	465	404	295
Sep. 2015	16.079	13.105	10.078	Sep. 2015	550	472	356
Dec 2015	18.383	15.002	11.778	Dec 2015	629	530	386
Mar. 2016	20.952	16.974	13.523	Mar. 2016	713	590	438
Jun. 2016	23.933	19.271	14.722	Jun. 2016	822	658	484
Sep. 2016	26.369	20.587	16.106	Sep. 2016	889	676	507
Dec 2016	29.765	23.745	18.649	Dec 2016	985	749	569
Mar. 2017	33.568	26.507	21.773	Mar. 2017	1.076	843	646
Jun. 2017	35.887	29.356	23.642	Jun. 2017	1.185	911	705
Sep. 2017	39.395	31.954	25.788	Sep. 2017	1.286	972	748
Dec 2017	43.436	35.227	28.712	Dec 2017	1.415	1.067	829
Mar. 2018	47.241	38.005	31.132	Mar. 2018	1.565	1.176	916
Jun. 2018	51.126	40.828	33.334	Jun. 2018	1.724	1.287	995
Sep. 2018	54.898	43.555	35.705	Sep. 2018	1.855	1.374	1.080
Dec 2018	59.282	46.796	38.385	Dec 2018	2.039	1.498	1.167
Mar. 2019	62.953	49.184	40.532	Mar. 2019	2.315	1.682	1.295
Jun. 2019	66.510	51.499	42.238	Jun. 2019	2.495	1.785	1.346
Sep. 2019	70.537	54.055	44.751	Sep. 2019	2.695	1.912	1.420
Dec 2019	75.141	57.272	47.799	Dec 2019	2.897	1.907	1.479
Mar. 2020	79.615	60.461	50.827	Mar. 2020	3.145	2.156	1.654

Jun. 2020	85.658	65.749	56.177	Jun. 2020	3.574	2.477	1.929
Sep. 2020	88.969	67.981	57.353	Sep. 2020	3.684	2.520	2.018
Dec 2020	93.974	71.743	60.334	Dec 2020	4.087	2.813	2.166
Mar. 2021	99.578	74.547	63.032	Mar. 2021	4.566	3.010	2.313
Jun. 2021	102.195	76.652	65.411	Jun. 2021	4.639	3.093	2.407
Sep. 2021	106.709	79.545	68.187	Sep. 2021	4.858	3.186	2.468
Dec 2021	112.106	83.692	72.405	Dec 2021	5.121	3.461	2.763
Mar. 2022	117.633	87.402	75.354	Mar. 2022	5.532	3.666	2.906
Jun. 2022	125.979	91.316	79.449	Jun. 2022	5.848	3.721	3.154
Sep. 2022	129.773	97.846	84.498	Sep. 2022	6.132	3.954	3.236
Dec 2022	136.095	103.182	88.647	Dec 2022	6.534	4.152	3.443
Mar. 2023	144.837	110.427	93.733	Mar. 2023	6.692	4.456	3.672

Source: Obtained from the data of the Banks Association of Turkey by the researcher.

To reduce the carbon footprint in the banking sector, it is important to conduct EFT/bank transfers and other banking transactions through mobile banking and internet banking. Performing transactions via mobile devices such as smartphones, computers, or tablets instead of visiting branches not only saves time but also significantly reduces paper usage. As there is no data available regarding mobile banking user information before the year 2015, the starting year is set as 2015 based on the data obtained from the Banks Association of Turkey, both individual and corporate mobile banking customer numbers have shown a significant increase in Turkey from 2015 to 2023.

In 2015, there were 7.92 million active customers at the retail banking level, while in 2023, the number of active customers increased approximately twelvefold to reach 93.73 million. At the corporate banking level, there were 256 thousand active customers in 2015, and this number reached 3.67 million customers with a fourteenfold increase in 2023. When analyzing banking data, it is observed that individual customers heavily utilize mobile banking, whereas this rate is still low in the case of corporate customers. It is particularly important for banks' major clients, who are corporate customers, to prefer mobile banking applications in terms of resource utilization. It is recommended that banks increase their supportive measures to encourage the use of mobile banking applications by corporate customers.

Table 2: Number of Individual and Corporate Internet Banking Customers

Period	Retail Banking (in thousands)			Period	Corporate Banking (in thousands)		
	Registered Customers logged at least once in the system	Registered Customers logged at least once within the last year in the system	The Number of Active Customers		Registered Customers logged at least once in the system	Registered Customers logged at least once within the last year in the system	The Number of Active Customers
Mar. 2011	16.253	8.498	6.505	Mar. 2011	1.697	860	723
Jun. 2011	16.696	8.764	6.721	Jun. 2011	1.767	887	751
Sep. 2011	17.242	9.323	7.065	Sep. 2011	1.786	915	763
Dec. 2011	18.106	10.389	7.803	Dec. 2011	1.892	968	803
Mar. 2012	19.322	11.304	8.485	Mar. 2012	1.966	1.009	844
Jun. 2012	20.509	11.828	8.605	Jun. 2012	2.049	1.050	863
Sep. 2012	21.653	13.035	8.975	Sep. 2012	2.100	1.081	886
Dec. 2012	22.611	13.884	9.630	Dec. 2012	2.193	1.131	922
Mar. 2013	24.012	14.654	10.246	Mar. 2013	2.100	1.150	953
Jun. 2013	25.313	15.707	10.468	Jun. 2013	2.189	1.197	980
Sep. 2013	26.588	15.546	10.975	Sep. 2013	2.268	1.227	991
Dec. 2013	28.190	16.824	11.422	Dec. 2013	2.235	1.217	1.014
Mar. 2014	28.590	17.462	12.039	Mar. 2014	2.086	1.272	1.066
Jun. 2014	29.669	17.807	12.134	Jun. 2014	2.152	1.311	1.090
Sep. 2014	32.303	18.580	12.588	Sep. 2014	2.225	1.341	1.095
Dec. 2014	34.048	19.615	13.181	Dec. 2014	2.324	1.399	1.134
Mar. 2015	37.651	20.802	14.229	Mar. 2015	2.493	1.427	1.178
Jun. 2015	40.320	21.977	14.466	Jun. 2015	2.729	1.495	1.191
Sep. 2015	40.564	22.867	14.999	Sep. 2015	2.810	1.523	1.211
Dec. 2015	42.917	23.900	16.170	Dec. 2015	2.766	1.548	1.251
Mar. 2016	45.701	24.905	17.231	Mar. 2016	2.856	1.594	1.280
Jun. 2016	50.064	26.113	17.019	Jun. 2016	2.800	1.625	1.282
Sep. 2016	49.149	27.038	17.400	Sep. 2016	2.614	1.629	1.272
Dec. 2016	51.482	27.547	19.077	Dec. 2016	2.901	1.657	1.321
Mar. 2017	50.752	22.770	12.576	Mar. 2017	3.018	1.617	1.250
Jun. 2017	51.948	23.468	12.046	Jun. 2017	3.029	1.646	1.246
Sep. 2017	51.922	22.114	11.552	Sep. 2017	3.107	1.664	1.231
Dec. 2017	53.654	21.801	11.856	Dec. 2017	3.223	1.688	1.270
Mar. 2018	55.894	21.907	12.232	Mar. 2018	3.356	1.701	1.294

Jun. 2018	57.827	21.776	11.419	Jun. 2018	3.448	1.714	1.283
Sep. 2018	59.403	21.953	11.334	Sep. 2018	3.532	1.721	1.270
Dec. 2018	61.119	22.203	11.258	Dec. 2018	3.629	1.744	1.286
Mar. 2019	62.328	21.694	11.119	Mar. 2019	3.737	1.754	1.297
Jun. 2019	63.693	21.372	10.303	Jun. 2019	3.922	1.788	1.281
Sep. 2019	65.487	21.365	10.527	Sep. 2019	4.025	1.782	1.253
Dec. 2019	67.387	21.518	10.714	Dec. 2019	4.134	1.784	1.271
Mar. 2020	69.339	21.792	10.920	Mar. 2020	4.290	1.815	1.336
Jun. 2020	71.629	23.256	11.930	Jun. 2020	4.436	1.846	1.323
Sep. 2020	72.585	23.347	10.758	Sep. 2020	4.464	1.805	1.340
Dec. 2020	74.817	24.061	11.074	Dec. 2020	4.669	1.892	1.369
Mar. 2021	76.686	24.503	11.092	Mar. 2021	4.853	1.947	1.411
Jun. 2021	77.818	23.652	10.476	Jun. 2021	4.957	1.956	1.372
Sep. 2021	79.660	23.758	10.095	Sep. 2021	5.060	1.946	1.364
Dec. 2021	81.689	24.405	10.525	Dec. 2021	5.185	2.276	1.452
Mar. 2022	84.030	23.969	9.937	Mar. 2022	5.444	2.076	1.497
Jun. 2022	85.929	23.141	9.696	Jun. 2022	5.588	2.051	1.498
Sep. 2022	89.074	23.962	10.787	Sep. 2022	5.720	2.147	1.498
Dec. 2022	91.137	25.147	10.545	Dec. 2022	6.069	2.199	1.541
Mar. 2023	92.088	25.834	10.564	Mar. 2023	6.172	2.284	1.593

Source: Obtained from the data of the Banks Association of Turkey by the researcher.

The data regarding mobile banking obtained from the Banks Association of Turkey is presented as of the year 2015, while the data regarding internet banking is presented as of the year 2011. Accordingly, in 2011, 6.50 million individual customers were conducting various banking services through internet banking, and by the year 2023, this figure had increased by approximately 62.5 % to reach 10.56 million individual users. When examining the usage of internet banking by corporate customers during the same periods, it is observed that in 2011, 723 thousand corporate customers were using internet banking, and by 2023, this figure had increased by 120 % to reach 1.59 million corporate customers.

When analyzing the Banks Association of Turkey data, it can be observed that both individual customer usage rates in mobile banking and internet banking are significantly higher than the usage rates of corporate customers. This situation reminds banks of the necessity to increase the usage levels of green banking practices among their corporate customers.

It should be frequently emphasized that with considering the transaction volumes and the frequency of regular visits to branches by corporate customers, there is a need to increase the usage rates of more environmentally friendly and carbon footprint-reducing internet and mobile banking. Banks should offer various incentives and significant advantages in transaction costs to corporate customers who use internet banking. Encouraging customers to benefit from phone banking services instead of visiting banks is also crucial in promoting green banking practices. When examining the data, it is believed that corporate customers do not prioritize green banking practices enough and their transactions are predominantly conducted through branches. It should not be forgotten that corporate customers' support for green banking is vital for an environmentally conscious future.

5. CONCLUSION AND EVALUATION

It is observed that the concept of green banking has been supported at significant levels by public institutions and the Banks Association of Turkey in recent years in Turkey. Especially, the sustainability reports published by the Banks Association of Turkey and banks are highly important for green banking practices. In order to develop and ensure the continuity of financial sustainability practices in our country, Turkey's leading banks signed the United Nations Global Compact in 2017. After the signing of this agreement, sustainable development models have gained momentum in Turkey. Akbank, Garanti BBVA, ING Bank, İşbank, Şekerbank, Türkiye Sınai Kalkınma Bankası, Yapı Kredi Bankası, and Türkiye Kalkınma ve Yatırım Bankası have all agreed to prioritize investment and support for all environmentally friendly and renewable energy projects exceeding 10 million dollars. It is predicted that more banks will provide support for environmentally friendly renewable energy projects in the future.

Considering the size of our country's banking sector, it can be observed that banking practices in developed economies such as the European Union and the United States are conducted with great meticulousness, and the Turkish banking sector is in a very good position. Therefore, it is predicted that green banking practices will continue to be more effective without slowing down in the future in our country. Especially in today's world, where technological advancements enable easier and faster access to resources and

information, it is inevitable for green banking practices to gain momentum at both individual and corporate levels. Although they may not be at the desired levels yet, it is crucial to see that banks operating in our country prioritize green banking practices.

Moreover, during the Covid-19 pandemic, which has been felt worldwide, it is observed that individuals and institutions have turned to mobile and internet banking more due to the restrictions on going out. Considering the increasing ease and affordability of internet access in our country, it is predicted that the use of environmentally friendly mobile and internet banking will further increase with the encouragement of banks. Banks operating in our country should provide more support to projects that promote the efficient and effective use of renewable energy and natural resources through green loans. Thanks to environmentally friendly projects supported by green loans, sustainable investments will gain momentum.

Green banking should be popularized in all segments of society, from individual customers to corporate customers. Individual customers should conduct their money transfers, credit card transactions, and bill payments more through internet and mobile banking. This will help reduce the use of paper and various raw materials, especially carbon emissions. On the other hand, corporate customers should place more emphasis on sustainable green projects and make the necessary applications to banks for support of these projects. After meticulous and detailed evaluations by banks and various public institutions, environmentally friendly projects that are beneficial to society and the national economy should be supported quickly. It should be acknowledged that countries can only achieve a sustainable future by considering environmentally friendly projects and the concept of green banking.

SUMMARY

Green banking is important in terms of supporting projects that contribute to the sustainability of environmentally friendly renewable energy sources, especially in the banking sector and financial institutions. The concept of green banking has been increasingly supported by the Banks Association of Turkey in recent years. During the Covid-19 pandemic, which has had an impact worldwide and almost brought life to a standstill, countries

have agreed on the importance of focusing on sustainability and more environmentally friendly investments. Natural disasters, visible declines in agricultural areas, and population increases worldwide serve as a reminder that countries need to prioritize renewable and environmentally friendly projects to sustain economic stability. In this context, green banking supports the sustainability of economic development by considering both financial performance and environmental issues. Banks that embrace the concept of green banking play an active role in providing the necessary financial resources for clean energy projects, high energy efficiency, recyclable products, and zero waste projects particularly for their corporate clients. With the support of the Banks Association of Turkey banks operating in our country are increasingly involved in supporting environmentally friendly projects. Furthermore, when examining the green banking practices of corporate and individual customers in Turkey, it can be observed that individual customers perform banking transactions more frequently through mobile and internet banking applications. Therefore, it is recommended to provide the necessary incentives and support to encourage banks' corporate clients to utilize green banking practices more extensively.

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CHAPTER 2

INDIGENOUS HOUSING IN MEXICO OTOMI AND MAZAHUAS IN PRECARIOUSNESS¹

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1 The text is derived from the chapter "La pertinencia del programa Familias Fuertes "Vivienda Indígena Digna". Un análisis de política pública", which is part of the book "Análisis desde la evaluación de la política social en el Estado de México" of the Universidad Autónoma Metropolitana. Here the condition of the native groups of the study area is emphasized.

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INTRODUCTION

Housing is not valued for its meaning, it falls prey to public policies based on its materials, services and amount of inhabited. An example of this is the indigenous life, which due to its historical condition has been relegated and devalued. The State of Mexico, the second entity with the greatest economic stability, owes a debt to the native groups of the region, the speakers of Otomi, Mazahua, Nahuatl, Matlatzinca and Tlahuica; indigenous groups that were subjugated twice as history indicates. The objective of the work is to analyze the conditions of indigenous housing in the second most important region of Mexico; importance defined by its natural, linguistic and economic conditions. The focus of the study is mixed, prevailing the geostatistical analysis and historical documentary. The main conclusion is that the Otomi and Mazahua-speaking indigenous groups, in addition to making up the most deeply rooted groups in the study area, present precarious floors, roofs and walls of their homes, which exacerbates their condition of marginalization and vulnerability.

1. INDIGENOUS HOUSING IN MEXICO

The relationship between housing and the State goes back a long way; in addition to the inexorable indigenous roots, during the Mexican Revolution the population demanded from the State, in addition to other social rights, due labor protection and with it housing. In other words, the incorporation of housing into the Mexican government's agenda began in 1917.

Before 1900, housing policy in Mexico -not properly formulated- was characterized by a population with indigenous and colonial traditions, peasants who mostly lived on the outskirts of palatial haciendas in precarious conditions (Leal, 2012).

Subsequently, came the industrialization process, which developed at the end of the 18th century and spread worldwide in different phases and periods, implied not only a complete transformation in the conception of the form and place of their residence, but also a significant degradation of their environment (Muñoz, 2014). Thus, in the new industrial conditions, the shortage of workers' housing or affordable housing became a new problem (Yeste, 2003). There was an exodus to the cities since they were the focus of development and modernization, the new inhabitants demanded housing and

services in unsuspected places to live; that is, a disorganized, demanding growth proliferated (Leal, 2012) and with limited economic capacities, and with it the first complications of architectural design, urban planning and a long etcetera of issues around the growth of cities.

For the working class population, the neighborhood emerged as a possibility of renting within the complex with shared services (Gómez-Obregón, 2021). In the mid-twentieth century, the Mexican government was forced to generate projects capable of housing the city's growing population.

The State used housing units as a solution to the real estate crisis, but also as a political instrument of modernization and an oblivion for the traditional past. But, for workers' housing, there is the emblematic case of the Tlatelolco complex -which survives to this day, where the poor neighborhoods of the industrial zone were replaced by the housing complexes, which, during the following twenty years, the scale increased from 200 dwellings to 18,000 dwellings (Gómez-Obregón, 2021).

In short, they migrated to the cities, they migrated from the peasant to the working class, they arrived in the effervescent cities, but in their luggage they brought with them the deep-rooted ways of being and being of indigenous and colonial Mexico, perceptions undoubtedly reflected in the housing, whether provided by the State, as part of its post-revolutionary commitment. This was the beginning of housing policy in Mexico, but not explicitly directed in any way to the indigenous population.

The next significant stage was the creation in 1972 of the Instituto del Fondo Nacional de Vivienda para los Trabajadores (INFONAVIT) and the Fondo de la Vivienda del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (FOVISSSTE). Both were created to comply with the workers' right to housing established in the Constitution, Article 4 of the Constitution.

It should be noted that from the 1970s to the mid-1990s, social policies were characterized by operating based on the demands of organized social groups (Barajas, 2002; Martínez and Morales, 2021); where social policy was assumed to be universal because it served groups with organizational capacity and the ability to articulate demands, rights and needs (Barajas, 2002). In other words, these were not targeted policies as they are currently known, whose mechanism emerged in 1995 and to this day is part of the rules of

operation of various programs (Martínez, 2022). In this context, rural and indigenous issues became relevant in the early 1970s, when there was a crisis in the Mexican countryside and with it an increase in poverty, which was addressed with the swelling of the state apparatus: 17 decentralized agencies and state-owned companies, 14 committees, commissions, councils and centers; and 21 trusts to serve the rural sector (Barajas, 2002:68).

Already in 1990, in an openly neoliberal Mexican context, housing credit institutions for workers acquire debt from the World Bank and grant credits to those who had 5 minimum wages (Leal, 2012); resulting in the pauperization of a social right, in much to the fate of the markets by the mechanism of supply and demand (Ortiz, 2012; Salinas and Pardo, 2018). The public housing crisis stems from a series of actions of neoliberalization of housing policies: creation of financial mechanisms, exclusionary and privatizing policies that limit access to housing for the neediest social classes. The privatization of access to housing has generated models that far from solving historical housing demands has allowed the emergence of new vulnerabilities and socio-spatial inequalities (Imilan, Olivera and Beswick, 2016).

In summary, several aspects were addressed, no doubt; but, indigenous housing should still wait its turn in the long list of demands and commitments of the Mexican State.

It is in 2006 that the Housing Law is issued; which is not a product of luck. Six years earlier, the millennium represented a challenge in the international order, in particular there was a call for the "Renewal of the United Nations: A Program for Reform" (UN, 1997), which led to a series of high-level sessions of the Millennium Assembly that could be called the Millennium Summit (UN: 1997: 2). In light of this, the symbolic moment of the year 2000 was taken advantage of, where the result was a common pact-project of commitments for the agendas of the Member States (Martínez and Morales, 2021); with emphasis on the discussion and actions for development, embodied in the Millennium Development Goals (UN, 2000) and whose project was reaffirmed in Mexico in 2002, during the International Conference on Financing for Development.

At the same time, in the year 2000, while the new pact was taking place at the UN; in Mexico, the first alternation government took place, with

Vicente Fox of the PAN, and in 2002 in line with the new Goals, Mexican social policy was renewed, namely:

- 2002, the National Coordination of the Oportunidades Human Development Program was created as a deconcentrated body of SEDESOL.
- 2004, the General Law for Social Development (LGDS) was published.
- 2005, creation of the National Council for the Evaluation of Social Development Policy, CONEVAL, as a mandate of the LGDS.
- 2006, publication of the Housing Law (Martínez y Morales 2021).

It is feasible to note that the national and international conjuncture shaped a scenario for new institutions in Mexico, especially for those aimed at social matters. Until then, housing gained relevance in the State's social agenda.

In particular, the Housing Law regulates Article 4 of the Constitution; Article 2 states that housing shall be dignified and decent, essentially it must be of adequate construction, healthy, habitable, physically and legally safe, and with basic services (DOF, 14/05/2019).

Related to the indigenous and its sociocultural complexity, the Housing Law states:

- In Article 6, fraction VII and VIII, construction materials must consider cultural and local characteristics to preserve identity and diversity, as well as different types and modalities of the housing process (DOF, 14/05/2019). Fraction XI points out the creation of participation schemes of communities mainly from areas in high and very high marginalization.
- Article 8, fraction XIII indicates the need to promote mechanisms for access to public and/or private financing for the construction and improvement of rural and indigenous towns and communities.
- Article 87, section VI, deals with the recognition of cultural characteristics, respect for the forms of settlement and construction of rural and indigenous communities, all considering the bioclimatic environment.

- Article 19, section VIII, of the National Housing Commission, indicates about the coordination, concretion and execution of programs that allow the improvement of their living spaces.
- Article 52, the competent agencies and entities will coordinate with the states where indigenous peoples and communities are located, to guide the actions, amounts of federal public investment and participation of the peoples, communities, municipalities, and the private and social sectors.

In short, Mexican housing law recognizes the multicultural identity of the country. Thus, the melting pot of Mexican multiculturalism implies accepting that there is a series of meanings that housing acquires, since cultural identity can be defined as the set of internalized cultural compilations (representations, values, symbols), through which social representatives (individual or collective) delimit their boundaries and differentiate themselves from others in a given context, all within a historically specific and socially constituted point (Giménez, 2000).

Thus, throughout the country, due to its vast landscapes and territorial and climatic conditions, communities produce a series of material objects that are part of their culture, and at the same time shape Mexican culture. That is, when subjects attribute a symbolic value and use them to show their belonging to the community and thus promote their identity (Mercado and Hernández, 2010). In the case of housing, the symbolic value is in elements such as colors, type of materials and local architectural elements (Torres, 2000); through the process of dwelling, values and meanings are assigned (Salazar and Ley, 2022).

However, the disadvantage of the indigenous population still prevails in comparison with the rest of the Mexican population. In 2020 in Mexico, there are a total of 2'858,588 indigenous census households. The average size of indigenous households is 4.1 persons, higher than the national average of 3.6 members per household (INEGI, 2020).

Regarding general housing conditions, the gaps are significant; in the case of housing backwardness, 79.1% of the indigenous population shows this situation compared to 44.7% achieved at the national level; regarding the need for complete housing, 15.2% of the national indigenous population has this deficiency compared to 11.6% achieved at the national level; and with the

need for housing improvement, 63.9% of the national indigenous population has it compared to 33.1% obtained at the national level (DOF, 2020).

The lack of housing quality and space for the national indigenous population is 30.2%; while at the national level, 10.2% of the population suffers from it. In terms of lack of access to basic services in housing, 56.3% of the national indigenous population suffers from this deficiency, compared to 15.5% at the national level (DOF, 2020).

This shows the great inequality experienced by indigenous peoples and the precarious conditions of their housing. Although there is a Law on the matter, it has arrived late and is slow to attend to the sector of the population historically with the highest rates of backwardness, and whose spirit gave life to the revolutionary movement that gave way to the Magna Carta. This is the context in which plans, programs and projects to address indigenous housing take place.

2. RESEARCH METHODS

This work has been carried out mainly from a quantitative perspective because it makes use of data leaving aside the cultural and historical analysis. The study retakes the use of geostatistical data treatment.

The variables taken into consideration in the study were collected from the 2015 Intercensal Survey of people and housing, and the housing construction materials (walls, roofs and floors) were analyzed for the original indigenous population of the State of Mexico.

For the calculation of the maps showing precariousness in housing construction materials, data from the Intercensal Survey 2015 (INEGI) Housing with the variables and questions were considered:

- **WALLS** (What material is most of the walls or walls of this dwelling made of?)
- **ROOFS** (Of what material is most of the roof?)
- **FLOORS** (What material is most of the floor of this dwelling made of?)

Subsequently, a count was made of dwellings that were in the following conditions:

- The material of the floors of the dwelling is earthen.

- The material of the roof of the house is made of cardboard sheets or debris.
- The walls of the house are made of mud, reed, bamboo or palm; cardboard, metal or asbestos sheeting; or waste material.

Documentary research was also used to contextualize the case study, to address economic development, because this would allow us to point out the parity of economic stability with social development, and also to know the origin of the indigenous groups in the study region.

3. RESULTS

The State of Mexico

The federal entity of the State of Mexico (Edo. Mex.) is located in the south-central part of the Mexican Republic. It covers an area of 21,461 square kilometers. Its capital is the city of Toluca and it is made up of 122 municipalities with 4,786 localities (CEFP, 2002). It is the federal entity with the largest population in Mexico, amounting to 16,992,418 people, 13.48% of the national total (INEGI, 2020).

In terms of its economic relevance, it is the second most important entity, its GDP in 2020 reached 1,993,874 million pesos (9.1% of the national total). Also, due to the size of its population, it provides the most important labor supply at the national level; the entity is comparable to the economies of Ukraine and Morocco; and represents more than 1.7 times the GDP of countries such as Panama and Costa Rica.

Five indigenous groups are identified in this entity, these are speakers of Mazahua, Otomí, Náhuatl, Tlahuica and Matlatzinca (COESPO, 2021). The native indigenous groups of this entity are relevant because of their territorial proximity to the center of the country, Mexico City, and that before the arrival of the colonizers, they were already participants of the identity that still distinguishes them today:

We: Matlatzinca, Otomi, Mazahua and Tlahuica, millenary inhabitants of this land that is now part of the State of Mexico, commit ourselves to be united in the struggle for the respect of our identity. We are not anthropological curiosities, nor museum objects; we are Human Beings who think and feel, who possess a cultural identity that demands

respect, and we are in a socioeconomic reality of exploitation that needs to be abolished (Pacto del Valle Matlatzinca, 1977; in Ramírez, 2009).

It should be noted that the Nahuatl group does not appear in this declaration given that it is well known that the Nahuatl-speaking Mexica occupation of the Matlatzinco Valley region was a strategically natural and warlike territory for expansion purposes, both of the Purepecha from what is now Michoacán and the Mexica from central Mexico. This left the Toluca Valley region in the middle. Velázquez (1973) mentions that the Matlatzincas always defended themselves from the Mexicas, they did not accept vassalage, at least until the warlike incursions of the leader Axayacatl to Matlatzinco, between 1474-1476. In terms of natural wealth, the Upper Lerma basin - where part of the territory comprising the State of Mexico is located - had a surplus of lake production, most of which was taken to the Mexico basin, the territory of Mexico City.

According to Menegus (1991:66), with the Mexica conquest there was a "fierce reorganization of the Matlatzinca territory" as well as profound changes of a different order. Albores (1995) points out that this reorganization facilitated the early introduction of Hispanic social and economic forms.

It is important to make a linguistic precision. Otomanguean is the linguistic trunk that embraces the Amuzga, Chinantec, Mixtec, Otopame, Popoloca, Tlapanec and Zapotec families (Rensh, 1997; Suarez, 1983). Otopame is the linguistic family of the Otomí, Mazahua, Matlatzinca, Ocuilteco, Northern Pame, Southern Pame and Chichimeco Jonaz languages (SIL Mexico, 2023). For its part, the linguistic trunk of Nahuatl is Yutonahua, which includes the families Corachol, Nahuatl, Piman, Taracahita (SIL Mexico, 2023).

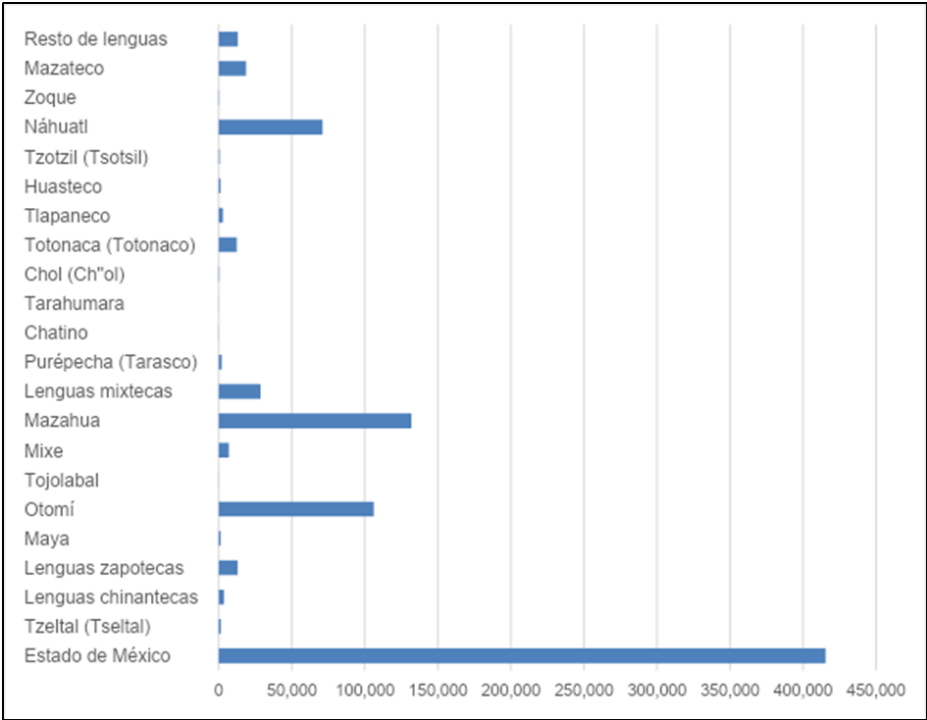
With all of the above, it is possible to point out that the Mexica occupation introduced Nahuatl-speaking groups by imposition, who since then have inhabited the Matlatzinco territory, but are currently a smaller group. Thus, before the first contact with the Spanish, the Mazahua, Otomí, Tlahuica, Matlatzinca and Nahuatl speakers already shared the same territory.

Currently, by the year 2020, 415,450 speakers of an indigenous language have been registered in the State of Mexico, of which 106,141 speak Otomí, 71,042 speak Nahuatl, and 131,911 speak Mazahua (INEGI, 2020) (See Graph 1; Map 1); the rest of the indigenous groups migrate from other

states, as recognized in Article 6 of the Law of Indigenous Rights and Culture of the State of Mexico.

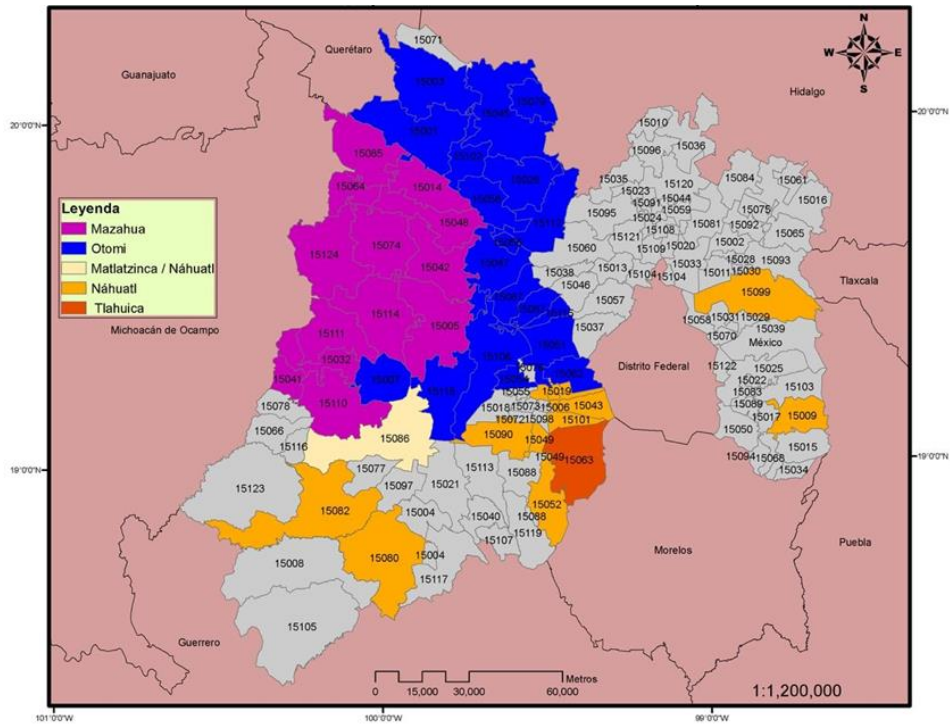
Geographically, the Mazahua group lives in the northwest of the State of Mexico, and the Otomi group in the northeast. The Matlazincas are in the center of the state, while the Tlahuicas are in the southeast. The Nahuatl group is scattered throughout the state.

Figure 1: Population 5 years and older speaking an indigenous language, State of Mex.



Source: Own elaboration with information from INEGI, 2020.

Map 1: Indigenous group, 2015, Mexico state



Source: Own elaborations with information from COESPO, 2021 and INEGI, 2015.

INDIGENOUS HOUSING

This second most important entity in Mexico, in spite of having a stable political life and economy, still has an important challenge to assume, the development of decent housing for the native indigenous populations.

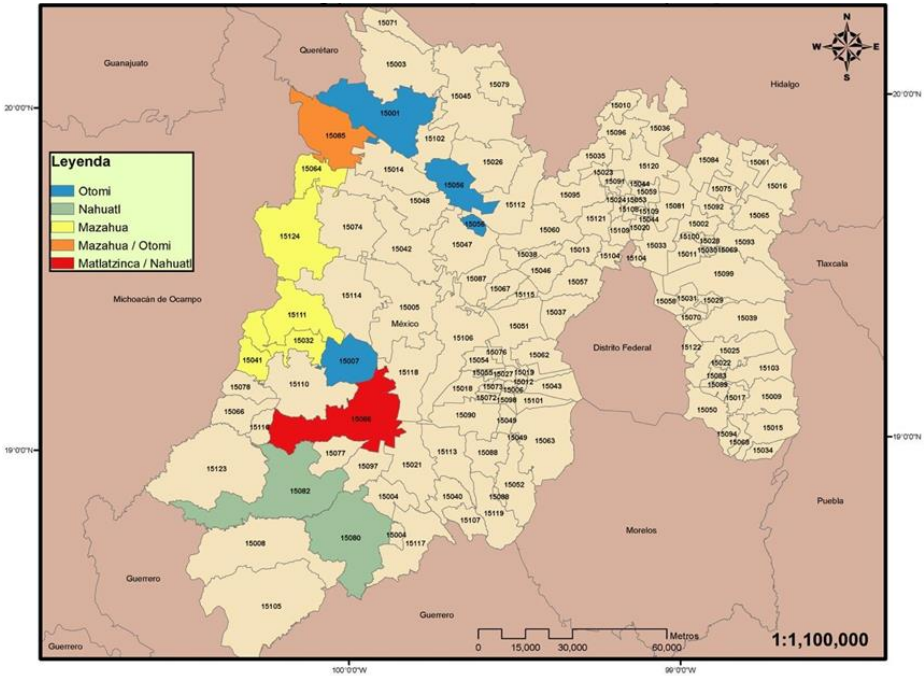
In the particular case of the entity, there is presence of precariousness in walls, it is confluent in 12 municipalities, especially with Mazahua indigenous presence (See table 1; map 2).

Table 1: Precariousness of walls

Original indigenous group	Township	Number of townships
Otomí	Acambay, Morelos, Amanalco	3
Mazahua	El oro, San José del Rincón, Villa de Allende, Donato Guerra, Ixtapan del Oro.	5
Mazahua/Otomí	Temascalcingo	1
Matlatzinca/Náhuatl	Temascaltepec	1
Náhuatl	Sultepec y Tejupilco	2
	Total of townships	12

Source: Own elaboration

Map 2: Indigenous housing with Precariousness in walls, 2015, Mexico state



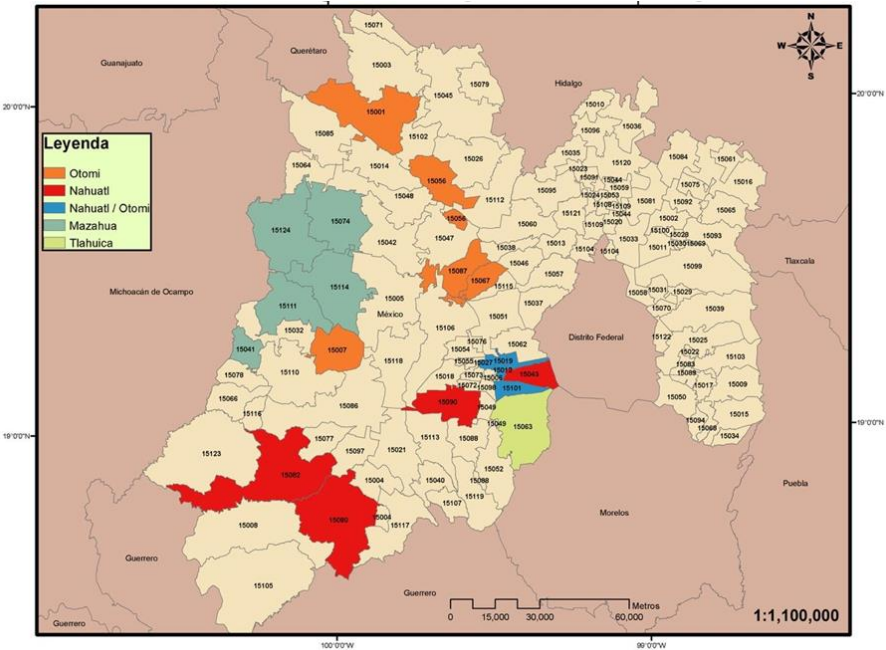
Source: Own elaboration with information from COESPO,2021; INEGI, 2015.

Table 2: Precariousness of floors

Original indigenous group	Township	Number of townships
Otomí	Acambay, Morelos, Temoaya, Oztolotepec, Amanalco,	5
Náhuatl	Tejupilco, Sultepec, Xalatlaco, Tenango del Valle	4
Náhuatl/Otomí	Capulhuac y Tianguistengo	2
Mazahua	San José del Rincón, San Felipe del Progreso, Villa de Allende, Villa Victoria, Ixtapan del Oro.	5
Tlahuica	Ocuilan	1
	Total of townships	17

Source: Own elaboration

Map 3: Indigenous housing with Precariousness in floors, 2015, Mexico state

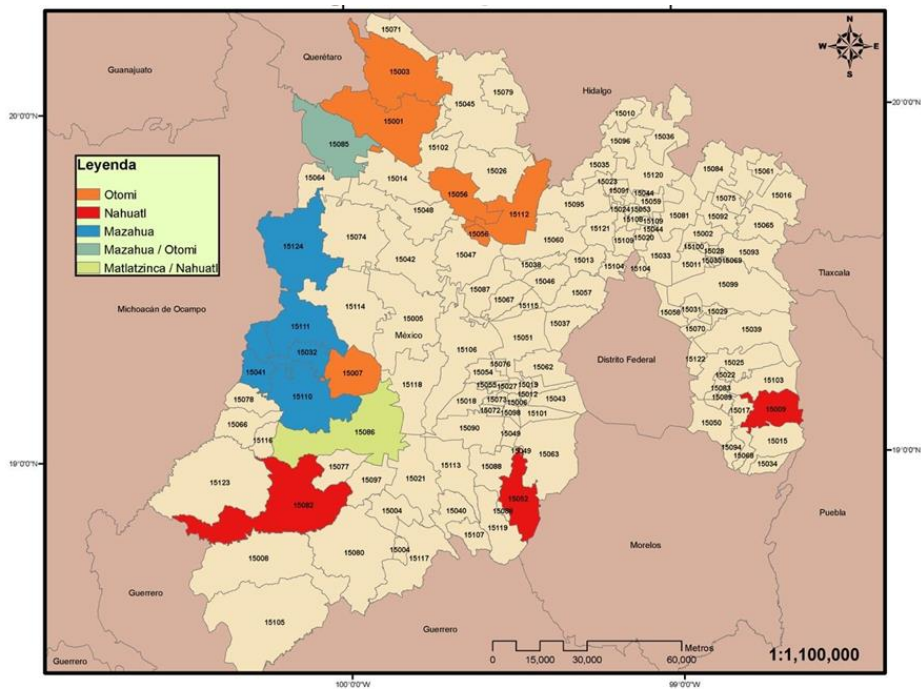


Source: Own elaboration with information from COESPO,2021; INEGI, 2015.

Table 3: Precariousness of roofs

Original indigenous group	Township	Number of townships
Otomí	Aculco, Acambay, Morelos, Atizapán, Amanalco	5
Náhuatl	Amecameca, Malinalco, Tejupilco	3
Mazahua	San José del Rincón, Villa de Allende, Donato Guerra, Ixtapan del Oro, Valle de Bravo.	5
Mazahua/Otomí	Temascalcingo	1
Matlatzinca/Náhuatl	Temascaltepec	2
	Total of townships	16

Map 4: Indigenous housing with Precariousness in roofs, 2015, Mexico state



Source: Own elaboration with information from COESPO,2021; INEGI, 2015.

CONCLUSIONS

It is possible to say that in Mexico housing is more than a right won in times of the revolutionary movement; it is more than an obligation of the Mexican State, well stated in the Constitution; it is even more than the set of floors, walls and roofs. Housing, in any part of the world, is an extension of cultural identity and the self; it is the first physical unit that shelters people.

With greater emphasis, housing is the expression of the prevailing origins of indigenous Mexico; and inversely proportional, its housing is the most precarious, as almost everything related to this population sector, and rightly so, public policy actions are pertinent.

Based on the results of the geostatistical analysis carried out, it is observed that the Otomí and Mazahua groups are the most precarious in housing, followed by the Náhuatl group; in all three groups with emphasis on roofs and floors, and then walls.

The overlapping of indigenous groups and some precariousness whether roof, floor or wall, indicates that the priority municipalities are Acambay, Morelos, Amanalco (with presence of Otomi groups), Tejupilco (Nahuatl speakers), San José del Rincón, Villa de Allende, Ixtapan del Oro, Donato Guerra (Mazahua groups), Temascalcingo (Mazahua and Otomi groups), Temascaltepec (Matlatzinca and Nahuatl groups) and Sultepec; These municipalities are mainly located on the border with the states of Michoacán and Guerrero, that is, northwest of the State of Mexico. In this sense, the precariousness of the housing of these indigenous groups exacerbates their condition of marginalization and vulnerability.

It would be important to know, for future studies, if the precariousness of indigenous housing is manifested in the availability of basic services such as drinking water, electricity and drainage.

In this sense, it is possible to point out that the priorities in terms of indigenous housing for the State of Mexico should be directed to the Otomi and Mazahua speaking groups, mainly, not only because they are the indigenous groups with the greatest presence in the entity, but also because historical debts prevail, since before the Mexican Revolution, for example.

SUMMARY

Indigenous housing in Mexico, specifically among the Otomí and Mazahua ethnic groups, faces numerous challenges and precarious conditions. The following is a summary of the indigenous housing situation of these groups in Mexico: The Otomí and Mazahua are two of the most numerous indigenous groups in Mexico and are mainly concentrated in the states of Mexico, Hidalgo, Querétaro and Michoacán. These communities face high levels of poverty, marginalization and lack of access to basic services, including adequate housing. In general, indigenous housing in these communities is often precarious, with simple building materials, tin or palm roofs, and overcrowded conditions. Many times, these homes lack basic services such as drinking water, electricity and adequate sanitation.

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CHAPTER 3

DETERMINATION OF EXCHANGE RATE DETERMINANTS AND PREDICTABILITY WITH MACHINE LEARNING METHOD

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INTRODUCTION

The exchange rate regimes implemented in countries have a significant impact on exchange rate movements that create domestic and international price differentials. The two extremes of these regimes are fixed exchange rates and flexible exchange rates. With the collapse of the Bretton Woods system, countries have mostly abandoned the fixed exchange rate system and adopted the flexible exchange rate system. In this context, while policymakers intervene in possible exchange rate movements in the fixed exchange rate regime, the effect of speculative capital movements and volatility increase in the flexible exchange rate system. While the increase in exchange rate fluctuations reduces the probability of forecasting the exchange rate accurately, it also leads to the search for methods to ensure accurate forecasting. On the other hand, even if the methods used in exchange rate forecasting are valid in the period in question, they may lose their validity due to a variable/attribute that is not taken into account or a change in current conditions.

The methods used in exchange rate forecasting differ in terms of the variable chosen, the characteristics of the market or the theory on which they are based. Forecasting by technical analysis, forecasting by fundamental analysis, forecasting by efficient markets approach and market-based forecasting methods are some of them (Ketboğa, 2019; Yalçın, 2008:162). In general, expectations for many variables used in financial forecasting are tried to be determined by quantitative, qualitative or artificial intelligence methods. More precisely, although the methods used to predict financial indicators differ, it is seen that there is no common consensus on this issue. For example, according to Plakandaras (2015) et al., generalized autoregressive conditional heteroskedasticity (GARCH) models are among the preferred methods among practitioners for volatility modeling, although they lack a precise verification of their forecasting ability. According to Galeshchuk and Mukherjee (2017), time series models are poor at predicting the direction of change in rates, while shallow artificial neural networks and support vector machines perform better (Galeshchuk and Mukherjee, 2017: 681). In support of this view, according to Nabiyeu (2016), the use of quantitative and qualitative methods in future forecasts, especially due to technological development, is insufficient and artificial intelligence methods

are used. ARIMA, Exponential Smoothing Artificial Neural Networks, Recurrent Neural Networks and Convolutional Neural Networks are some of the artificial intelligence methods used in time series forecasting. (Yurduseven and Müngen, 2022; 661-665)

In this study, machine learning techniques are used to forecast the exchange rate. Although machine learning is a method that dates back to the 1950s, many algorithms have been developed until today and artificial neural networks are one of them. This method, called deep learning, was developed based on the neural structure of the human brain and has been used in many areas (Öngün, 2023: 14). One of these areas of use is exchange rate forecasting.

The exchange rates may be affected by many developments in money and capital markets as well as socio-political events, relative interest rates, purchasing power parity and central bank decisions. On the other hand, since it is not possible to know the events that may occur in the market in advance, forecasts of the future exchange rates based on indicative data are tried to be explained by models constructed under current conditions. Especially the 2008 global crisis has highlighted the need to implement effective methods for estimating banks' market risk. On the other hand, cross-border activities and increased volatility in exchange rates emphasize the importance of exchange rate risk. The importance of this study lies in both the difficulty in the predictability of exchange rates and the increase in the aforementioned exchange rate risk.

This study aims to forecast the exchange rate in Turkey by constructing a model that includes political and psychological attributes in addition to economic factors. In this context, the study is expected to contribute to the literature both in terms of the wide range of attributes taken into account in model building and the methodology used. While the findings of the analysis show that the forecasting is successful, the remaining sections of the study include the literature review, methodology, application, conclusions and recommendations, and bibliography.

1. LITERATURE

Cao et al. (2005) construct an exchange rate forecasting model based on support vector machines and check the predictive power of this model. The data used in the study are the daily exchange rates of the British Pound against the US Dollar from January 2, 2003 to January 28, 2005 and the results of the analysis show that the support vector machine learning (SVM) model has some predictive power.

Ince et al. (2006) investigated the most accurate method for exchange rate forecasting and developed a two-stage forecasting model that includes parametric techniques such as autoregressive integrated moving average (ARIMA), vector autoregressive (VAR) and co-integration techniques and nonparametric techniques such as support vector regression (SVR) and artificial neural networks (ANN). In the analysis, daily Euro/Dollar, Pound/Dollar, JPY/Dollar and AUD/Dollar exchange rate values from January 1, 2000 to May 26, 2004 were used as attributes. The findings of the study show that the support SVR technique outperforms the ANN for two input selection methods.

Muslim judges et al. (2009) used the artificial neural network method to model the highly volatile Turkish TL/US dollar exchange rate time series and found that the ANN method produces better forecasts than models such as seasonal ARIMA and ARCH.

Wang et al. (2016) used USD/EURO exchange rate, exchange rate return and squared value of exchange rate return, absolute return value, NASDAQ index, Crude oil price and Gold spot price as attributes in their study aiming to predict USD/EURO exchange rate. As a result of the research conducted using ARIMA Models and artificial neural networks, an absolute relative error of 0.343% and a correlation coefficient of 0.99545 between the predicted value and the actual value were determined and it was determined that artificial neural networks gave successful results.

Ramakrishnan et al. (2017) used crude oil, palm oil, rubber and gold prices as exchange rate determinants in the Malaysian context and conducted exchange rate forecasting using Support Vector Machine, Neural Networks and Random Forest techniques. The results of the analysis show that Random Forest is much better than other techniques in terms of accuracy and performance.

Ranjit et al. (2018) used different machine learning techniques such as Artificial Neural Network (ANN), Recurrent Neural Network (RNN), Simple Recurrent Neural Network (SRNN), Gated Recurrent Unit (GRU) and Long Short Term Memory (LSTM) to develop a forecasting model for Nepalese Rupee against Euro, Pound Sterling and US Dollar. The findings of the analysis using high, opening, closing and low prices of foreign exchange as inputs show that LSTM networks give better results than SRNN and GRU networks.

Goncu (2019) uses machine learning-based regression methods such as Ridge, decision tree regression, support vector regression, and linear regression to predict the next month's exchange rate using a model that includes the local money supply, real interest rates, the US Federal Funds rate, and last month's monthly average exchange rate. The results of the analysis show that Ridge regression provides accurate forecasting with a low margin of error for investors or policymakers.

Qu and Zhao (2019) found that the LSTM neural network model has smaller root mean square error (RMSE) and mean absolute error (MAE) than the RNN network model and the predicted price is more accurate.

Datta et al. (2021) used three machine learning algorithms such as ridge regression, lasso regression, decision tree and a deep learning algorithm called Bi-directional Long Short Term Memory (Bi-LSTM) to predict the exchange rate on twenty-two different currencies in US dollars. The results of the analysis show that the overall performance of all algorithms is satisfactory, but Bi-LSTM outperforms the others.

Djemo et al. (2021), in their study on exchange rate forecasting with exchange rate ensemble learning algorithms using exchange rates and macroeconomic variables as input variables, show that the method provides an accurate forecast for the appreciation of the US dollar and the British pound and the depreciation of the Japanese Yen. Other findings include that stock prices and terms of trade are effective in the appreciation of the US dollar.

Tekin and Patır (2023) analyzed the results of their study on the prediction of the US dollar exchange rate using artificial neural networks and calculated the MSE value as 0.0019355, MAE value as 0.01738 and MAPE value as 0.5137. This finding shows that the model predicts the dollar

exchange rate with an error rate of 0.5137% (approximately five per thousand). The input variables used in the study are CPI, interest rates on consumer loans, monthly average value of one ounce of gold in dollars, BIST100 index, monthly average gram price of gold bullion, M3 money supply.

2. Econometric Method

2.1. Machine Learning

Machine learning algorithms are considered to be very successful in predicting financial indicators. These algorithms are divided into two as supervised and unsupervised. The supervised learning method processes a data set with known results to learn the model. This process continues until it learns the model, that is, until it performs acceptably. Once the model is ready, it is used to find new unknown values (Patil and Kulkarni, 2019, p.1365). Supervised machine algorithms can make good predictions from the data. If there are n houses in the sample and their prices are known, it can correctly predict the value of that house based on the attributes of another house. It looks for a function that minimizes the prediction error between prediction and reality within the same distribution (Mullainathan, 2017, p.89). With this function, near-accurate prediction can be made.

In this study, 3 different supervised machine learning algorithms were used: Random Forest algorithm, Decision Trees and K-Nearest Neighbor algorithms.

2.1.1. Random Forest Algorithm

The Random Forest (RF) algorithm is an approach consisting of multiple decision trees and nodes first developed by Ho. Breiman (2001). This algorithm can be used for both regression analysis and classification. According to the method, in order to branch the nodes, the best of the random values in the nodes are selected and certain weights are given to the decision trees. These weights are determined according to the internal errors of the decision trees and the decision tree with the lowest error is given the highest weight and the decision tree with the highest error is given the lowest weight. These weights are used for voting in class prediction. Then, these votes are

summed up and the final decision is made (Ustalı, 2020, p.7). The RO algorithm consists of four steps. These are ;

Step 1: In the first step, the number of decision trees (n) to be created according to the data characteristics is determined. (Okumuş and Aydemir, 2017, p.3);

Step 2: At each node in the decision trees, m variables are randomly selected and the best branch is determined by calculating the Gini index. (Pal M, 2005, s.2)

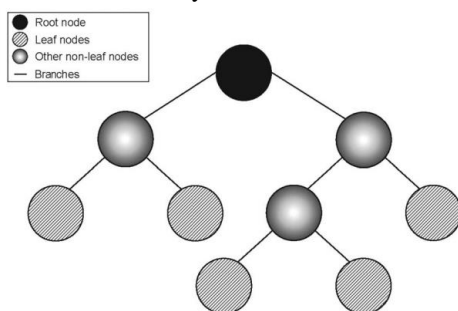
Step 3: The best branch identified in the previous step is split into two sub-branches. This process is continued until the Gini index is zero, in other words, until there is one class at each node. (Watts J. D., Powell S. L., Lawrence R. L., and Hilker T., 2011, s.5)

Step 4: In the last stage, the class with the highest number of votes among the predictions made separately by n decision trees is selected as the final decision prediction. (Okumuş and Aydemir, 2017, p.3);

2.1.2. Decision Trees

Decision trees are tree-like graphical approaches based on conditional probabilities. It is a helpful strategy in operations research, marketing analysis, financial trends to determine the shortest path to the goal. Decision trees are binary trees. In general, they consist of a root node, non-leaf nodes and leaf nodes connected by branches. There are two branches leading to two different nodes as shown in Figure 1. (Gepp, A., Kumar, K. And Bhattacharya, S., 2010, s. 539).

Figure 1. The basic structure of a binary tree



Source: Gepp, A., Kumar, K. And Bhattacharya, S., (2010). Business Failure Prediction using Decision Trees. *Journal of Forecasting*, 29, 536–555.

Decision trees are non-parametric supervised machine learning algorithms used for both classification and regression. It helps build a model that predicts the value of a target variable by learning simple decision rules extracted from data features.

The advantages of decision trees are as follows:

- It is very easy to understand and explain.
- It does not require much effort to prepare the data. Other techniques often require normalization of the data.
- It can handle problems with multiple outputs.
- It performs well even if its assumptions are somehow violated by the actual model from which the data is generated.
- This model can be validated using statistical tests. This makes it possible to take into account the reliability of the model. (1.10. Decision Trees — scikit-learn 1.2.2 documentation)

2.1.3. K-Nearest Neighbor (kNN)

The target is estimated by local interpolation of targets associated with nearest neighbors in the training set. One of the most important issues in the kNN algorithm is to find the optimal class value k. The class value k is predetermined. The optimal value of k depends on the size and structure of the data; it is possible to create classes from k=1 up to n observations. Using a larger class value than necessary will reduce the accuracy of the classification, as it will put data that are not very similar in the same group. Conversely, using a smaller k value than necessary will exclude some possible classes; in this case, again, class accuracy gains downward momentum. (Dilki, 2020, p. 227) The KNN algorithm, or also known as the K-Nearest Neighbor algorithm, is one of the most widely known and used machine learning algorithms. Classification is done by using the closeness of a selected feature to the closest feature. The K value here is expressed by a number such as 3 or 5 for example. The formula in Equation 1 is used to determine the distances between objects. (Kılınç,2016:90)

$$d_{(i,j)} = \sqrt{\sum_{k=1}^p (X_{ik} - X_{jk})^2} \quad (1)$$

2.2. Universe and Sampling

In machine learning method studies, one of the most important factors affecting the prediction success in target variable prediction is the generated feature set. A feature is each column in a data set that will form the targeted model output. This data set is as important as the preferred machine learning algorithm for the prediction success of machine learning algorithms. In this study, machine learning is used to predict the value of the exchange rate price at the end of the month and the extent to which the exchange rate is affected by macroeconomic factors is investigated. Using the multiple cointegration technique, Şit and Karadağ (2019) found that there is a relationship between inflation and exchange rate.

Çalışçı (2021) analyzed the relationship between exchange rate and industrial production index by using Engle-Granger and Phillips-Ouliaris co-integration tests and Toda-Yomamoto (1995) causality test. As a result of co-integration tests, a long-run co-integration relationship was found between exchange rate and industrial production. Based on this study, the Industrial Production index is considered to be used as an attribute in forecasting the exchange rate. The services sector has an important value in the Turkish economy with its net foreign exchange inflows, employment and value added. Trade in services gives a surplus in foreign currency and contributes positively to the current account deficit in the balance of payments (<https://ticaret.gov.tr/hizmet-ticareti/hizmet-ticaret-istatistikleri>). Foreign trade balance and tourism revenues also affect the demand for foreign exchange. For this reason, these three factors are considered to have an impact on the exchange rate and are included in the attribute dataset.

2.3. Data Set

In order to perform machine learning studies, the data must be normalized. After normalizing the data, prediction studies were performed with 3 different machine learning algorithms, 20% of which were used for testing. All machine learning algorithms were run according to the selected success criterion condition. The aim is to minimize this error criterion. Absolute Mean Percentage Error (MMSE) is frequently used in prediction studies. When calculating this value, the difference between the output value generated by the machine learning algorithms and the actual value is

calculated. The absolute value of this difference is taken and divided by the actual value to find the relative value.

Multiply by 100 to get the percentage value of the error. It should be used when the true value is not zero. It is shown with the formula in Equation 2.

$$MOYH = \frac{100}{n} \sum_j^n \frac{e_j}{A_j} \tag{2}$$

For this purpose, a feature set was created with 10-year price data for USD/TRY and 10-year Consumer Price Index (TÜFE), Industrial Production Index (SUE), Economic Confidence Index (EGE), Service Revenues (HIZGE), Tourism Revenues (TURG), 5-Year Bond Yield (THVLF) and Foreign Trade Balance (DTD) data. All data were collected monthly and obtained from TUIK. The attributes used and their sources are given in Table 1.

Table 1. Attribute Definitions and Source

Attribute	Attribute Definitions	SOURCE
TUFE	Consumer Price Index	TUIK
SUE	Industrial Production Index	TUIK
EGE	Economic Confidence Index	TUIK
HIZGE	Service Revenue	TUIK
TURG	Tourism Revenue	TUIK
THVLF	5-Year Bond Yield	TUIK
DTD	Foreign Trade Balance	TUIK

The changes in the USD/TRY value planned to be forecasted are shown in Chart 1.

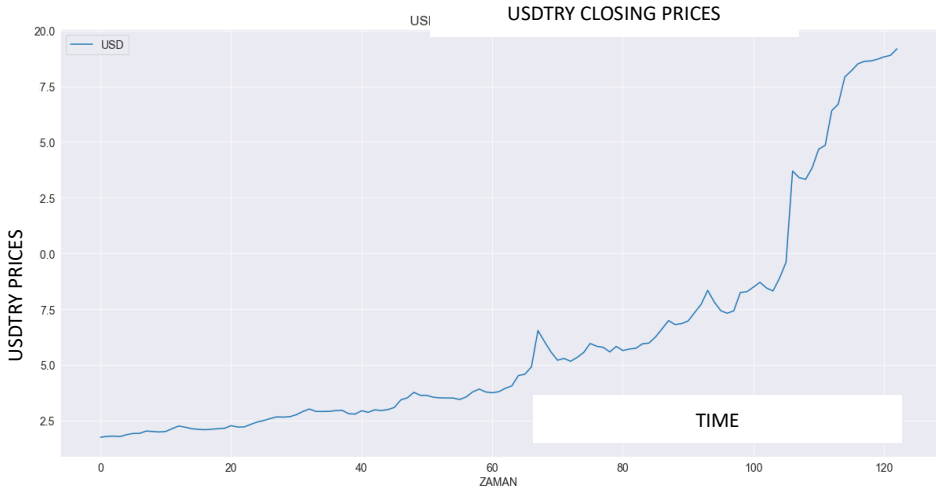


Chart 1. Chart for Target Data

2.4. Data Analysis

For learning algorithms and graphical representations, Python programming language was used.

3. Findings

In this study, 3 different models were used and different prediction error rates were obtained. According to the OMYH criterion, the best results are Random Forest (RF) 87.79%, Decision Tree (DT) 87.42%, K-Nearest Neighbor 82.56%. The results of the RF algorithm and the DT algorithm are very close. The top 4 most effective features are SUE, TUF, EGE and THVLF. SUE and TUF were the two most effective features in both algorithms. When we look at the effect rates, SUE was 58% effective and TUF was 30% effective.

According to the MOYH success criterion, the RF algorithm achieved the most successful result with 87.79%. Chart 2 shows USD/TRY price values (blue color) and forecast values (red color).

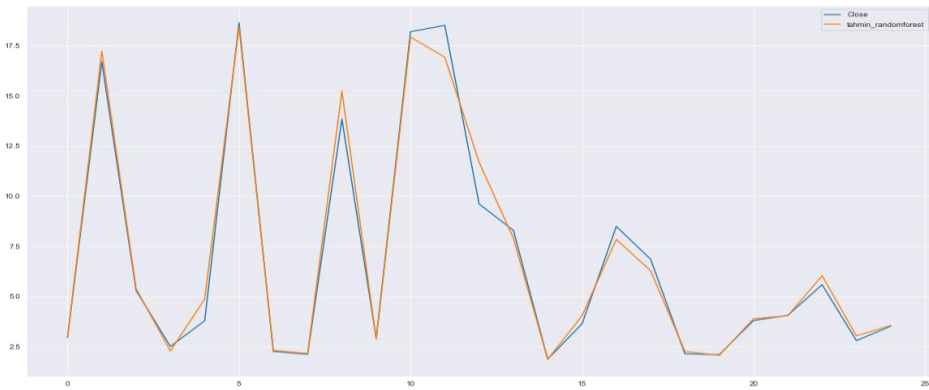


Chart 2. Chart of Actual and Forecast Values of Exchange Rate

4. Conclusion and Recommendations

Exchange rate can drive macroeconomic factors in developing countries and macroeconomic factors are also affected by exchange rate fluctuations. Therefore, it is useful to examine the relationship between exchange rates and macroeconomic factors. In this study, by creating a set of attributes consisting of macroeconomic indicators, machine learning algorithms are used to predict the USD/TRY parity on a monthly basis and the effect of attributes on the prediction success is investigated. Machine learning algorithms were used as the application language and Python programming language was used for graphics. The findings of the study show that machine learning algorithms give successful results especially in future forecasting modeling. Likewise, in this study, the exchange rate was predicted by comparing it with other models with high predictive power among machine learning algorithms.

According to the OMYH criterion, Random Forest (RF) achieved the best results with 87.79%. This is very close to the decision tree algorithm. In both algorithms, SUE, TUF, EGE and THVLF attributes were identified as the most interacting variables. According to both algorithms, the most interacting variables are SUE and TUF, respectively. According to the RF algorithm, these variables are followed by EGE and TVLHF, and in the decision tree, TVHLF and EGE variables are swapped. CPS is 58% effective, TUF is 30% effective, TVHLF is 6% effective and EGE is 3% effective. Other variables can be considered ineffective. In Şit (2019:163), it is stated that inflation and interest rates have an effect on the exchange rate.

In economic terms, accurate forecasting of the exchange rate value is important in predicting the changes in macroeconomic indicators such as economic growth and CPI/TUFE. Likewise, the findings of the study indicate that, contrary to this view, exchange rate forecasting increases the predictive power of these two indicators. In this context, this study analyzes the strength of the relationship between exchange rate, inflation and growth. Theoretically, a deviation of the exchange rate from the expected value changes the growth rate. Moreover, while overvaluation reduces economic growth, the result of under-valuation is uncertain depending on country dynamics. In this context, it is thought that accurate exchange rate forecasting by both policy makers and economic actors will ensure accurate forecasting of other macroeconomic indicators. The results of the study show that machine learning algorithms are highly accurate in forecasting exchange rates when accurate attributes are used. Based on these results, in order to improve the prediction performance of the models, different macroeconomic variables can be added to the first 4 attributes and the effects of different variables can be investigated.

Summary

Foreign exchange rates are one of the most important economic indicators in international markets. This importance stems from the impact of exchange rates on indicators such as foreign trade volume and foreign capital investments. In this context, exchange rate forecasting is an important topic that has been extensively studied by researchers and economic actors. On the other hand, forecasting the exchange rate is quite difficult due to the changing dynamics of macroeconomic factors and the large number of factors affecting its daily value. In this study, different machine learning algorithms are used to forecast the exchange rate for Turkey using inputs such as Consumer Price Index, 5-Year Bond Yield, Industrial Production Index, Economic Confidence Index, Services Revenue, Tourism Revenue, and Foreign Trade Balance. The results of the analysis show that the Random Forest (RF) algorithm achieves the most successful result with 87.79% according to the Absolute Mean Movement Percentage (MOHR) success criterion. Again, the results of the analysis show that the most effective macroeconomic indicators in kurtahnnin are economic growth and consumer price index.

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CHAPTER 4

**POLITICAL TRAJECTORIES OF ENRIQUE PEÑA NIETO
AND ANDRES MANUEL LOPEZ OBRADOR: A
DOCUMENTARY REVIEW**

Ramsés Daniel MARTÍNEZ GARCIA ¹

Introduction

The study of political trajectories falls within the framework of political science whose main purpose is to understand how the interrelation of formal and informal factors drives successful political careers and political leaderships capable of forming shared visions among followers and militants. The chapter presents an overview of the events, mentors and determining factors that shaped the development of political trajectories and contributed to the maximization of the political capital of the last two presidents of Mexico. Thus, in the first instance, an analysis is made of the moments and political characters that boosted Enrique Peña Nieto's career, from his time in public administration in the State of Mexico, his governorship in the state and his arrival to the Federal Executive. Secondly, the characteristics of Andrés Manuel López Obrador's political trajectory are described in detail, from his social leadership in Tabasco to his arrival to the presidency of Mexico in 2018.

The victories of Enrique Peña Nieto (EPN) and Andrés Manuel López Obrador (AMLO), in the elections of 2012 and 2018, represent very interesting electoral experiences to analyze how their political trajectories strengthened antagonistic leaderships capable of building successful candidacies, since they achieved victory and eventually became presidents of Mexico's alternation. On the one hand, after twelve years of permanence of the National Action Party (PAN), the return of the Institutional Revolutionary Party (PRI) would be a reality in the person of EPN. On the other hand, for the 2018 elections, the rise of the first party of leftist denomination and of recent creation (MORENA) would be possible in the image of AMLO.

The image of the political leader has always had a very important value, and currently his personal relevance seems to have a greater echo in the voting decision. For Rebolledo (2017), the approach to political leadership has implied placing at the center of analysis the capacity of politicians to influence voters' decisions and, above all, a very important trend in which the maximization of their political capital as a form of electoral persuasion stands out. Social and economic changes have motivated political parties to look for new ways of elaborating links, beyond the traditional ones linked to the social class structure and ideology. In this sense Espinoza and Navarrete (2016)

pointed out the tendency of the electorate to cast their vote for the person (candidate) and not for the political party and its platform.

Elections of 2012: The return of the PRI to power and the political leadership of Enrique Peña Nieto

The proposed approach to the 2012 presidential election is oriented towards two essential variables: the study of the political leadership shown by Peña Nieto as a catalyst of political personalization, and on the other hand, the most relevant aspects of his career as a professional politician from his beginnings in Arturo Montiel's administration in the State of Mexico (1999-2005) until his stay in the federal executive (2012-2018).

EPN's political career should be seen through the impulse he had from the PRI of the State of Mexico and from influential political figures in the state. He found in Arturo Montiel's administration the support to position himself in political positions that were gradually bringing him closer to a profile of supposed political rejuvenation in this entity, occupying bureaucratic positions and as a legislator in the state congress, being a preamble to his victory in the electoral contest for the governorship of the state of Mexico. Although he joined the PRI when he was 18 years old, it was not until 2000 (at the age of 34) when he assumed the position of Secretary of Administration of the state government, and then between 2003 and 2004 he was a local congressman and in 2005 he won his first elected office.

Previously, EPN's political career began around 1990, when Ignacio Pichardo Pagaza was governor of the State of Mexico, when he became the secretary of a Citizen Zone Movement attached to the National Confederation of Popular Organizations (CNOP). Shortly thereafter, he represented a district in the Coordinating Commission of Conventions for the Municipal Assembly of the Revolutionary Youth Front (FJR) of the PRI. In the 1993 state elections, EPN was in charge of the treasury of the campaign that led Emilio Chuayffet to become governor of Mexico City, and then he was recruited as private secretary of the Secretary of Economic Development, Juan José Guerra Abud. He held this position until 1998 when César Camacho Quiroz was governor. After Arturo Montiel Rojas became governor, EPN held the position of undersecretary of government and in March 2000 he was appointed Secretary of State Administration. In 2003, he obtained the

candidacy for the local deputation for District XIII with head office in Atlacomulco and for the following year, 2004, EPN was listed along with ten other pre-candidates for the governorship of the State of Mexico, who declined as the weeks went by until he was the only one on the list.

By the year 2005, EPN assumed the governorship of the State of Mexico, the road was not easy because he had to face local political figures of local leadership, for example, Isidro Pastor (Castro, 2009) or Carlos Hank Rhon, for the PRI candidacy. From the beginning, he appeared as the "rejuvenated face" of the new PRI: efficient, trained and supported by the Mexican party structure, particularly by Arturo Montiel and the questionable and controversial "Grupo de Atlacomulco" (Loaeza, 2020). From that moment on, EPN's personal image would be the "house stamp" of his administration and, in addition, of his positioning as an eventual candidate for the presidency.

Special mention should be made of Arturo Montiel's political sponsorship for Enrique Peña Nieto to win, in the first instance, the candidacy for the governorship of the State of Mexico, because despite the disagreements and political confrontation that Montiel had with Roberto Madrazo and some PRI leaders of the State of Mexico, he was able to promote Peña Nieto, who was not only of his full confidence, but also had been an influence in the deepest roots of his political formation and experience (Villarreal, 2013). This appointment and the political disagreement with Madrazo placed Peña Nieto in a complicated negotiation and convincing position, however, his victory in the gubernatorial elections was resounding and this structured the political platform to consolidate his leadership. .

After the PRI's defeats in the presidential elections of 2000 and 2006 and the decentralization of the party's own decision-making mechanisms, Peña Nieto had before him the opportunity to establish alliances with PRI militants, and thus position himself as a conciliatory and integrating political leader in view of his candidacy for the 2012 elections. Specifically, in this stage of party reconfiguration, the work EPN was able to do was to support governors as a way to gain personal loyalties, through the creation of two political organizations, the first one called Fuerza Mexiquense and the second one called Expresión Política Mexiquense, which reached more than 90 thousand operators (Loaeza, 2020) through which he not only supported

governors' candidacies with different resources, but also his presence was relatively constant in campaign activities (Hernández, 2015). The governors who received the aid were Fernando Toranzo of San Luis Potosí, Yvonne Ortega of Yucatán, Javier Duarte of Veracruz and Jesús Calzada of Querétaro. For example, according to a newspaper article published by *La Jornada* on December 10, 2010, the presence of PRI political leaders (including EPN) at the inauguration of Javier Duarte as governor of Veracruz was noted. Thus, new internal leaderships were configured, placing Peña Nieto as the great maker of agreements, under a scheme of unification and integration of the different factions that coexisted in the internal dynamics.

The results of the 2009 mid-term elections (Loaeza, 2020), in which the PRI won 15 governorships (out of the 16 at stake), as well as a majority in Congress, were assumed with a certain hopeful optimism. This meant a resurgence of the party's political strength and, at the same time, new leaderships were consolidated in the light of decentralization practices in which governors acquired greater protagonism, to the detriment of the presidentialism that for several decades characterized the relations between the federal and state governments.

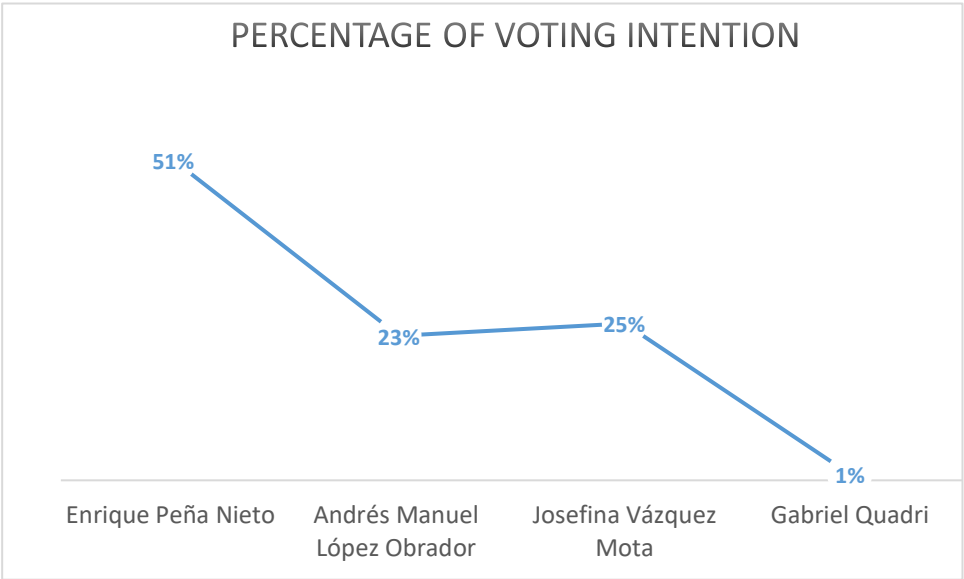
Another wise decision made by EPN, which ratified his capacity for inclusive leadership, was well into the final stretch of his term as governor of the State of Mexico. Five aspirants to the candidacy for the State of Mexico's government raised their hands: Luis Videgaray, Ernesto Némer, Alfredo del Mazo, Ricardo Aguilar and Eruviel Ávila. With the aim of maintaining the party's internal cohesion (Navarrete, 2013), EPN's work was fundamental to establish agreements and thus avoid wearing down processes that could disarticulate a recently relieved PRI, and thus all the aspirants declined in favor of Ávila, who would eventually become the governor of the entity and left EPN in a very attractive position to start a presidential election campaign under the partisan recognition of his political leadership.

Given Peña Nieto's unifying, conciliatory and charismatic political leadership with the PRI militancy, he had to face an internal election process against former Senator Manlio Fabio Beltrones to determine who would be the PRI candidate for the 2012 presidential elections. According to a newspaper article published by *El País* in November 2011, Beltrones

announced his withdrawal from the candidacy, arguing "party unity" and thus leaving the way clear for the former governor of Mexico City.

Since the beginning of the electoral campaign, EPN showed a wide percentage of voting intentions in favor of him, such trend would not change (although it would be shortened) and he would be the winner. Thus, the 2012 elections took place in a political climate of disillusionment due to the few optimal results that Felipe Calderón of the National Action Party (PAN) had in terms of fighting poverty, security, education and in general in core issues of social life (Meyer, Calleja and Miranda, 2012: 27). Such citizen disenchantment contributed to the return of the PRI to the presidency, and with it the rearrangement of political forces.

Figure 1: Voting intention March-April 2012

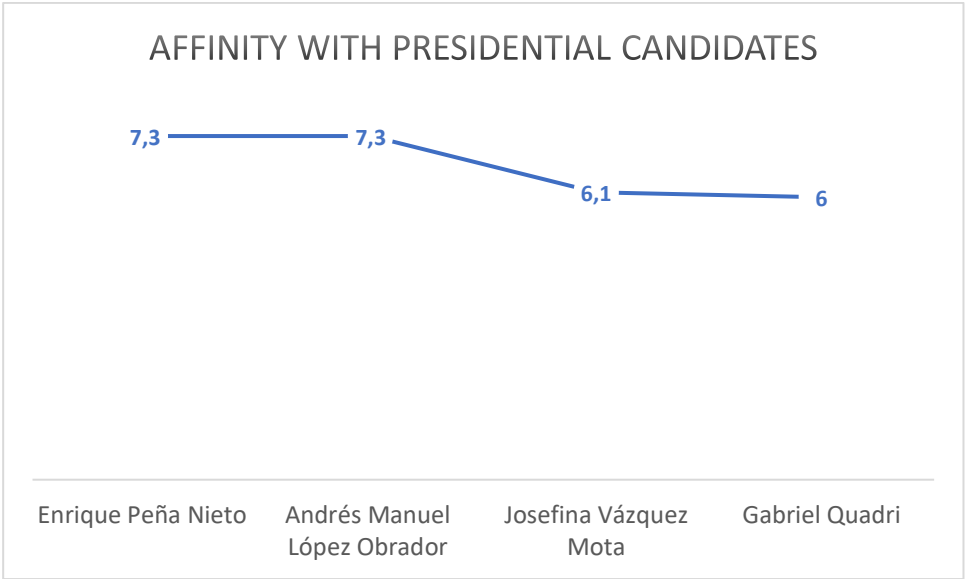


Source: Own elaboration base on parametry (2012).

As shown in Graph 1, the voting intention in favor of Peña Nieto remained higher before and during the first part of the electoral campaign. The final percentages on July 1, 2012 would change, but not to the extent of compromising EPN's victory (see Table 1). It is interesting to note that the electoral campaign of the PRI-PVEM coalition candidate was characterized by the constant presentation of spots on open television and YouTube.

According to a study presented by Animal Político in 2012, 13,725 spots were presented from March 30 to May 6, and were reproduced 326 times a day, which represented a bombardment for the voter. The most repeated theme in the content of his marketing strategy was the fulfillment of his commitments when he was governor of the State of Mexico and the experience he had to provide social and economic stability (Díaz and Góngora, 2019). A revealing fact is the pre-electoral survey of the National Electoral Study of Mexico (CIDE, 2012), which highlights that the best evaluated candidates were Peña Nieto and Andrés Manuel López Obrador.

Figure 2: Affinity with presidential candidates

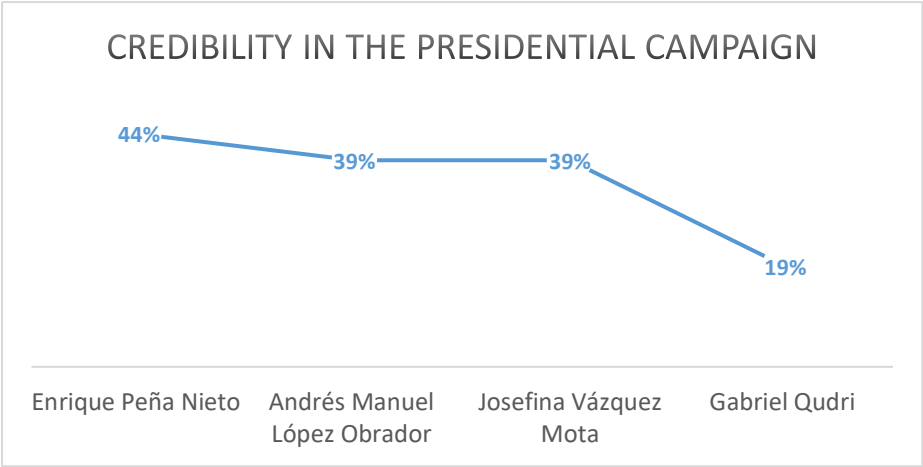


Source: GEA (2018).

Note. The data is expressed on a scale from 0 to 10.

However, with respect to the credibility gained based on the campaign slogan, Peña Nieto obtained the best percentage 44%, thus reflecting greater trust in the electorate, as he was also the candidate who had the greatest exposure to the media. In second place were Andrés Manuel López Obrador and Josefina Vázquez Mota (see graph 2).

Figure 3. Credibility in the presidential campaign (abril-mayo de 2012)



Source: Own elaboration base on GEA (2018)

Thus, the party structure that supported EPN was dedicated to contribute to the construction of an educated, honest and politically experienced personal image (Olmeda and Armesto, 2013) that together with the reputation as a politician of results (Meyenberg, 2015) could lead the country to the path of social and political certainty. Thus, the political platform on which his project for a nation would rest would be determined based on the following items: a) Free market model with a social purpose, b) Application of fair and progressive taxes so that whoever earned more, would pay more and review the fiscal attributions in the three government systems, c) Modernize Pemex, with the participation of the private sector, and d) Eradicate food poverty.

The final results showed EPN as the winner by a margin of almost seven percentage points, his victory was clear in relation to the second place and with this, the political alternation was achieved. After twelve years in the Federal Executive, the National Action Party (PAN) had to see its project of having the first female president of Mexico in the person of Josefina Vázquez Mota frustrated. In this way, the PRI would have a new opportunity to consolidate itself again as the first national political force, and Enrique Peña Nieto would have the responsibility to address the priorities in terms of security, health, corruption, and consequently modernize Mexico.

In summary, it is possible to point out that the political leadership played by Peña Nieto was not only regarding the design of media exposure strategies, for example, the poll conducted by Milenio GEA/ISA on the 101st day of the campaign, positioned Peña Nieto as the leader with more than 46% of the votes. No pollster ventured to offer data other than the wide and clear victory that the PRI candidate could obtain, and on the contrary, they agreed that the success of his campaign was located, in part, in the development of the slogan "this is my commitment and you know I will fulfill it", in addition to the development of spots that took care of his image as a politician in movement (Navarrete, 2013) committed and with political experience in giving good results. His influence was also important in the internal rearrangement of the PRI to generate agreements and structure internal cohesion when it was coming from two electoral defeats in the six-year terms of 2000 and 2006. He achieved political loyalties, for example, according to a newspaper article published on August 9, 2012 in the first meeting held by EPN, as President of Mexico, with 19 PRI governors, among them César Duarte, Rubén Moreira, Eruviel Ávila, Fausto Vallejo, Roberto Sandoval and Fernando Toranzo, who expressed their support so that Peña Nieto could promote three initiatives from the beginning of his administration: The creation of the National Anti-Corruption Commission, giving greater powers to the Federal Institute of Access to Information and Data Protection. Thus, the actions undertaken by EPN under the scheme of integrating charismatic leadership (Navarrete, 2013) were:

To seek agreements and political loyalties to consolidate his presidential project through the use of political and economic resources of the government of the State of Mexico.

Avoiding in 2011 the rupture between those who aspired to the governorship of the State of Mexico.

Adoption of personalization strategies in the 2012 presidential campaign, taking advantage of his charisma and the media exposure of his personal life.

In short, EPN represented the image of a politician of PRI origin, supported by characters of great political importance in the State of Mexico, such as Arturo Montiel, who took advantage of the social moment in the country due to the bad results of Felipe Calderón's government and, on the

other hand, was the cornerstone to face the enormous challenges that the political party had to reposition itself as the first national political force. The results of the 2012 presidential elections are as follows:

Table 1: 2012 presidential election results

Candidate	Coalition or political party	Percentage of votes
<i>Enrique Peña Nieto</i>	PRI-PVEM	38.2%
<i>Andrés Manuel López Obrador</i>	Coalición Movimiento Progresista PRD-PT-MC	31.5%
<i>Josefina Vázquez Mota</i>	PAN	25.4%
<i>Gabriel Quadri</i>	Nueva Alianza	2.2%

Source: wn elaboration base on INE (2018)

The table above shows that EPN's margin of victory was clear, reflecting a difference of almost seven percentage points (more than 3 million votes) with respect to the second place candidate for the Progressive Movement, Andrés Manuel López Obrador, while the PAN candidate was in third place in electoral preferences.

1.2. 2018 Elections: MORENA achieves alternation and AMLO consolidates his political leadership

The 2018 presidential elections have special relevance, since they allow for the first time the rise of a nominal left-wing political party, and also because the victory percentage of Andrés Manuel López Obrador (AMLO) was historic. For the purposes of this paper, the approach to be taken will be from two aspects: the political trajectory and leadership played by AMLO in the creation of the party and in the positioning of personalization that he assumed in the 2018 electoral campaign.

AMLO's proselytizing trajectory began in 1976 when he was part of Carlos Pellicer Cámara's campaign for the governorship of Tabasco, however,

it was in 1982, under the leadership of Enrique González Pedrero when he began to have greater political strength in Tabasco, and a year later he was appointed president of the State Executive Committee of the PRI in the state. From that moment on, his political inclination towards the left caused him difficulties with the PRI militants of Tabasco, thus generating his dismissal in November 1983. His estrangement with the PRI would become more evident in the following years, since according to AMLO, the party's lack of identity with the ideological principles of democracy and social justice (Bolívar, 2017: 102) had disoriented him from social causes.

By 1988 he lost his first election to the governorship of Tabasco for the National Democratic Front (FDN) with the PRI candidate Salvador Neme Castillo, and by 1994 he did it again, now with Roberto Madrazo as his political adversary. Two electoral processes with unfavorable results did not prevent AMLO from continuing his political career, now in key leadership positions in the leadership of the Party of the Democratic Revolution (PRD). His attributes as a good negotiator, impetuous and a very active politician allowed him to get the support of groups of important political weight in the PRD, for example, René Bejarano and Armando Quintero Martínez, so that in 2000 he became the head of the (then) Federal District.

AMLO's political leadership can be traced back to the period in which he was a militant and leader of the PRD, candidate for the governorship of Tabasco, as well as his time as head of the Federal District Government and the presidential candidacies of 2006 and 2012. It is visible the constant transition between a dominant charismatic type of leader to an integrating type (Navarrete, 2019) in which he has gone from postures of distancing and political disagreements to the elaboration of strategies that tend to conciliation. The most important actions of integrating charismatic leadership carried out by AMLO in the period from 1996 to 2000, were according to Espinoza and Navarrete:

- Operation franchise and external candidates.
- Negotiation with the internal fractions of the PRD.
- Establishing greater proximity with the citizens through the welfare programs that he undertook as head of the Federal District.

However, for the period from 2000 to 2006, his leadership is strongly modified, due to the fact that he replaces his positioning of avoiding direct

conflicts with the federal government, and instead, adopts a posture of direct confrontation and rupture (Bolívar, 2017) with President Vicente Fox. Added to this, the internal conflict he lived with some fractions of the PRD headed by Jesús Ortega and Jesús Zambrano would end his leadership when Ortega assumes the national presidency of the PRD. An event that marked the rupture between AMLO and the Party of the Democratic Revolution was the electoral process of the Iztapalapa Delegation (Espinoza and Navarrete, 2016) when "Juanito" supported by the Labor Party (PT) and López Obrador wins the elections and leaves his place to Carla Brugada.

The following five years (2000 to 2005) were crucial in AMLO's political career, as he managed to consolidate a charismatic leadership with the citizens, due to the fact that he showed himself as a tenacious politician, concerned about social causes and in a clear and marked distancing from the political cadres that had historically governed and that, in addition, were associated with corruption and mismanagement.

Subsequently, two electoral processes (2006 and 2012) for the presidency of Mexico would see López Obrador as a candidate, in none of them would he obtain victory, because in the first elections, and in which he would argue fraud, Felipe Calderón would be the winner, and in the following Enrique Peña Nieto would be favored by the voters.

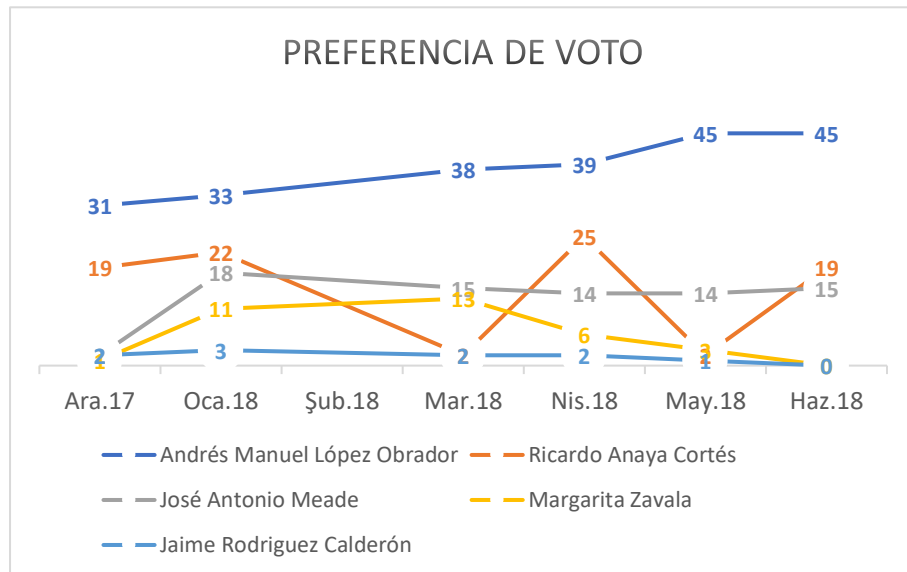
It should be remembered that in the 2006 elections and with a result against only 0.56% with respect to Felipe Calderón, he implemented a series of actions that called for peaceful civil resistance and since July of that same year, the capital's zócalo would be "taken" by crowds of supporters of the Tabasco politician. In addition, in several entities of the country actions aimed at disapproving the results of these votes were orchestrated.

For the 2018 elections, AMLO would be a candidate for the third time to the presidency of Mexico, now under the support of the coalition "Together We Will Make History" commanded by the National Regeneration Movement (MORENA), a recently created political party and whose main leader was López Obrador himself. The result would be favorable to him and after two attempts he would obtain victory in the federal elections. The formation of MORENA as a political party (in its beginning as a civil association) not only meant the weakening of the PRD, since many of its militants and leaders left together with AMLO, for example, Marcelo Ebrard, Martí Batres and Mario

Delgado, but also promoted a rearrangement in the party system by positioning itself in its first electoral contest as the fourth political force with 8.37%. The midterm elections of 2015 allowed this new party to consolidate its electoral base and the charismatic leadership of its founder (AMLO) allowed great social drag, although with little institutionalization (Navarrete, 2019).

For AMLO, MORENA would be the party base he needed for his presidential aspirations, since by being able to bring together a great diversity of leftist political characters he was also able to build a solid vote structure, which he maximized and expanded from the beginning by heading, from his person, the strategies of political communication. The dissemination of spots and propaganda media had as their starting point the media exposure of its founder (Espinoza and Navarrete, 2016). For MORENA, the image of its leader provided it with the credibility necessary to become a viable alternative.

Figure 4. Voting preference December 2017-June 2018



Source: Own elaboration base on parametry (2018)

Based on graph 4, it can be seen that AMLO's margin of victory was not compromised, even before the presidential campaign formally began. On the contrary, the intention to vote as the months went by rose.

For the 2018 elections, the coalition "Together We Will Make History" headed by MORENA. He designed an electoral platform that made special emphasis on the problems of corruption and poverty, and whose solution would be based on social reconstruction. The proposal was aimed, then, at a structural change (Muñoz, 2021), in the long term that would be able to reverse the damage caused by neoliberal governments. In the background, this platform took advantage of the social situation that was experienced due to the discouraging results of the government of Enrique Peña Nieto. Issues such as insecurity, violence and corruption generated disenchantment and weariness in citizens who saw, for example, in the rise in the price of gasoline and in media scandals such as the "white house" the need for new viable political alternatives that were capable of addressing the root problems.

It is of great interest that, within MORENA, from its origins, two types of political leadership were proposed. The first of them, of intermediate cut represented by those who played roles that allowed the institutional legitimation, internal management of the political party (Castro, 2009) and in general of the normative structure. On the other hand, the integrative charismatic leadership (Navarrete, 2019) that AMLO played that allowed a certain electoral pragmatism to incorporate leaders and militants capable of building significant support for the attraction of votes. In this sense, the main actions held by the now president of Mexico, in his capacity as an integrative charismatic leader can be summarized as follows:

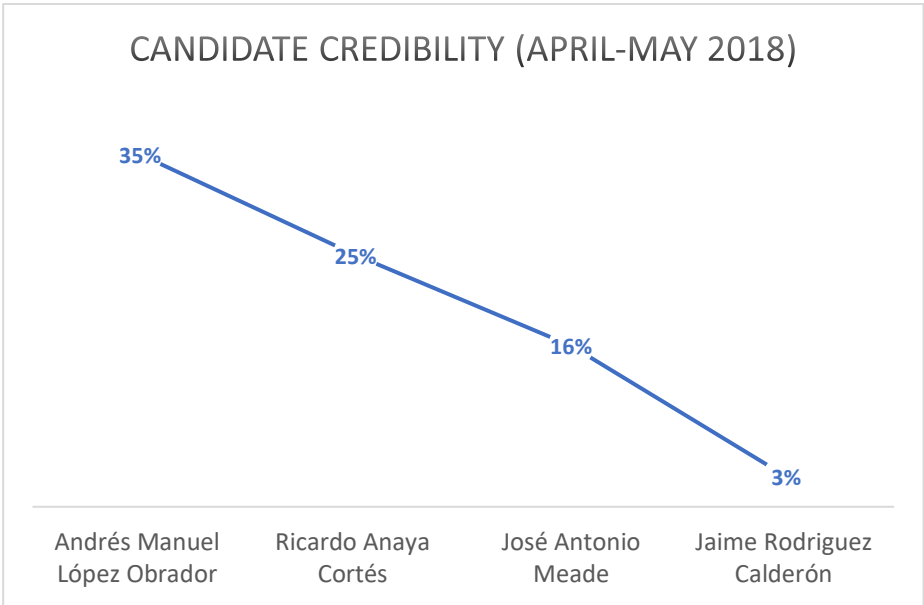
To elaborate a discourse of conciliation that could find an echo in the different sectors of society. This mechanism allowed him to develop a political narrative that called for plurality, and especially for peace and consensus.

- The capacities of integrative charismatic leadership must be accompanied by attributes of proximity to citizens. Thus, certain individual particularities such as sympathy, ability to "connect with others" (Castillo, 2009) and a certain positive and hopeful orientation are fundamental. In this sense, AMLO's personal skills allowed him to build an image capable of uniting diverse social groups, because regardless of their origin or cultural or economic conditions they shared needs, for example, to end corruption and generate a climate of security.

- AMLO's moderation implies a relevant change to highlight with respect to his previous candidacies and especially the role he played after 2006 arguing fraud.

Thus, it is possible to observe that the qualities of integrative charismatic leadership that AMLO presented were fundamental to build the partisan base of MORENA, since in the image of his person fell the ideological foundations that raised his campaign, of the left, but not of rupture and yes of unification and solidarity in the democratic framework of the electoral process (Esteinou, 2019), and at the same time, in the internal structure of the party he managed to build internal leaderships with management capacity represented, on a regular basis, in political figures with long-standing trajectories. For its part, MORENA and the coalition Together We Will Make History provided financing for AMLO's electoral campaign, as well as exposure time in the media, fundamental elements to promote greater closeness and proximity to his electorate.

Figure 5 Candidate credibility (April-May 2018)

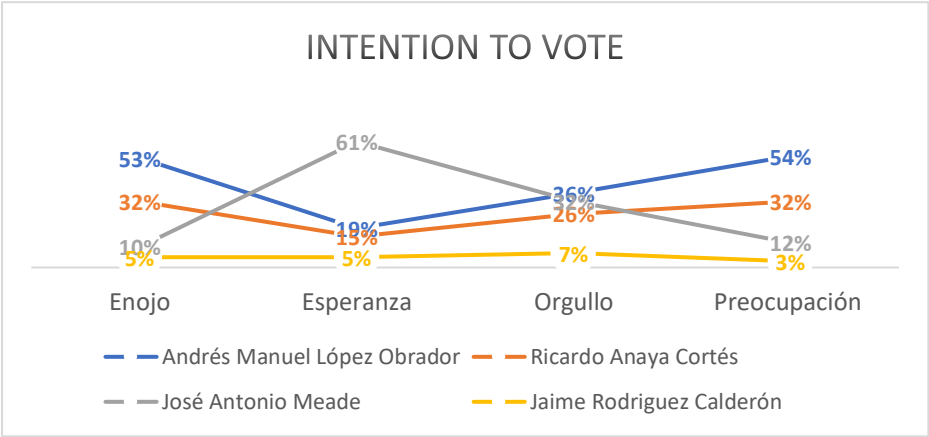


Fuente: Oen elaboration based on GEA-ISA (2018)

According to figure 5, the greatest credibility in the last two months before the workday was achieved by Andrés Manuel López Obrador, while

Ricardo Anaya and José Antonio Mead managed to place second and third respectively. This shows that, while it is true that personal political capital is important in influencing the preference of the electorate, a relatively positive perception of candidates is not enough. If observed, the difference between the credibility obtained by López Obrador and Anaya between the "Little and Much" levels was barely 3%.

Figure 6. Intention to vote with respect to the feelings produced by the outgoing government



Source: GEA-ISA (2018)

It is interesting to note that AMLO's voter presented mostly negative feelings about the Peña Nieto government, such as anger and concern, and thanks to his charismatic integrative leadership (Navarrete, 2013) he was kind enough to promote and disseminate a vision of a political project based on the disenchantment and weariness of citizens.

In short, it is observed that the integrative charismatic leadership exercised by AMLO in the 2018 electoral campaign has its roots in his militancy and leadership in the PRD, as well as in electoral processes in the state of Tabasco and in what is currently the CDMX (formerly the Federal District) transiting to the dominant type. Proximity and closeness to voters have been attributes that have characterized López Obrador candidate, his communication skills and empathy maximized by communication mechanisms have led to his person being a reference in the imagination of the electorate.

Table 2. Results of the 2018 presidential election

Candidate			Coalition	Percentage
Andrés Manuel López Obrador			Juntos haremos historia	53.1%
Ricardo Anaya Cortés			Por México al frente	22.2%
José Antonio Meade Kuribreña			Todos por México	16.4%
Jaime Rodríguez Calderón			Independiente	5.2 %

Source: Own elaboration with information from INE (2018)

The results suggested a change in the party system, since for three decades the Institutional Revolutionary Party (PRI) had positioned itself as a pragmatic hegemonic party (Sartori, 2002). However, after the results of 2018 it would occupy the third position, losing governorships and presence in the legislative branch. In addition, MORENA was accredited as the party in power with broad citizen acceptance protected, to a large extent, by a belief system based on the desire for change and yearning for justice for the poorest (Aragón, Fernández and Bautista, 2019).

CONCLUSION

Under the analysis of the relationship between institutions and political leaderships, it would be well worth answering synthetically, how important is the relationship between institutions and political leaders in the scenario of modern democracy? Faced with such questioning, it is appropriate to start from the premise that in any system of modern democracy there are normative values that govern it; Freedom and representativeness may be the ones that best distinguish modern-enlightened thought. Under this tenor, the criterion of functionality of modern democracy finds meaning in the interrelation of both fundamental principles and whose representation is found in institutions and political leaders. Therefore, the relational dynamic between political institutions and political leaders in the context of modern democracies is

unbreakable, since they represent fundamental entities in the consolidation of governments tending to representativeness.

So, the quality of modern democracy as a political system has to do with the quality of its institutions and political leaderships, because in their interrelation is the possibility of the representation of various groups that, in some way, have some access to be politically visible. In fact, for Shumpeter (2015) democratic political systems are representative of the interests of certain groups that have access to political power, that is, of an elite that has interference in the decisions that impact the majority of society.

SUMMARY

The political trajectory of Enrique Peña Nieto and Andrés Manuel López Obrador is a fascinating and complex issue in Mexico's recent history. Enrique Peña Nieto was born on July 20, 1966 in the State of Mexico. He began his political career in the Institutional Revolutionary Party (PRI), one of the most important and traditional political parties in Mexico. Andrés Manuel López Obrador, also known as AMLO, was born on November 13, 1953 in Tabasco, Mexico. He began his political career in the PRI, but later distanced himself from the party due to ideological differences and founded his own party, the National Regeneration Movement (MORENA), in 2014. This chapter is a documentary work which seeks to describe the political development that Enrique Peña Nieto and Andres Manuel Lopez Obrador has had.

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CHAPTER 5

INSTITUTIONAL STRUCTURE AND ECONOMIC GROWTH IN N11 COUNTRIES (2002-2021)

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INTRODUCTION

The literature has long debated the determinants of a country's economic growth and development. The essential question in the discussion is why certain countries are more developed than others. Macroeconomic variables have generally been used to explain economic growth. However, especially since the first half of the 1990s, the relevance of institutional quality in national economic growth and development, as well as in assessing the development gap, has been stressed. A country with good institutions is perceived to be more prominent than other countries in achieving a high level of development with lower transaction costs, as well as achieving a better distribution of factors of production by ensuring a fair distribution of income and a better distribution of factors of production through the proper functioning of property rights, civil and political rights freedoms. Poor and weak institutions can subject countries to economic and political unrest, as well as lagging economic growth. Many elements, including as political freedoms, economic freedoms, social capital, social features, corruption, governance, and political instability, have begun to be included in models used to depict institutions in order to assure long-term economic progress. According to the research, institutional quality has a positive and significant explanatory effect on economic growth.

The literature on the N11 (Next 11) countries (Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Philippines, South Korea, Turkey, and Vietnam) has not previously examined the relationship between institutional economics and economic growth. Furthermore, because the study intends to examine Poland, this country is included in the number of cross-sections. The remaining variables are changed to indices because the variables reflecting the institutional framework are indices. These distinctions serve as the foundation for the rationale that distinguishes this study from others in the literature.

The study's goal is to use panel time series analysis to analyze the relationship between institutional structure and economic growth in N11 nations, including Poland, from 2002 to 2021. The research will continue with the literature on this topic. The data set will be introduced, and tables will be used to interpret the econometric method and empirical results. Finally, the study will be ended by summarizing the econometric test results.

1. LITERATURE

Studies on the relationship between economic growth, socioeconomic disparities, and institutional structure began in the 1990s. It is well recognized that institutional economics has a long history. However, the problems in acquiring institutional indicators that are deemed to represent the institutional structure for the relevant subject are the reason why both empirical and theoretical research have begun to be explored since the 1990s.

Economic liberties, corruption, political freedoms, and governance are some of the institutional indicators that represent the institutional framework. Analyses reveal that institutional structure positively affects economic growth; Barro (1991), Abrams and Lewis (1993), De Haan and Sturm (2000), Ulubasoğlu and Doucouliagos (2004), Beşkaya and Manan (2009), Hayaloğlu (2012), Fayissa and Nsiah (2013), Artan and Hayaloğlu (2014), Tunçsiper and Biçen (2014), Göger (2020), Doğanay and Değer (2020) and Kangal and Eroğlu (2023). According to Mauro (1995) and Akçay (2002), institutional structure has a negative impact on economic growth.

The following studies demonstrate the importance of institutional structure in economic growth: Artan and Hayaloğlu (2013), Aykut and Akın (2014), Malikane and Chitambara (2017), Yıldırım (2019), and Eren (2019). According to Göcen (2021) and Yay and Ezanoğlu (2023), there is a causal relationship between institutional structure and economic growth. According to Yenipazarlı (2009), there is a long-run relationship between institutional structure and economic growth.

Yay (2002) discovers a favorable association between economic liberties and growth, but no such relationship exists between political freedoms and growth. Yapraklı (2008) discovered that corruption prevention and government efficacy variables have a favorable impact on growth, whereas rule of law, political stability, transparency, and regulatory quality have a negative impact. Erkuş (2016) indicated that economic freedoms favorably effect growth but democracy, political freedoms, and civil liberties negatively affect growth. Şahin (2018) discovers a positive association between governance quality and growth, but no relationship between political liberties and growth.

As can be seen from the study, the relationship between institutional structure and economic growth has been studied at various times, in various

nations or country groups, and using various approaches. The research show that the effect of institutional structure on economic growth is positive and considerable. The studies on institutional structure are summarized in the table below in selected chronological order. In terms of the nation group chosen for the connected issue, re-indexing the series, and analyzing them using two alternative models, this study differs from the literature.

Table 1: Institutional Structure and Economic Growth Research

Author	Number of Countries	Period	Method	Institutional Structure Variable
Barro (1991)	98 Selected Countries	1960-1985	Panel Data Analysis	Political Instability
Abrams and Lewis (1993)	1968-1987	90 Selected Countries	Three Stage Least Squares Method	Democracy, Economic Freedoms and Personal Freedoms
Mauro (1995)	1980-1983	67 Selected Countries	Two Stage Least Squares and Panel Least Squares Method	Bureaucratic Efficiency Index Representing Corruption
De Haan and Sturm (2000)	1975-1990	80 Selected Countries	Sentiment Analysis	Economic Freedoms
Yay (2002)	1971-1990	74 Least Developed and Developing Countries	Least Squares Method	Democracy
Akçay (2002)	1960-1995	54 Selected Countries	Least Squares Method	Corruption
Ulubasoglu and Doucouliagos (2004)	1970-1999	119 Selected Countries	Panel Data Analysis	Political Rights and Civil Liberties and Economic Freedoms

Yapraklı (2008)	2002-2005	36 Selected Countries	Panel Data Analysis	Quality of Regulation, Prevention of Corruption, Political Stability, Government Effectiveness, Transparency and Rule of Law
Yenipazarlı (2009)	Turkey	1970-2006	ARDL Bound Test and Cointegration Analysis	Index of Economic Freedom, Index of Economic Freedom (wef), Index of Economic Freedom (coref) and Index of Economic Freedom (target)
Yıldırım (2009)	96 Selected Countries	1970-2005	Panel Data Analysis	Economic Freedoms Index, Political and Civil Rights Index
Beşkaya and Manan (2009)	Turkey	1970-2005	Time Series Analysis	Economic Freedoms and Democracy
Hayaloğlu (2012)	110 Selected Countries and Turkey	2000-2009 1972-2009	Panel Data Analysis, Time Series Analysis	Political Freedoms
Artan and Hayaloğlu (2013)	High Income, Middle Income and Low Income	2000-2009	Panel Data Method	Economic Freedoms and Political

	110 Countries			Freedoms
Fayissa and Nsiah (2013)	39 Selected African Countries	1995-2004	Panel Data Analysis	Governance Indicator
Tunçsiper and Biçen (2014)	9 Emerging Market Economies	2000-2012	Panel Regression Method	General Economic Freedoms Index, Property Rights Index, Freedom to Work/Freedom to Establish Business Index, Freedom to Trade Index and Freedom to Invest Index
Aytun and Akın (2014)	83 High Income OECD, Upper Middle Income, Lower Middle Income and Low Income Countries	2000-2010	Panel Causality Analysis	Institutional Quality Index
Artan and Hayaloğlu (2014)	Turkey	1972-2009	Time Series Analysis	Political Freedoms Index
Doğan (2015)	55 Selected Countries	2000-2010	Panel Data Analysis	Gini Coefficient, Political Institution Index, Economic Institution Index and Legal

				Institution Index
Erkuş (2016)	24 Selected Countries	1996-2011	Panel Data Analysis	Democracy, Economic Freedom
Malikane and Chitambara (2017)	South African Countries	1980-2014	GMM Analysis	Economic Freedoms, Democracy and Political and Civil Rights
Şahin (2018)	MENA Countries	2002-2015	Panel Data Analysis	Governance Index and Political Freedoms
Eren (2019)	High (37), Upper- Middle (19) and Lower- Middle (19) Income Countries	2002-2017	GMM Analysis	Control of Corruption, Freedom of Expression and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Rule of Law and Regulatory Quality
Göger (2020)	Turkic Republic Countries	2002-2018	Panel Data Analysis	Index of Economic Freedom and Governance Index
Doğanay and Değer (2020)	23 Less Developed, 63 Developing	2002-2018	Two Stage System Generalized Method of	Control of Corruption, Government Effectiveness, Administrative Quality, Freedom of

	and 48 Developed Countries		Moments	Expression and Accountability, Rule of Law Political Stability and Non- Violence
Göcen (2021)	D8 Countries	1996-2019	Bootstrap Panel Granger Causality	Economic Freedom Index
Kangal and Eroğlu (2023)	Countries in the Top 10 in the Index of Economic Freedom	2006-2020	Panel Data Analysis	Economic Freedom Index, Business Freedom Index Global Competitiveness Index Democracy Index, Corruption Perception Index
Yay and Ezanoğlu (2023)	Turkey	1995-2021	Toda- Yamamoto Causality Analysis	Economic Freedom, Rule of Law, Size of the State in the Economy, Regulatory Efficiency and Open Markets

2. DATA SET, ECONOMETRIC METHOD, AND RESULT

The relationship between institutional structure and economic growth will be examined using two models. The first model will investigate the effect of institutional structure on economic growth in the absence of control variables. The institutional structure will be represented by the economic freedoms index and corruption control variables. Because growth is the dependent variable in the second model, labor and capital factors will be

included as control variables. The Heritage Foundation database provided the economic freedom index, and the Worldwide Governance Indicators database provided the control of corruption variable. The World Bank database is also used to collect economic growth, labor, and capital metrics.

Because the series describing the institutional structure are indexes, the variables indicating economic growth, labor, and capital are translated to indexes in base 100 and turned into new variables. As a country group, the period 2002-2021 is considered for the next eleven (N11) countries³ and Poland. The inclusion of Poland in the study is for the purpose of providing the findings of the analysis in that nation. The period range is determined by the availability of data. The study's panel time series analysis is based on annual data. The models that have been prepared for the analysis are displayed below.

Model 1:

$$I-GROWTH_{it} = \beta 0_{it} + \beta 1EFI_{it} + \beta 2CC_{it} + u_{it}$$

Model 2:

$$I-GROWTH_{it} = \beta 0_{it} + \beta 1EFI_{it} + \beta 2CC_{it} + \beta 3L_{it} + \beta 4K_{it} + u_{it}$$

1. In the model, the I-GROWTH series is used as the dependent variable to indicate economic growth. For the GDP Per Capita variable in the economic growth series, the formula “ $N-(N-1)/(N-1)*100$ ” was used. By expressing the economic freedom index, the EFI variable serves as the independent variable. The CC variable is the independent variable for corruption index control. In Model 2, the I-L variable is introduced to the model as a labor control variable, and the I-K variable is added to the model as a capital control variable. In the equations, the “i” sub-index represents the 12 countries, while the “t” sub-index represents time. $\beta 0$ represents the constant term, while “u” represents the error term. The table below shows the explanations for these series.

³ Bangladesh, Egypt, Indonesia, Iran, Mexico, Nigeria, Pakistan, Pakistan, Philippines, South Korea, Turkey, and Vietnam are among them. Only South Korea is developed among the group, with the remaining countries being developing.

Table 2. Definitions and Variables

Code	Explanation	Source
I-GROWTH	-Economic Growth (Gdp Per Capita, Constant 2015US\$) -The formula $N-(N-1)/(N-1)*100$ was employed. -Based on the year 2012 and indexed from 100.	World Bank*
EFI	Representing Economic Freedom; -Property Rights -Government Integrity -Judical Effectiveness -Tax Burden -Government Spending -Fiscal Health -Business Freedom -Labor Freedom -Monetary Freedom -Trade Freedom -Investment Freedom -Financial Freedom average of indices	The Heritage Foundation**
CC	Control of Corruption	Worldwide Governance Indicators ***
I-L	Labor force, Total -Based on the year 2012 and indexed from 100.	World Bank*
I-K	Capital (Gross Fixed Capital Formation, Constant 2015US\$) -Based on the year 2012 and indexed from 100.	World Bank*

Note: *The World Bank: <https://data.worldbank.org> (Access: 19.05.2023)

** The Heritage Foundation: <https://www.heritage.org/index/explore> (Access: 19.05.2023)

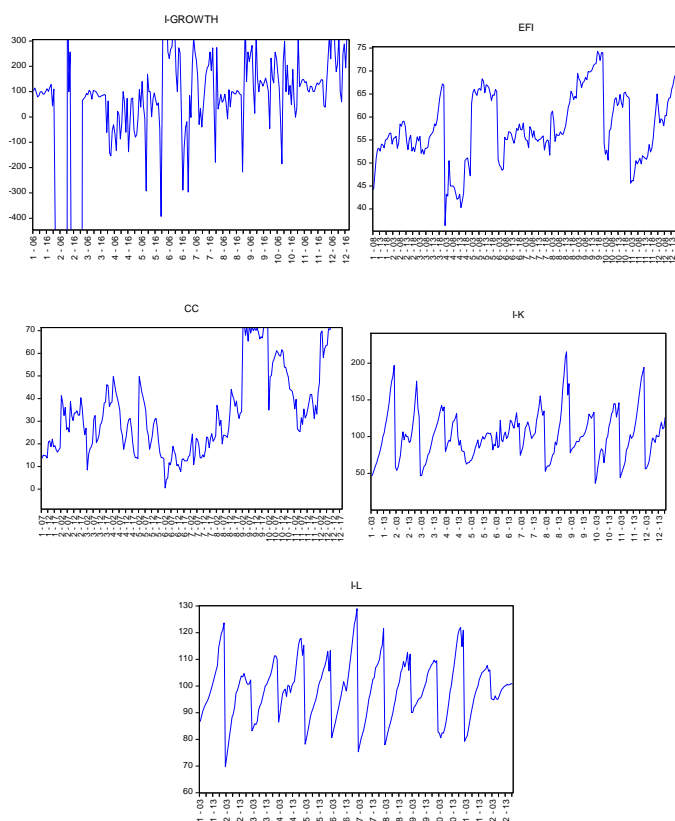
***WorldwideGovernanceIndicators:<https://info.worldbank.org/governance/wgi/Home/Reports> (Access: 19.05.2023)

Panel time series analysis is utilized in this study to test for cross-sectional dependence and homogeneity of slope coefficients in order to examine the link between the variables. Panel unit root tests, also known as second generation in the literature, were used based on the results of the cross-

sectional dependence analysis. The Bai and Ng (2004) test, one of the conventional unit root tests, is used to assess the stationarity levels of the variables. Following that, because the series were discovered to be stationary at the level, a short-run analysis was performed. After detecting econometric difficulties and selecting the right model, Parks and Kmenta (1986) developed the (FGLS) estimator, which is both a robust estimator and eliminates econometric problems. . Finally, to assess the causative relationship between the variables, the causality test devised by Emirmahmutoğlu and Köse (2011) was incorporated in the study. For data analysis, the Stata, EViews, and Gauss econometric package programs were utilized. The findings are provided in tables after brief descriptions of the exams.

Before using econometric tests, it is assessed whether the series contains an intercept, a trend, or both.

Figure 2. Series Level Value Graphs



The figures show that the economic freedom (EFI) and corruption control (CC) series have an intercept impact due to their non-zero starting point and a trend effect due to their upward and downward oscillations. The other series have only one intercept. This circumstance will be considered when picking the model for future tests.

2.1. Tests for Cross Section Dependence and Homogeneity

The CD (2004) test established by Pesaran is used to assess cross-sectional dependence among variables. This test can be applied when the number of cross-sections is greater than the number of observations, as well as when the number of observations is greater than the number of cross-sections. Furthermore, this test supports homogeneous or heterogeneous panels. The CD (2004) test is chosen in this study because it is one of the most extensively used tests in the literature. The PUY (2008) test, which is more recent than other cross-section dependence tests, is also employed in the application. . Pesaran, Ullah, and Yamagata created the PUY test. The test, which is expressed as a bias-corrected LM test, examines for cross-sectional dependence in heterogeneous panels (Pesaran, 2004: 4-12). Despite the fact that the study includes 12 cross-sections and 20 observations, there is a (T>N) scenario. Furthermore, before moving on to additional tests in the study, the homogeneity test should be performed. The Slope Homogeneity test established by Pesaran and Yamagata (2008) reports on the homogeneity of the slope coefficients. This test’s null hypothesis is predicated on homogeneity (Göcen, 2021: 875). The PUY test is included in the analysis since the homogeneity test indicates that the series satisfy the heterogeneity assumption.

Table 3. Test Results for Cross Section Dependence and Homogeneity

N11 Countries and Poland	Cross-Sectional Dependence		Homogeneity	
	<i>Pesaran CD</i> (2004)	<i>PUY</i> (2008)	<i>Pesaran & Yamagata</i> (2008)	
Variables			<i>ΔTilde</i>	<i>ΔTilde_{adj}</i>
I-GROWTH	8.349 (0.000)	16.245 (0.000)	6.685 (0.000)	7.521 (0.000)
EFI	-2.072	22.762	3.888	4.218

	(0.019)	(0.000)	(0.000)	(0.000)
CC	-2.257	18.326	2.241	2.431
	(0.012)	(0.000)	(0.013)	(0.008)
I-L	-1.715	3.676	3.747	4.064
	(0.043)	(0.000)	(0.000)	(0.000)
I-K	-2.088	20.156	1.677	1.819
	(0.018)	(0.000)	(0.047)	(0.034)

Note: () denotes probability values.

When the data in Table 3 are examined, both the Pesaran CD (2004) and PUY (2008) tests reject the null hypothesis of “no cross-sectional dependence” for all series. As a result, it is determined that the variables are cross-sectionally dependent. At the 5% significance level, another test, Pesaran and Yamagata (2008) Homogeneity finding, rejects the null hypothesis “slope coefficients are homogeneous” for all variables. Based on these findings, the stationarity of the series was evaluated using Bai and Ng (2004), a 2nd generation panel unit root test.

2.2. Panel Unit Root Test

Bai and Ng (2004) devised the PANIC (Panel Analysis of Nonstationarity in Idiosyncratic and Common Components) unit root test to test the stationarity of the variables. This test determines whether or not the series contains unit roots by taking into account the common factor structure based on cross-sectional dependence. The test’s null hypothesis is “there is a unit root,” while the alternative hypothesis is “stationary.” It can accommodate both balanced and unbalanced panels (Bai and Ng, 2004: 1140). Furthermore, because it allows for heterogeneous panels, it was chosen for use in the study.

Table 4. PANIC Unit Root Test Result

N11 Countries and Poland		PANIC Unit Root Test (Bai and Ng 2004)	
Variables	Model	Statistics	Probability
I-GROWTH	(C)	3.376	0.000
EFI	(C+T)	3.174	0.001
CC	(C+T)	5.208	0.000
I-L	(C)	1.998	0.023
I-K	(C)	1.974	0.024

Note: Intercept is represented by (C), and Trend is represented by (C+T). Because the series is annual, the lag length is entered as “2”. As the information criterion, “Schwarz” is picked.

The null hypothesis of “there is a unit root” is rejected for all variables when the unit root test findings are assessed. As a result, the variables do not have a unit root, indicating that they are stationary at level I(0). As a result, a short-run analysis will be performed between the series.

2.3. Model Determination, Basic Assumption Tests, and Model Estimation

In panel data analysis, you must pick from the Pooled OLS, fixed effects, and random effects models. States that fixed effects estimate a distinct constant term for each cross-section (Greene, 1993: 466). Technically, it means adding a dummy variable to each cross-section. As a result, it is often referred to as the LSDV (least squares dummy variable) estimator. Fixed effects are favoured in many analyses due to the fact that they are always consistent. However, the selection of fixed effects is still determined by the F test result. The null hypothesis in the F test is pooled OLS, whereas the alternative hypothesis is fixed effects. The assumption behind random effects is that there is no association between cross-sectional changes and explanatory variables. To use random effects, this correlation must be evaluated to see if it is zero. Only random effects can be employed if the correlation cannot be disregarded as zero. To determine if the random effects model should be utilized, the Breusch-Pagan (LM) test is performed. This test’s null hypothesis is pooled least squares, and the alternative is random effects. If the two tests differ, the Hausman test is applied, which fits the chi-square distribution with k degrees of freedom (Baltagi, 2001: 20). The Hausman test’s null hypothesis indicates random effects, while the alternative hypothesis states fixed effects.

Table 5. Results of the Appropriate Model and Basic Assumption Test

Model Preference		
Test Type	Test Statistic	
	Model 1	Model 2
F Test	χ^2 (11): 373.12	χ^2 (11): 360.99
(Pooled OLS-Fixed Effect)	(0.0000)	(0.0000)

BP (LM) Test	χ^2 (01): 820.18	χ^2 (01): 759.83
(Pooled OLS-RandomEffect)	(0.0000)	(0.0000)
Hausman Test	χ^2 (2): 0.19	χ^2 (04): 6.66
(Fixed Effect-Random Effect)	(0.9090)	(0.1550)
Basic Assumptions		
Test Type	Test Statistic	
	Model 1	Model 2
Poi-Wiggins	χ^2 (11): 1114.00	χ^2 (11): 1106.87
Heteroscedasticity	(0.0000)	(0.0000)
Wooldridge	F(1, 11): 899.547	F(1, 11): 722.172
Autocorrelation	(0.0000)	(0.0000)

Not: () stands for intrinsic probability values. Both models regulate the F test in two ways (temporal dimension). “H₀: Time dimension does not need to be controlled” is not rejected. It is decided that the time dimension will not be included in the F test.

Table 5 indicates that the F test, which decides between pooled OLS and fixed effects, rejects the null hypothesis of “Pooled OLS” for both models. For both models, the F test excludes fixed effects and the BP (LM) test rejects the null hypothesis “H₀: Pooled OLS”. The random effects model is shown by the BP (LM) test. The null hypothesis cannot be rejected when the Hausman test is used for both models (H₀: Random Effects; H_a: Fixed Effects). As a result, it is clear that the random effects model should be chosen. The basic assumption tests were also addressed before interpreting the model estimation findings. The results of these tests show that the model has heteroscedasticity and autocorrelation issues. Heteroscedasticity and autocorrelation issues that develop in the econometric analysis section are typically found in panel data models. As a result, the FGLS test devised by Parks and Kmenta (1986), which provides robust standard errors while accounting for these issues, was used. The residuals are used to account for heteroscedasticity and autocorrelation after the test is computed using the least squares approach. The generalized least squares approach is then used to estimate it again. This process is repeated until β (s) approaches a fixed integer (Tatoğlu, 2012: 253).

Table 6. Results of Model Estimation

FGLS (Parks-Kmenta 1986) Robust Standard Errors				
1st MODEL				
IGROWTH	Coefficient	Std. Err.	z	p> z
EFI	2.9962	1.5034	1.99	0.046
CC	5.1929	0.5737	9.05	0.000
C	-360.7463	111.6105	-3.23	0.001
Wald $\chi^2(2)$: 83.69			Prob. χ^2 : 0.0000	
2nd MODEL				
IGROWTH	Coefficient	Std. Err.	z	p> z
EFI	2.3136	1.9711	1.17	0.240
CC	4.5441	0.8823	5.15	0.000
IL	0.5273	2.6691	0.20	0.843
IK	-2.6422	0.8053	-3.28	0.001
C	-99.7866	258.4667	-0.39	0.699
Wald $\chi^2(4)$: 31.89			Prob. χ^2 : 0.0000	

When the FGLS estimate results are examined, the economic freedoms and corruption control series for the first model are shown to be statistically significant. It is concluded that increasing economic freedom by one unit boosts economic growth by 2.99 units. A one-unit increase in economic freedom boosts economic growth by 5.19 units in the control of corruption variable. The probability value χ^2 , which expresses the significance of the model as a whole, is less than the 5% significance level, indicating significance for the whole model.

The second model's FGLS estimation results reveal that the control of corruption variable is statistically significant. According to the coefficient, a one-unit increase in corruption control enhances economic growth by 4.54 units. The variable of economic freedoms is shown to be unimportant. Although the capital variable included as a control variable in the model is statistically significant, it has a negative effect on growth. Another control variable, labor, is found to be unimportant in the model. When all of these results are analyzed, it is clear that the labor and capital variables introduced into the model as control variables have a detrimental impact on the control of economic liberties and corruption, which are thought to represent the institutional framework. As a result, the values in Table 6 support the idea of using two models to examine simply the effect of institutional structure on

economic growth. The probability value of χ^2 is also significant for the second model.

2.4. Panel Causality Test

The causality analysis developed by Emirmahmutoğlu and Köse (2011) is used to collect information on the existence and direction of the causal relationship between variables. Based on the Toda-Yamamoto (1995) methodology, the test gives causality information for the complete panel as well as cross-section (country) data. It is suitable for use with or without cross-sectional dependence. It is not necessary for the series to be integrated to the same degree. Furthermore, no cointegration relationship is required for the series. In summary, no assumptions are made for this test. The bootstrap critical values for research with cross-sectional dependency are reported, as is the asymptotic probability value for studies without cross-sectional dependence (Emirmahmutoğlu and Köse, 2011: 872). As a result, it is commonly preferred.

The null hypothesis that economic freedoms are not the driver of economic growth is rejected for the entire panel when Table 7 is examined. As a result, economic freedoms are believed to be the cause of growth. For Egypt, Indonesia, South Korea, and Vietnam, cross-sectional analysis demonstrates a causal association between economic freedom and growth. For the entire panel, the null hypothesis that economic development is not the cause of economic freedom cannot be rejected. As a result, there is no causal relationship between economic freedom and growth. According to the cross-sectional approach, no country has a causal relationship between growth and economic freedom.

The null hypothesis that poverty control is not the cause of economic growth cannot be rejected for the overall panel. In terms of cross-sectional interpretation, no causality relationship is found from poverty control to economic growth for any cross-section. At the 10% significance level, the null hypothesis that economic growth does not control poverty is rejected. As a result, a causal association between economic growth and poverty reduction is discovered. For Mexico, Pakistan, and Vietnam, cross-sectional results show a unilateral causality from economic growth to poverty reduction.

In summary, causality analysis demonstrated a unilateral causal association between economic freedom and economic growth, as well as a unilateral causal relationship between economic growth and poverty reduction. It is found that labor and capital are both important drivers of economic progress.

Table 7. Panel Causality Test Outcome

Emirmahmutoglu & Köse (2011) Panel Causality										
Hypothesis	<u>H₀: Economic Freedoms Does Not Cause Economic Growth</u>									
Countries	Bang.	Egypt	Indo.	Iran	Mex.	Nige.	Pak.	Phili.	S.Korea	Turkey
	[0.885] (0.347)	[5.441] (0.020)	[8.170] (0.004)	[0.343] (0.558)	[1.232] (0.267)	[1.134] (0.287)	[2.203] (0.138)	[0.341] (0.559)	[4.743] (0.029)	[0.278] (0.598)
Panel Fisher 50.944	Bootstrap 10 % 36.874		Bootstrap 5 % 41.330		Bootstrap 1 % 51.011		H ₀ REJECT Economic Freedoms → Economic Growth			
Hypothesis	<u>H₀: Economic Growth Does Not Cause Economic Freedoms</u>									
Countries	Bang.	Egypt	Indo.	Iran	Mex.	Nige.	Pak.	Phili.	S.Korea	Turkey
	[0.208] (0.648)	[2.259] (0.133)	[1.438] (0.230)	[0.863] (0.353)	[1.363] (0.243)	[3.551] (0.060)	[1.044] (0.307)	[0.151] (0.698)	[3.107] (0.078)	[0.155] (0.283)
Panel Fisher 31.722	Bootstrap 10 % 37.284		Bootstrap 5 % 42.134		Bootstrap 1 % 51.580		H ₀ NOT REJECT Economic Growth → Economic Freedoms			
Hypothesis	<u>H₀: Poverty Control Does Not Cause Economic Growth</u>									
Countries	Bang.	Egypt	Indo.	Iran	Mex.	Nige.	Pak.	Phili.	S.Korea	Turkey
	[0.683] (0.409)	[2.450] (0.118)	[0.869] (0.351)	[3.454] (0.063)	[5.425] (0.066)	[0.638] (0.425)	[1.080] (0.583)	[0.637] (0.425)	[0.485] (0.486)	[1.309] (0.520)
Panel Fisher 28.984	Bootstrap 10 % 38.485		Bootstrap 5 % 42.857		Bootstrap 1 % 49.984		H ₀ NOT REJECT Poverty Control → Economic Freedoms			

Panel Fisher 55.020		Bootstrap 10 % 38.537		Bootstrap 5 % 42.506		Bootstrap 1 % 52.951		H ₀ REJECT Capital → Economic Growth				
Hypothesis		<u>H₀: Economic Growth Does Not Cause Capital</u>										
Countries	Bang.	Egypt	Indo.	Iran	Mex.	Nige.	Pak.	Phili.	S.Korea	Turkey	Viet.	Poland
	[0.427] (0.513)	[0.413] (0.520)	[0.003] (0.953)	[1.738] (0.187)	[0.188] (0.664)	[8.624] (0.013)	[2.494] (0.287)	[0.272] (0.602)	[0.887] (0.346)	[0.048] (0.826)	[0.589] (0.443)	[0.367] (0.545)
Panel Fisher 24.384		Bootstrap 10 % 40.788		Bootstrap 5 % 45.747		Bootstrap 1 % 59.623		H ₀ NOT REJECT Economic Growth → Capital				

Note: Since there is cross-sectional dependence, the panel fisher part is taken into account. [] denotes the wald statistic and () denotes the probability. “→” indicates causality and “↛” indicates non-causality.

CONCLUSION

This study looks at the relationship between institutional structure and economic growth for the N11 (Next 11) countries and Poland, which is included in this group. The study takes into account two models. The first model was estimated without other variables to compensate for the effect of economic freedoms and poverty control variables on economic growth. Because economic growth is the dependent variable, the second model is estimated by including labor and capital variables as control variables.

As a result of the series' cross-sectional dependence, second generation unit root tests were performed. The variables were found to be stationary at level $I(0)$ as a result of the unit root test, and a short-term analysis was performed. Furthermore, because the model detects the autocorrelation and heteroscedasticity problem, which is one of the key assumption tests, the estimation approach proposed by Parks and Kmenta (1986) is employed. Economic liberties and poverty control, which are thought to represent the institutional framework in the first model, are statistically significant in the model as a consequence of the estimation. When the coefficients are examined, both economic freedom and poverty reduction have a favorable impact on economic growth for the set of nations studied. Only the economic freedoms variable, which represents the institutional structure, is statistically significant in the second model, which includes labor and capital as control factors. When its coefficient is examined, it is discovered to have a favorable impact on economic growth. However, this effect is less pronounced when compared to the first model. As a result, in the second model, which incorporates labor and capital, both statistical and coefficient distortions have arisen in the economic freedoms and poverty control variables, which are thought to represent the institutional framework. The importance of building two models in the study is highlighted in this scenario.

The test devised by Emirmahmutoğlu and Köse (2011) was then used to determine the existence and direction of causation. Economic liberties are discovered to be the cause of economic growth as a consequence of the test. Cross-sectional results show that Egypt, Indonesia, South Korea, and Vietnam are similarly affected. Economic growth has also been identified as a driver of the poverty control variable. The same is true for Mexico, Pakistan, and Vietnam. When all of these findings are considered together, it is clear that

there is a strong association between institutional structure and economic growth for the N11 countries as well as Poland, which is included in this country group, and that institutional structure has a positive effect on economic growth. It has arisen as a critical concern that institutional structure should not be overlooked in the development of these countries.

SUMMARY

The purpose of this study is to use panel data to analyze the relationship between economic growth and institutional structure from 2002 to 2021. The analysis was carried out by incorporating Poland in the N11 (Next 11) country group. Economic liberties and poverty alleviation are said to symbolize institutional framework. The dependent variable, GDP Per Capita, is turned into an economic growth series using the formula " $\frac{N-(N-1)}{(N-1)} \times 100$ ". As control variables, labor and capital are introduced. Economic growth, labor, and capital data have been turned into indexes based on 2012 and translated into new series because the variables describing the institutional framework are index values. The data was analyzed using the Eviews, Gauss, and Stata package tools. The series were found to be $I(0)$ as a consequence of the second generation unit root test, which took cross-sectional dependence into consideration. According to the FGLS estimator, economic liberties and poverty control variables that indicate institutional structure have a significant and beneficial effect on economic growth. Furthermore, a causation conclusion from economic freedom to economic growth and from economic growth to poverty control was found.

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CHAPTER 6

BEYOND A LOGO: CITY BRANDING FOR LOCAL GOVERNANCE

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INTRODUCTION

The concern for sustainable development in communities is a major issue in the 21st century. Perspectives highlight the lack of sustainability, scarcity of resources, globalization, vested interests, and the potential clash between civilizations.

Governments have undergone reforms, such as New Public Management and governance, to address these economic challenges. These reforms import theories and mechanisms from other fields to bring comprehensive solutions to administration.

This paper proposes the discipline of place marketing or place branding, which originated in the United States in the 1990s. It refers to the work of Kotler, Haider, and Rein (1993), Anholt (2007), Govers and Go (2009), and Eshuis and Klijn (2012), Asensio (2008), Valdez (2012), and Lees-Marshment, ed. (2014 [2012]). In this paper, place branding is synonymous with *city branding* to be more specific.

The debate revolves around what should engage a community: the identity of a city or the vision of an administration. Political marketing has led many mayors to constantly campaign for the next step, overshadowing the purpose of the State. Government marketing, as outlined by Mokwa and Permut, aims to position the government's agenda above personal political ambitions.

1. WHAT DOES GOVERNANCE AIM TO ACHIEVE?

With the approval of the United Nations' Agenda 2030, a shift is expected in the role of local governments in development, impacting public administrations and social actors. Sustainable Development Goal 11 emphasizes the transformation of cities and communities into inclusive, safe, resilient, and sustainable entities. According to the UN's New Urban Agenda (2021), urban areas in developing countries will experience significant growth compared to rural areas.

The UN 2030 proposal for governance aims to promote an inclusive and effective approach to address global challenges and achieve the Sustainable Development Goals (SDGs). It encourages active participation from all relevant stakeholders, including governmental and non-governmental actors, in decision-making and the implementation of sustainable policies.

The governance model of UN 2030 emphasizes cooperation and collaboration among different actors, such as governments, civil society, the private sector, and international organizations, to address social, economic, and environmental challenges at a global level. It aims to strengthen governance mechanisms, promote transparency, accountability, and citizen participation in decision-making, and adopt integrated and holistic approaches to sustainable development.

The reform of the state, as highlighted by the Latin American Center for Administration and Development (CLAD), focuses on fulfilling economic contracts, safeguarding social rights, and promoting competitiveness in the international arena. It emphasizes that the state should not only generate but also regulate activities, striving to meet the needs of society. However, the involvement of the community and stakeholders is crucial for achieving sustainable development.

In the post-bureaucratic paradigm, citizens expect administrations to engage with users and deliver high-quality services that add value to the collective. The bureaucratic paradigm, on the other hand, centered around centralization and control, disregarding outcomes. Collaboration between governments and non-governmental actors has been recognized as essential for public administration modernization.

Different perspectives on governance have emerged, including corporate governance, new public management, multi-level governance, and network governance. These perspectives focus on fair treatment, performance, negotiation among different levels of government, and interaction with social actors in a complex environment. Strategy plays a crucial role in managing social processes and public policies.

The governance perspective does not aim to diminish the role of governments but rather advocates for non-authoritarian and non-paternalistic leadership. It seeks to overcome centralist coercion and favoritism, fostering commitment and collective efforts toward sustainable development.

The New Urban Agenda emphasizes that sustainable development cannot be achieved if urban planning is limited to political cycles. Urban governance, involving national, subnational, and local governments, as well as stakeholders, is crucial. Transparent decision-making, participation,

subsidiarity, cooperation, and digitalization are key principles for generating agreements and managing urban areas.

2. BRANDING A CITY IS MORE THAN A LOGO

The creation of a city brand goes beyond a logo or slogan, as it requires substantive change rather than superficial packaging. To avoid common mistakes, incoming governments should involve stakeholders in designing and implementing long-term objectives. Active participation leads to satisfaction and progress for all stakeholders.

Governance is crucial for positioning a city brand, defining its vocation, and leveraging its competitive identity. Analyzing local and regional resources is essential, going beyond a review of public finances. The Netherlands strategically defined its tourism vocation, while Dubai aligned its local idiosyncrasies with its ambition for tourism and business growth (Govers and Go, 2009).

Campaign strategy is crucial in political marketing, providing a guiding idea for maximum visibility. Governments must also communicate effectively by fostering agreement among ordinary people and stakeholders, instead of focusing solely on information dissemination (Carville & Begala, 2003; Trad & Ibinarriaga, 2012; Maarek, 2012 [2007]).

According to Anholt's perspective (2007), countries should strive to develop a competitive identity in order to define their national brand. In this author's view, a nation's reputation is the result of a genuine governance exercise that emphasizes the interaction of the following elements: 1) tourism promotion, 2) existing business brands, 3) public policies, 4) business sectors and investors, 5) local culture, and 6) the people, the residents of the place. The same interaction of actors applies to city branding. However, in this interpretation of Anholt's model, the element of "tourism" has been modified to "specialization," as some cities may not necessarily have a tourism vocation but may be specialized in another economic activity, as highlighted by Kotler, Haider, and Rain (1993).

Local governments often fail to define a clear vocation, trying to encompass multiple goals simultaneously. This non-strategic approach leads to confusion and hinders individuals from identifying their role in the city's

development. A focused effort on one or two goals can project a clear intention and attract individuals with relevant skills.

3. THE VALUE: SPECIALIZATIONS OF CITIES

Value refers to the degree of usefulness or aptitude of things to satisfy needs, provide well-being, or bring delight. In its philosophical definition, value is the quality possessed by certain realities, considered goods, for which they are estimable. The concept of value is frequently employed in exchange theories, including Marx's theory, which asserts that the use value of commodities is internalized by individuals only when they can compare similar objects that satisfy the same need. It is important to highlight that, according to this theory, the value is not determined by the production process of objects or commodities but by the exchange relationship between two commodities, which Marx refers to as exchange value (Marx, 1975 [1867] Volume I).

Indeed, value is appreciated through the satisfaction of needs provided by an object or service. However, as Marx also observes, as a value in exchange, value is determined by the exchange relationship itself. In this sense, it is highly valid to revisit Kotler and Armstrong's (2012 [1980]: 5) marketing concept, where they define marketing as the *"process by which companies create value for customers and establish strong relationships with them to obtain value in return"*. Hence, governmental marketing can be considered as the process through which public organizations create value for citizens and establish strong relationships with them to obtain value in return.

For citizens, value lies in the fulfillment of needs that individuals cannot satisfy on their own, except through the social contract. Meanwhile, the government sector can derive value not only from citizens' taxes but also from other types of actions such as involvement, participation, and work in specific public policies.

Public administrations at any level are subjected to constant scrutiny, often unconsciously by citizens, based on the perceived value received. According to Huntington, institutionalization is the process by which organizations and/or norms acquire stability and value (2015 [1968]: 23). From this definition, the acquisition of value is related to four variables: autonomy, coherence, adaptability, and complexity. The organizations that

persist in societies are those that effectively address the needs for which they were designed. Huntington points out that a significant portion of the upheavals in countries with low development standards is due to the failure of state organizations to meet these variables, thus their inhabitants do not perceive a value that justifies belief in them or investment in them.

An organization that is perceived to have high value becomes an institution because it is appreciated by its community and endures. The legitimacy required for an administration to govern is achieved through the image that its people perceive of their government, the perceived value in the citizen-government relationship. There is no worse publicity for investors than a place that constantly changes the rules, where there is no stability or security to establish themselves. Cities lose value when the government is deficient, fails to deliver results, and has a negative image. This highlights the gravity of being unaware of the implications of perception.

As cautioned, it cannot be assumed that all governing authorities have the pure conviction that the place they govern should be recognized through a positive image. The reality, as stated by Pedro Asensio (2008: 130-132), is that governmental marketing strategies usually focus on enhancing: 1) the political party that came into power, 2) the governing ideology, 3) the proposed government program, and 4) the personal brand of the political leader. On one hand, the ideal scenario suggests that the ruler should focus on enhancing the reputation of their city. However, Machiavelli (2001 [1532]: 120) observed that political ambition is inherent to rulers, so it may suffice for the means of maintaining their power to appear honorable and praiseworthy, as people always judge by appearances and rely only on results.

Administrations come and go, but communities persist. On one hand, governmental marketing is dedicated to building relationships between the government and the governed; it is inherent to an administrative context, at least in democratic contexts. On the other hand, the effort to generate or position a city brand constitutes a larger undertaking as it seeks to define an enduring image in the minds of those involved. As mentioned by Govers and Go (1992) and Baker (2019), the definition of a project to establish a place brand represents a lasting legacy for the community. Undoubtedly, it requires significant effort and a lengthy negotiation process, but it unquestionably yields direct results in improving people's quality of life.

The favorable image enjoyed by successful populations makes them natural candidates for attracting tourists and investments to the extent that they can afford to select individuals who can contribute the most benefits to their specialization strategy. Just look at the job offers published by the governments of Canada or Australia to realize that they have migrant programs to recruit specific skilled labor depending on their development and economic sector exploitation needs. They do not allow indiscriminate immigration.

The image of a place is a construct. In Rawls' analysis of Kant, it becomes clear that what is considered "truth" does not exist when debating the existence of moral principles independently of human experience and preference (Rawls, 1999: 192-213). Kant explains that physical things also do not exist solely based on how they are perceived. This way of considering social phenomena also prevails, at least, in the works of Hume, Locke, and Bayle, in the sense that there is no evidence of a world outside the individual; each person only has perceptual knowledge through the senses.

Therefore, what any individual can identify as the image of a place is derived from what they perceive about it. As explained by Govers and Go (2009: 44-45), the perception of a city brand depends on three concrete factors: 1) the identity of the offering, 2) performance, and 3) what we perceive as the image.

What does the city specialize in? Populations can specialize in different fields and promote an image. Undoubtedly, many places will engage in more than one economic activity; large cities usually have multiple areas of specialization, which in turn encompass subsectors or niches. However, the recommendation for medium-sized and especially small cities is to try to focus on a specific activity so that people can clearly identify the primary sector. This is known in marketing as the value proposition when we deliberately make an offer, and the first-time visitor seeks to have a positive experience. This pertains to the second point of Govers and Go (2009), namely, the performance for the user or investor.

According to the analysis by Kotler, Haider, and Rein (1993: 51), cities tend to specialize in four sectors: 1) vacation destinations, 2) industrial hubs for factories, 3) residential areas, specific places for living, and 4) convention sectors, where a large influx of people gathers seasonally for specific events.

On the other hand, Simcity, one of the most famous video game simulators developed by Electronic Arts, suggests that city specializations can be: 1) tourist destinations, 2) industrial hubs, 3) centers for trade and the financial sector, and 4) clusters for the exploitation of natural resources like oil, gas, or minerals. Interestingly, several academic works have documented the use of Simcity as a playful way to educate people, including policymakers, in the discipline of urban planning (Pahl, 1991; Adams, 1998; Gaber, 2007; Arnold, Söbke, & Reichelt, 2019).

Based on the aforementioned perspectives, it is suggested here that while cities have immense possibilities for specialization, we can identify the most common ones depending on both tangible elements (natural resources, infrastructure, facilities, etc.) and intangible factors (traditions, educational level, purchasing power, civic culture, etc.) of a city. Among the most common specializations, we can mention: 1) tourism, 2) residential areas, 3) industrial hubs, 4) convention and event hosting, 5) resource exploitation, which always carries the disadvantage of potential resource depletion, 6) finance and business, and 7) cities specializing in services, such as university towns, medical hubs, and cities whose primary activity is bureaucracy.

4. STAGES FOR DEFINING A CITY BRAND

The Seven Steps or Stages were designed by Baker (2019) based on his consulting experience in the United States and Australia for generating place branding in towns, small cities, and regions. The following points constitute an adaptation of his work with specific explanatory elements that incorporate ideas from other referenced authors.

4.1. Step 1: Measurement and Diagnosis

The initial consideration involves assessing the size, type, historical dynamics, previous branding efforts, and available budget of the place. Existing reports and research should be reviewed to understand the case. These observations are hypotheses indicating the city's vocation.

Market research starts by defining the problem, discussing alternatives, setting objectives, and developing a research plan. Data collection includes focus groups and questionnaires to understand perception in areas like assets,

knowledge, positioning, demographics, and online research using social listening and common rankings.

Identifying the target audience, known as place buyers, is crucial. Understanding their location, motivations, perspectives, and desired benefits is important. Elements like strategic stakeholders, strengths, weaknesses, uniqueness, economic performance, communication strategy, external stakeholders, competitors, consumer process, positive experiences, and current trends should be outlined.

Preliminary meetings with stakeholders should be preceded by research. Open-mindedness is essential, and a designated office should execute the branding strategy. Initial engagements may involve diverse opinions and demands from society.

4.2. Step 2: Analysis and Advantages

To position our city, we need to consider three elements: 1) target audience needs, 2) understanding place strengths (tangible and intangible), and 3) knowledge of competitor strengths. A strategic diagnosis using SWOT analysis helps with this. Being the first to offer something new in the market gives a preferred position, so if many cities are already dedicated to the same thing, finding a new niche or adding an innovative variant is recommended.

Distinguishing factors can include architecture, attractions, historical presence, climate, culture, sports teams, industries, natural sites, accessibility, nightlife, and more.

Economically, resources should be allocated to maximize utility and production while minimizing costs. After laying the political groundwork, a minimalistic general brand should be defined for sectors to adopt. It fosters community pride, tourism, and alignment with the economy, projects a unified identity, keeps sectors focused, generates synergy, facilitates agreements, and reduces conflicting messages.

4.3. Step 3: Architecture and Alignment

Brands are designed with hierarchies of importance, reflecting the relationships and connections among the brand's foundational interests. Brand architecture prioritizes based on geographical level, historical or competitive significance, knowledge level, and reputation.

Brand positioning can be achieved through a House of Brands or a Branded House. A House of Brands differentiates its subdivisions based on composition, like Sony's different divisions. A Branded House, like Kimberly-Clark, owns multiple brands under one company. In politically volatile scenarios, local governments may adopt their own positioning strategies, allowed by subnational governments.

In regions with a good reputation, neighboring municipalities focus on enhancing the brand of the locality that attracts the most investors. Examples include Monterrey in Nuevo León, Mexico, and Santiago de Compostela in Galicia, Spain, where individual recognition is less important than reinforcing the idea of being part of a larger brand experience, such as the Camino de Santiago pilgrimage route.

4.4. Step 4: Articulation

In emergency situations, assigning responsibilities is crucial to ensure prompt action. In governance projects, clear roles and process monitors establish accountability. The brand leadership committee oversees progress, focusing on decision-making and evaluation. Micromanaging should be avoided, and preliminary surveys can defuse debates over branding elements.

Stakeholders and committee members should be trained in marketing concepts to foster a common language. Some destinations face challenges with their brand conception, like difficult-to-pronounce names. Changing a place's name should be approached cautiously. Instead, using a destination name within the brand narrative can be effective, as seen with the Tillamook Coast in Oregon, USA, where promoting the region as "Tillamook County" had less appeal compared to the familiar term "Tillamook Coast" (Baker (2019: 169)).

4.5. Step 5: Activation

To disseminate the brand effectively, a holistic communication approach is recommended, utilizing an omnichannel marketing strategy that can adapt to different message formats. Creating a simple document that outlines the marketing strategy with three to five core objectives, along with a concise brand book specifying semiotics, is beneficial. The document should be straightforward and concise, easily reproducible, and ideally fit on a single

page for stakeholder adoption. A good strategy should be easily repeatable with clear guidelines (Pérez Rojas, 2019: 44).

During implementation, it is crucial to ensure alignment between the unique selling proposition and the entire ecosystem. This includes information channels, advertising, websites, mobile applications, publications, public relations, events, merchandise, urban platforms, architecture, visitor centers, conferences, and other platforms for brand exposure in various forms. Consistency across these channels will strengthen the brand's message and impact.

4.6. Step 6: Adoption

To engage people in city brand positioning, it is crucial to gain their belief in the project. The main objective is to motivate individuals to understand and embrace the concept, encouraging them to interpret and personalize the brand's foundations. Convincing people of the plan's effectiveness is essential, and investing in training individuals on the correct utilization of brand elements is necessary. Emphasizing goals, techniques, and messages that drive the desired narrative is important. Japanese restaurants exemplify identity emphasis through simultaneous welcoming and expressing gratitude to diners upon arrival and departure.

When good governance is established, every individual becomes a city brand ambassador. The leading office and monitoring committee must maintain relationships with key individuals and organizations involved to ensure project sustainability. Appointing brand ambassadors from influential individuals or groups can transfer their visibility and fame to the city brand. This practice is common in non-governmental organizations. For example, football star Kylian Mbappé serves as a sports ambassador for Alcoholics Anonymous in France. His refusal to participate in press conferences sponsored by a beer brand during the 2022 Qatar World Cup significantly increased the organization's visibility.

4.7. Step 7: Action and Monitoring

Building a city brand is just the first step of a long-term plan that requires constant effort and coordination. The leading government office must maintain commitment to governance to ensure the brand's success. To ensure

the long-term operability of the brand strategy, there are six key elements to consider:

1. Brand leadership: A specialized committee oversees the long-term work, assigning roles and responsibilities for consistent monitoring.
2. Brand management: This team focuses on tactical execution and adaptability in the short term, typically led by the mayor's designated office.
3. Integrated marketing: Guidelines are established to evaluate stakeholder actions and ensure they reinforce the brand strategy, implementing corrective measures if needed.
4. Product development and experience management: Data collection is crucial for empirical analyses of target audience satisfaction.
5. Urban platform review: Collaboration between the brand manager, leadership committee, and public works officials aligns strategic city points with objectives.
6. Monitoring and evaluation of progress: Various methods, including social listening, campaign impact, and key statistics such as tax revenue, industry sales, and tourist spending, are used to assess progress.

CONCLUSIONS

Firstly, public administration has embraced disciplines like new public management and governance, including government marketing and city branding. The future of nations lies in urbanization and sustainable development, with local governments expected to define plans in this regard. Engaging people is crucial for long-term project success and authentic governance practices.

Secondly, organizations projecting value become institutions. Value and image are perceptions, and politicians should not equate value with personal brand promotion. True governance requires the participation of various sectors to generate a consistent brand image. Defining brand specialization establishes a strategic direction where stakeholders can identify their role.

Thirdly, comprehensive public policy for city branding involves market analysis, identifying conditions and possibilities, visualizing brand

deployment, establishing a common language, implementing concise strategies, maintaining motivation, and active monitoring by the brand leadership committee. Evidence-based decisions, such as surveys and target audience analysis, should guide the committee's actions.

SUMMARY

An analysis is presented on the implications that the introduction of the concept of governmental marketing and its specialization for the construction of place branding or city branding has had. It is defined that a greater participation of local governments is demanded by the United Nations' sustainable development goals, therefore the way in which the government will be involved with organized sectors of society will be through the exercise of governance.

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CHAPTER 7

A POPULAR CONCEPT OF SUSTAINABLE DEVELOPMENT WITH AN ECOLOGICAL FOOTPRINT: AN EMPIRICAL ANALYSIS OF E7 COUNTRIES

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INTRODUCTION

Throughout their lives, humans have both affected and been affected by the environment. Since 1980, industrialization, urbanization, population growth, and technological advances have resulted in the emergence of production and consumption processes that disrupt natural balance. The disruption of nature's balance has resulted in environmental problems that threaten the existence of all living things. The rise in environmental problems has had a global impact, and what needs to be done to meet today's needs without depleting the resources of future generations has taken on global significance. Because natural resources are limited, ensuring economic development through the use of natural resources has highlighted the need to protect future generations' rights.

When we look back in time, we can see how the interactions between humans and the environment have changed. Human beings who wanted to meet their wants and needs in the early periods of history caused significant environmental damage over time. Environmental pollution has increased dramatically, particularly since the industrial era. Nations have pursued economic growth while failing to address environmental issues. The rash use of natural resources, which are assumed to be limitless in economic activity, has resulted in an increase in global temperature.

Climate change, which has become a global issue, has piqued the interest of scientists in recent years. This global issue is linked to rising energy demand, an overreliance on fossil fuels, population growth, and inefficient agricultural practices. Global carbon dioxide emissions, which have increased on average over the last 50 years, have been reduced with the advent of the Sustainable Development Goal (SDG-13), making a significant contribution to mitigating the effects of climate change. Climate change mitigation and adaptation measures, as outlined in SDG-13, must be incorporated into national policies, strategies, and planning. Climate change mitigation strategies necessitate scientific research for policymakers, organizations, and investors. In this context, the availability of new econometric techniques helps to investigate the causes of environmental pollution in various countries.

Previously, the understanding of development was related to the abundance and consumption of energy; today, the understanding of more

economical energy use and relatively more economical energy availability has replaced it. Policies relating to the concepts of healthy environment, energy security, and energy diversity have emerged as a result of this shifting perspective. These new policies are designed to mitigate the effects of global warming and climate change. Climate change, which is one of the most serious environmental issues, also serves as a catalyst for other environmental issues. Climate change, which has such a significant and destructive impact, was only the subject of technical and scientific studies until 1980, with the exception of initiatives and conferences held during the Cold War's softening periods, and was not on the global agenda. Recent scientific research, however, and the occurrence of natural disasters, have brought this issue to the global agenda and raised awareness about it.

Climate change, also known as global warming, causes an increase in the average temperature of land, sea, and air throughout the year. Climate change has an immediate and indirect impact on human health, agricultural lands and products, water quantity and quality, and natural habitats. To mitigate the effects of climate change caused by global warming, the use of fossil fuels should be reduced, while the use of renewable energy and more efficient manufacturing technologies should be prioritized. Because of the increased use of fossil fuels, the vast majority of countries around the world, regardless of their level of development, have been severely impacted by the problem of global climate change.

The emergence of the global warming problem in recent years has brought to the forefront the concept of ecological footprint, which is the main factor. The term "ecological footprint" has been used in the literature to describe how much natural resources are used by humans in general. The ecological footprint, developed by Wackernagel and Rees in 1996 to make ecological measurements, is made up of six sub-components. Carbon footprint, agricultural land footprint, forest footprint, grassland footprint, built-up area footprint, and fishing ground footprint are examples of these. The ecological footprint is a concept that depicts the amount of land and water required in global hectares (gha) to regenerate the resources depleted as a result of various human activities and to dispose of the wastes generated during consumption. The ecological footprint also indicates how much biologically productive space is required for a given economy to regenerate

the resources it consumes and absorb waste in nature (Wackernagel and Silverstein, 2000, 392).

Modern econometric techniques have played a significant role in providing scientific and concrete evidence on the causes of climate change. The causal effect of environmental pollution has been studied in various countries and continents, but E7 countries have not analyzed data from 2000 to 2021. As a result, this study seeks to empirically investigate the causal relationship between ecological footprint, GDP per capita, industrialization, and population. The panel time series analysis method was used in the study. The remainder of the paper will present the literature review, introduce the data set, and present the empirical results in tables.

1. LITERATURE

The existing literature yields inconclusive results. The results of the causal relationship between environmental pollution and macroeconomic variables differ by country and econometric technique. The majority of the studies make use of panel data analysis. Over the period 2000-2021, scientific evidence of the causal effect between ecological footprint, gdp per capita, industrialization, and population has not been extensively investigated in E7 countries.

This study builds on the previous study, which used an autoregressive distributed lag approach to examine carbon dioxide emissions, gdp per capita, industrialization, and population data for Rwanda⁴ from 1965 to 2011. The variables in the study are cointegrated and have a long-run relationship, according to the findings. The granger causality test is used, and it is determined that there is unidirectional causality between industrialization and gdp per capita, population and carbon dioxide emissions, population and gdp per capita, and population and industrialization. Long-run elasticity results show that a 1% increase in GDP per capita reduces carbon dioxide emissions by 1.45%, while a 1% increase in industrialization increases carbon dioxide emissions by 1.64%. In this context, economic growth will, in the long run, reduce environmental pollution. This finding lends support to the environmental Kuznets curve hypothesis. Furthermore, industrialization

⁴ Rwanda, or officially the Republic of Rwanda, is a landlocked country located in the eastern part of the central part of the African continent.

increases carbon dioxide emissions and degrades environmental and health quality. Such studies spark a global debate about climate change mitigation and its consequences from a Rwandan perspective.

Table 1: Literature on environmental pollution and growth

Author	Data Period	Country	Variables	Methodology	Finding
Grossman ve Krueger (1991)	1977-1985	42 Countries (NAFTA Countries)	Growth, environmental pollution	Panel data analysis	A unilateral causality was found from economic growth to environmental pollution.
Halicioglu (2008)	1960-2005	Turkey	Income, CO2 emissions, energy consumption, foreign trade	ARDL Border Test Analysis	The study concluded that income is the most important factor in determining environmental pollution.
Soytas ve Sari (2009)	1960-2000	Turkey	CO2 emissions, energy consumption, labor, gross capital investment	Toda Yamamoto Analysis	There is no causal relationship between energy consumption and economic growth and environmental pollution.
Apergis & Payne (2010)	1992-2004	11 Countries (Selected CIS Countries)	CO2 emissions, energy consumption and real output	Panel data analysis	They show that in the long run, energy consumption has a positive and significant effect on CO2 emissions, while in the short run, there is bidirectional causality from energy

					consumption and real output to CO2 emissions and unidirectional causality between energy consumption and real output.
Ozturk & Acaravci (2010)	1968-2005	Turkey	Economic growth CO2 emissions, energy consumption and employment	ARDL cointegration method and Granger causality	A cointegration relationship was found between the variables. CO2 emission, energy consumption and real production are not Granger causes of the EKC hypothesis and the EKC hypothesis is not valid in Turkey.
Asumadu-Sarkodie & Owusu (2011)	1965-2011	Rwanda	Industrialization, population, economic growth, environmental pollution	ARDL Border Test Analysis	In the long run, bidirectional causality was found between the variables, while in the short run, a unilateral causal relationship was found from industrialization and population to environmental pollution.
Al Mulali (2011)	1980-2009	MENA Countries	Oil consumption, CO2 emissions, growth	Panel data analysis	There is a long-run relationship between environmental pollution and economic growth.

Hossain (2011)	1971-2007	Brazil, China, India, Malaysia, Mexico, Mexico, Philippines, South Africa, Thailand and Turkey	CO2 emissions, energy consumption, economic growth, trade openness and urbanization rate	Panel data and causality tests	No causal relationship was found in the long run. In the short run, Granger causality was found from economic growth and trade openness to CO2 emissions, from economic growth to energy consumption, from trade openness and urbanization to economic growth and from trade openness to urbanization.
Wang etc. (2011)	1995-2007	In 28 Provinces of China	CO2 emissions, energy consumption, economic growth	Panel cointegration and vector error correction method	CO2 emissions, energy consumption and economic growth were found to be cointegrated and they also found bidirectional causality between CO2 emissions-energy consumption and energy consumption-economic growth.
Saatci & Dumrul (2012)	1950-2007	Turkey	CO2 emissions, GNP	Unit Root and Cointegration Analysis with Structural Breaks	There is a long-run relationship between economic growth and environmental

					pollution.
Altintas (2013)	1970-2008	Turkey	Environmental pollution, energy consumption, economic growth	Time Series Analysis	A cointegration relationship was found between the variables.
Cetin & Seker (2014)	1980-2010	Turkey	Economic growth, trade deficit, environmental pollution	ARDL Border Test Approach	It is concluded that economic growth and foreign trade deficit increase environmental pollution in the long run.
Aydin etc. (2019)	2004-2014	Turkey	Total amount of waste and GDP per capita	Smooth Transition Regression Model	An increase in economic growth has increased the amount of waste, so an increase in income has been found to increase the amount of waste.
Oguzhan & Gultekin (2019)	1985-2016	MINT Countries	Environmental pollution, economic growth and industrialization	Panel Data Analysis	In the long run, industrialization and economic growth increased environmental pollution, while no effect was found in the short run.
Torun etc. (2019)	1988-2014	Algeria, Egypt, Iran, Iraq, Jordan, Lebanon, Tunisia and Turkey	Economic growth and energy consumption, carbon dioxide emissions	Panel data analysis method	A long-run relationship was found between economic growth, energy consumption and carbon dioxide emissions.

Damirova & Yayla (2021)	1995-2016	Turkey, Slovakia, Denmark, Malta, Malta, UK, Portugal, Hungary, Netherlands, Italy, Italy and Switzerland	Per capita income, foreign direct investments, human development index and environmental taxes, Principal Component Analysis representing environmental pollution	Panel Data Method	In the long run, the human development index decreased environmental pollution. According to FMOLS results, environmental taxes are ineffective in reducing pollution, but according to DOLS results, environmental taxes are effective in reducing pollution.
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2. DATASET, METHODOLOGY and ANALYSIS

2.1. Dataset

The panel data set used in this article spans the years 2000 to 2021. The ecological footprint was obtained from the Global Footprint Network as the dependent variable in the study, while the economic growth data used as the independent variable and the industrialization and population data used as control variables were obtained from the World Bank. The time period is limited to 2021 because, while the ecological footprint includes data for 2022, economic growth, industrialization, and population data are only calculated until 2021. The relationship between ecological footprint and growth was investigated for E7⁵ countries using this data set using Eviews and Stata econometric package programs. The model is determined within the

⁵ E7 stands for the concept of "Emerging Seven Countries" whose capital markets are growing rapidly and have recently gained importance in terms of economic size. These countries are China, India, Russia, Brazil, Brazil, Mexico, Indonesia and Turkey.

framework of the analysis, and the results of the tests chosen in accordance with the data are methodologically listed.

Model : $fp_{it} = \beta_0 + \beta_1 growth_{it} + \beta_2 indust_{it} + \beta_3 pop_{it} + \varepsilon_{it}$
 $i = 1, \dots, 7$
 $t = 2000, \dots, 2021$
 β_0 = coefficient of constant regression ε_{it} = random error term

Table 2: Data set and variables

Variable Name	Code	Explanation
Ecological footprint	fp	Ecological footprint (Ecological Footprint vs Biocapacity (gha per person))
Economic growth	growth	Growth (GDP per capita constant 2015 US\$) The formula $(N-N-1)/N-1*100$ was used to calculate economic growth.
Industrialization	indust	Industrialization (including consruction, value added (% of GDP))
Population	pop	Population (total)

Source: 1. Global footprint network 2. WorldBank

2.2. Methodology

First, horizontal cross-section dependence for individual variables was tested in the study's empirical analysis. The variables showed horizontal cross-section dependence. The Hsiao (1986) test was used to determine homogeneity, and it was discovered to be heterogeneous. Following the homogeneity test, the panel data hierarchy was used to perform the Extended Dickey Fuller (Madf) test, which is the second generation unit root test. As a result of the unit root test, the variables are found to be level stationary. OLS was used because the variables were stationary at the level. The robust

estimator was used after the econometric problem tests were added. As a result, the model detected the problem of changing variance. As a result, the PCSE estimator developed by (Beck-Katz 1995) Robust Standard Errors (Beck-Katz 1995) was used, which takes these issues into account. To investigate the causality relationship between two variables, Dumitrescu-Hurlin (2012) used causality tests.

2.3. Empirical Analysis

2.3.1. Cross-Sectional Dependency Test

Initially, horizontal cross-section dependence is critical in determining the necessary steps for panel data analysis and testing. The presence or absence of horizontal cross-section dependence is critical in determining which unit root tests to use in the remaining analysis. In the presence of horizontal cross-section dependence, second generation unit root tests are used. In the case of horizontal cross-section independence, on the other hand, first generation unit root tests are used. These tests should not be ignored if inaccurate results are to be avoided.

The Eviews package program includes several tests for horizontal cross-section dependence analysis. Time and size cross-section should be considered when determining which test is appropriate for the data. The Lagrange Multiplier (LM) test developed by Breush-Pagan (1980) should be used if the time section (T) of the panel is greater than the horizontal section (N). The CDLM test developed by Pesaran (2004) is used when both N and T are large, i.e. when the horizontal cross-section and time dimensions are large. When $N > T$, however, the analysis results may deviate. To summarize, Pesaran (2004) devised the CD (Cross Section Dependent) test for situations in which the horizontal cross section is greater than the time cross section ($N > T$). In addition, Pesaran developed the bias-adjusted LMadj (Bias-Adjusted Cross Sectionally Dependence Lagrange Multiplier) test in 2008 (Turgut and Uçan, 2021: 9).

Table 3: Results of the Cross-Sectional Dependency Test

Variables	Breush-Pagan		Pesaran Scaled LM		Pesaran CD	
	Statistic	Prob	Statistic	Prob	Statistic	Prob
Fp	47.95584	0.0007	4.159376	0.0000	5.296907	0.0000
Growth	158.2025	0.0000	21.17080	0.0000	12.12229	0.0000
Indust	73.21904	0.0000	8.057573	0.0000	7.181335	0.0000
Pop	272.1799	0.0000	38.75790	0.0000	5.245400	0.0000

Ho: There is No Cross-Sectional Dependency

Three tests were run to determine the horizontal cross-section dependence of the variables in the analysis. The tests are found to have horizontal cross-section dependence. In the case of horizontal cross-section dependence, second generation unit root tests will be used to determine the level at which the variables are stationary. Furthermore, the homogeneity test is used to determine which of the second generation unit root tests will be used. Furthermore, the individual graphs of the variables were examined. Because the model's variables include trend and intercept, this criterion was considered in model selection.

2.3.2. Homogeneity Test

When using panel data analysis, the homogeneity test is used to determine whether other countries are affected in the same way by changes in any of the countries considered. As a result, whether the selected countries are similar or dissimilar is critical for the homogeneity test. If the economic structures of the countries under consideration differ, the coefficients are heterogeneous. The coefficients are homogeneous if their economic structures are comparable (Kar et al., 2019: 42).

For homogeneity testing, the Hsiao (1986) test is used in this study. The Hsiao test employs three hypotheses. These are the hypotheses H1, H2, and H3. The alternative hypothesis accepts heterogeneity while the H1 hypothesis accepts homogeneity. The H2 hypothesis is based on homogeneity, whereas the alternative hypothesis is based on heterogeneity. Finally, hypothesis H3 asserts that the slope coefficients are homogeneous, whereas hypothesis H4 assumes partial homogeneity.

Table 4: Hsiao Test Hypotheses

H1(0) : The Panel Is Homogeneous.	H1(A) : It is Heterogeneous.
H2(0) : The Panel Is Homogeneous.	H2(A) : It is Heterogeneous.
H3(0) : The Panel Is Homogeneous.	H3(A) : Partially Homogeneous.

Table 5: Homogeneity Test Results

Hypothesis	F-Statistics	Possibility
H1	464.4257	4.1E-111
H2	22.76310	3.25E-31
H3	480.9749	1.35E-92

At the 5% level of significance, all three hypotheses accepting homogeneity are rejected. The hypotheses' alternatives are accepted within the framework of these probability values. Heterogeneity is the alternative hypothesis to hypotheses H1 and H2. Hypothesis H3's alternative is partial homogeneity. Because H1 and H2 produce identical results, it is concluded that the variables are heterogeneous. As a result of these findings, a unit root test will be performed to defend the heterogeneity assumption under horizontal cross-section dependence, and the variables' stationarity levels will be determined

2.3.3. Panel Unit Root Tests

The first issue in panel unit root tests is whether the panel's horizontal cross-sections are independent of one another. Depending on whether there is horizontal cross-section dependence or not, first or second generation unit root tests are used. First generation tests are classified as homogeneous or heterogeneous in the absence of horizontal cross-section dependence. Levin-Lin-Chu (2002), Breitung (2005), and Hadri (2000) developed tests based on homogeneity in first generation unit root tests. Diverse assumption tests include Im-Pesaran-Shin (2003), Maddala-Wu (1999), and Choi (2001). The assumption behind first generation unit root tests is that a shock to one of the cross-sectional units affects the entire cross-section in the same way. Second generation unit root tests, on the other hand, assume that other units are affected differently by a shock to one of the cross-sectional units as a result of the effect of globalization. Second generation unit root tests are MADF (Taylor and Sarno, 1998), SURADF (Breueri Mcknown and Wallace, 2002),

Bai and Ng (2004), CADF (Pesaran, 2006), and PANKPSS (Carrion-I Silvestre et al., 2005) (Yildrm et al., 2013: 88).

Because the variables in this analysis have horizontal cross-sectional dependence, the stationarity of the series is examined using the MADF test (Taylor and Sarno, 1998), which is a second generation unit root test.

Table 6: Panel Unit Root Test Results

Variables	FP	GROWTH	INDUST	POP
MADF				
MADF Statistics	39.457	83.365	23.090 (1)	52.038
			177.239 (2)	
Critical Value (%5)	38.897	38.897	38.897 (1)	38.897
			86.328 (2)	

- **Tstatistics < Ttable ; Ho cannot be refused**
- **Tstatistics > Ttable ; Ho rejected**

The dependent variable Fp and the independent variables Growth and Pop are stationary at level, according to MADF (Taylor and Sarno, 1998) test results. Because one of the independent variables, Indust, has a unit root, it is made stationary in excel by taking its difference. Because the dependent and independent variables are stationary, LS estimation is used. The investigation will then move on to Dindust.

2.3.4. Model Selection And Basic Assumption Tests

When determining the panel data regression model, there are three types of model estimators. There are three of them: the pooled ECT model, the fixed effect model, and the random effect model. To choose between these model estimators, three types of tests are used. The F test, the Breush-Paan Lagrange Multiplier (LM) test, and the Hausman test are among them. The F test is used to validate the pooled ECT model. The F test is used to determine whether the series differs between units. The pooled ECM model is accepted if the series used do not differ by units. The F test's null hypothesis is accepted as "there is a unit effect in the series" (Yerdelen Tatolu, 2012: 164). The Berush-Pagan LM test determines whether the pooled ECT model or

random effects model is better suited for regression (Breush-Pagan, 1980: 239). It is the LM test against the random effects model based on the residuals of the pooled ECM model. The LM test's null hypothesis is "the variance of random unit effects is zero." If the pooled ECT model is found to be inappropriate for the dried model as a result of these two hypothesis tests, a Hausman test is used to choose between fixed effect and random models. The Hausman test null hypothesis is "there is no correlation between explanatory variables and unit effect" (Yerdelen Tatolu, 2012:180). Table 7 shows the estimator results for determining which of the pooled ECT, fixed effect, and random effect regression models is the best test for the established model. The model was also subjected to autocorrelation and variance tests, which are basic assumption tests.

Table 7: Model Selection And Basic Assumption Tests

	Test Statistic		Prob
F Test	2834.90		0.0000
BP LM Test	1285.94		0.0000
Hausman Test	8.78		0.0124
	Test Statistic		Prob
Heterocedasticity Leven-Brown- Forsythe HC Test	W0: 13.5519699	df (6,140)	0.0000
	W50: 7.5413372	df (6,140)	0.0000
	W10: 12.2434733	df (6,140)	0.0000
Autocorrelation Wooldridge Test	F(1,6): 3.673		0.1038

The null hypothesis of the F test is accepted as pooled in the model selection table, but the analysis results show that H_0 is rejected and the alternative hypothesis fixed is accepted. The BP (LM) test is used in addition. The null hypothesis of the BP (LM) test is assumed to be pooled, but the prob value rejects H_0 and accepts the alternative hypothesis, random. Because the results of both tests differ, the Hausman test is used. The Hausman test has a random null hypothesis and a fixed alternative hypothesis. Based on the prob values, H_0 is rejected, and the model is determined to be fixed. Furthermore,

it is discovered that the model has a problem with varying variance. As a result, Beck-Katz (1995)'s PCSE estimator will be interpreted.

2.3.5. Model Estimation Test : PCSE Test

The variance of the error term is not equal to the unit matrix in the case of variance, autocorrelation, and correlation between units in the estimation of the regression model. This causes inconsistency in the model and reduces its efficiency. There are two approaches to overcoming this problem: either the standard errors should be eliminated without affecting the parameter estimates, resulting in robust standard errors, or appropriate and robust estimators should be used to estimate in the presence of at least one of the aforementioned problems (Yerdelen Tatolu, 2012: 242). Because of these issues, the robust estimators method is used in this study. Huber Eicker (1967, 1980), Wooldridge (2002), Newey-West (1987, 1994), Parks-Kmenta (1967, 1986), Beck-Katz (1995), and Driscoll and Kraay (1998) are examples of robust estimators used in the literature (Topal et al., 2014: 76).

Table 8: Robust Estimator Results

FOOTPRINT	Panel-corrected			
	Coef.	Std. Err.	z	P > z
Growth	.0175505	.0048655	3.61	0.000
Dindust	-.0029075	.010126	-0.29	0.774
Popu	-1.72e-90	1.37e-10	-12.49	0.000
_cons	3.070327	.0998278	30.76	0.000
R-squared: 0.7882				
Wald chi2(2): 13.01				
Prob > Chi2: 0.0015				

According to the findings, even though economic growth is less than 0.05, it is statistically significant. Economic growth of one unit increases the ecological footprint by 0.017 unit. Industrialization, which refers to the Dindust series, is found to be statistically insignificant in the model because it is greater than 0.05. As a result, the variable will be ignored. In the model, the population variable is significant and has a negative impact on the ecological footprint. The probability value indicating the model's significance as a whole

was 0.0015, proving that the model was significant as a whole. Furthermore, the R-squared value, which expresses the explanatory power of the model's independent variables, was found to be 78%. This demonstrates that economic growth, population growth, and industrialization account for 78% of the ecological footprint.

SUMMARY

The study used ecological footprint, economic growth, industrialization, and population data to represent environmental pollution in a short-term analysis. The panel data analysis used considers E7 countries for the bed cross-section and 2000-2021 for the time cross-section. In the application, the dependent variable was ecological footprint, the independent variable was economic growth, and the control variables were industrialization and population. The OLS test, which is a short-term analysis, was used because the dependent variable was found to be stationary at the level as a result of the unit root application. The PCSE estimator, a robust estimator, was used in model selection because it was found to have fixed effects but did not produce consistent results. According to the evidence, as economic growth increases, so does the ecological footprint, whereas as population grows, so does the ecological footprint. As a result, increased economic growth resulted in environmental pollution.

CONCLUSION

Using panel data analysis, this study investigates the relationship between carbon footprint, economic growth, industrialization, and population in the E7 countries from 2000 to 2021. Eviews package programs were used to test horizontal cross-section dependence and homogeneity in the study. The series showed horizontal cross-section dependence, and the homogeneity test revealed heterogeneity. Following that, MADF unit root tests, Stata's second generation unit root test, were used, and it was determined that all variables except the industrialization variable were stationary at the level. Because OLS cannot be performed due to its unit root content, the industrialization variable was made stationary at the level by taking the difference of the series in question. F and BP (LM) tests were used to determine the panel data regression model, and the final decision was made using the Hausman test,

which determined that the result was fixed. Because the problem of changing variance was encountered in the study, it was decided to use robust estimation because a healthy interpretation could not be made in accordance with fixed effects. According to the study's findings, while the model as a whole was significant, the *dindust* variable was found to be insignificant in the model and thus was not interpreted. The growth variable increases the ecological footprint, whereas the population variable decreases it. Economic growth, according to this study based on E7 countries, will increase the ecological footprint, or environmental pollution. In the short run, this result supports the Environmental Kuznet Curve hypothesis but contradicts it in the long run. Subsidies to promote sustainable growth based on clean and environmentally friendly raw materials and growth initiatives should be supported by the E7 countries. The population of a country has a significant impact on the rate of economic growth, industrialization, labor force, and environmental pollution. The Ministries of Agriculture and Environment should take a people-centered approach to environmental action as a policy implication. Another step toward reducing pollution is for residential, commercial, and industrial energy technologies to be led by clean and renewable energy technology.

Environmental pollution will increase, environmental degradation will occur, and welfare will decline in a growing economy. The environment should not be overlooked in the pursuit of growth, which is the primary goal of every economy. Furthermore, state policies should be strengthened to limit the comfortable behavior of companies with a production structure that disregards nature, the world, and living creatures. Expansion of manufacturing areas that use clean energy, consume renewable energy, and prioritize environmental protection will set a good example for a clean growth model. Only by implementing these and similar measures will growth cease to be an excuse for increasing the ecological footprint.

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CHAPTER 8

IMPACT ON COMPETITIVENESS IN THE FACE OF TAX REFORM IN MEXICO FROM 2020 TO 2022 IN DIGITAL SERVICES. CASE: NETFLIX¹

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INTRODUCTION

This research has the objective of knowing the impact of the Tax Reform towards digital platforms, focusing on the affectation in the competitiveness of companies, specifically Netflix, and its affectation in the demand of the service. This research is based on the theory of social representation in order to understand the space surrounding the study.

The research method is mixed descriptive and documentary type (Torres and Sampiere, 2018), collecting data from electronic documents, using a survey conducted by the authors of the research with the help of the Google Forms tool. The research addresses a global context which began to give rise to these regulations especially in a fiscal way, in addition to having a context of the country, in which the case study will also be found which is Netflix, which will allow us to understand how these changes made by Mexico affected its competitiveness and its strategies to sell the product in the country.

The results obtained show that the reform significantly affected its competitiveness and therefore its market share, being displaced from the only streaming platform to compete with several platforms with similar services at the same time. Being the Tax Reform of 2020 a great change for the competition conditions in Mexico, causing that companies had to generate competitive advantages in order to improve their position in the market and obtain more customers, competing in the fairest and most equitable way possible.

1. RESEARCH DESIGN

The theory of social representations helps the individual to understand the environment in which he lives, because as Moscovici (1969) mentions it helps the individual to understand the environment in which he finds himself, these representations are systems with their own logic and language that go beyond a simple opinion, allowing the formulation of theories that help to reveal reality and its functioning. Thus, a better understanding and mastery of the social environment can be achieved, together with the elaboration of codes that facilitate the classification of the various aspects of life surrounding the individual. This idea is simplified by Ibáñez (1998) who mentions that social representations produce meanings that require understanding in order to be

able to adopt appropriate behavior in the social environment. These common sense theories allow for an accurate explanation of everyday phenomena, which facilitates personal development without any setbacks.

This theory is relevant to this article, as it seeks to go deeper than a simple idea such as the change of tax laws. The application allows understanding the impact of the Tax Reform on digital services, as well as the consumer's perception and adaptation to the new changes implemented by streaming platforms. Because these changes affected their daily reality and, as a consequence, generated a new behavior for the individual.

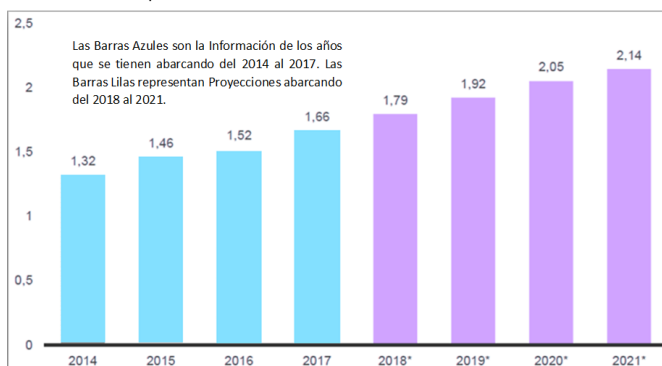
2. DIGITAL SERVICES IN THE GLOBAL CONTEXT

The acquisition of products and services is part of society since ancient times; with the first barter, which allowed the exchange and satisfaction of needs that people could not meet on their own, until the use of digital currencies that we know now. In the last decades, the way of acquiring such products or services has evolved and adapted to the new needs of users, changing from where to acquire them to the great variety that the market offers.

This adaptation process has undoubtedly been reflected in the platformization of the last decades, where companies have had the need to venture into the use of digital platforms to offer their products or services to a wider and more demanding public. Triggering with it a process of adaptation by users, also known as eCommerce, which led to an exponential growth of those who acquired such goods or services through digital platforms as referred to in Statista EAE Business School (San Martín and Iñigo, 2018) where the increase of active buyers in eCommerce is reflected (Figure 1).

The way in which users had started to make use of eCommerce, as shown in the graph, is the clear reflection of the new needs of a globalized society, characterized by immediacy and convenience. This undoubtedly led to an increase in the consumption of digital services around the world, since it was enough to have a device and connect to the network to satisfy what users need or want at that precise moment.

Similarly, the increase in demand for digital services can be observed according to the study conducted by EAE Business School (2018) on the status and future of global e-commerce at the retail level (graph 1).

Gráfica 1**Aumento de Compradores Activos en ECommerce a Nivel Mundial**

Fuente: San Martín, J. e Iñigo, M. (2018).

Nota. El gráfico representa el aumento de compradores electrónicos activos en miles de millones a nivel mundial, comparando este periodo por nueve años. Adaptado de *Evolución de compradores activos en el comercio electrónico mundial (en miles de millones)*.

As shown in Graph 2, the growth of e-commerce through service platforms is on the rise. This confirms a growing dynamism in the use and demand for digital services that are increasingly common and indispensable in society.

3. MEXICO AND THE DEVELOPMENT OF DIGITAL SERVICES

For the Mexican society it all started approximately in the 90's where the terms of platforms and digital services began to gain popularity. These were driven by the beginning of the Internet, due to new access and multiple possibilities, resulting in the creation of digital content as a novelty, with greater dissemination and reach especially among young people, part of the national platformization.

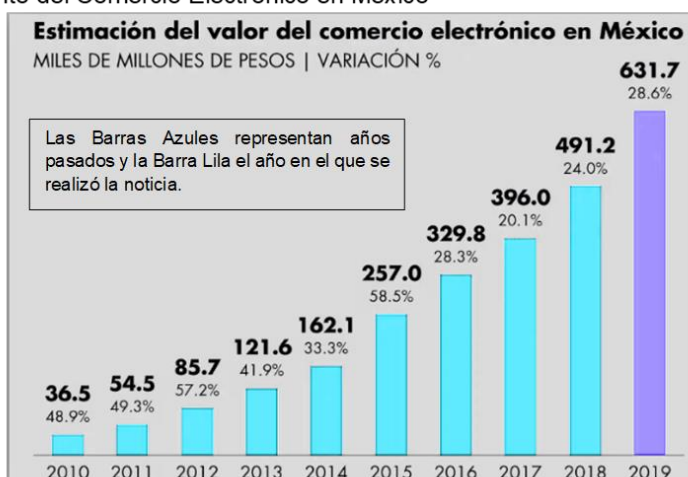
Undoubtedly it is difficult to specify which was the first digital service that was used, because "The Internet era arrived in Mexico in 1989, when this network of networks was being formed as a global network." (UNAM, n.d., as cited in Koenigsberger, 2014). However, the internet could only be used within some educational institutions in the country such as the National Autonomous University of Mexico (UNAM) and the Tecnológico de Monterrey; until it began to expand to other schools and in 1994, RedUNAM began diversification by becoming a commercial provider of this service. It

can be said then that, from this expansion of Internet access, digital services began to be used within the Mexican population, although at first only for the educational sector, expanding its reach to the commercial sector.

Due to the growth of these services provided digitally, different business models were developed in the country depending on the objectives of the organization. The establishment in the Mexican market has grown exponentially over the years, this can be analyzed with the data provided by Riquelme (2020) in his document Growth of Electronic Commerce in Mexico (Illustration 1).

Ilustración 1

Crecimiento del Comercio Electrónico en México



Fuente: Riquelme (2020).

Nota. La ilustración representa el aumento en porcentaje del comercio electrónico (*eCommerce*) en México, permitiendo comparar el crecimiento que ha tenido en últimos nueve años. Adaptado de *Estimación del valor del comercio electrónico en México*.

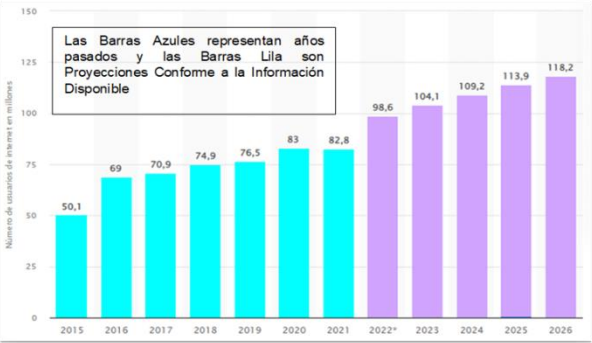
As shown in Figure 1, the trend of increase in the consumption of digital services was already existing; having as main cause of growth the development of e-commerce, as mentioned by Juárez, director of the Internet Association in Mexico "the growth of e-commerce in Mexico is due to the fact that Mexicans are facing the economic situation of the country by making their spending more efficient through digital shopping" (quoted in Riquelme,

2020). In search of money optimization, the Mexican population prefers alternatives that benefit their economy, because it is easier to search for the same product in different digital services than to look for them physically, optimizing time and resources that can be used in other needs, thus facilitating the rise of digital platforms.

The growth of Internet users has driven the development of e-commerce in the country, because over the years it has become an indispensable tool for the population. That is why Mexicans have integrated this commerce to their daily lives; in addition, Internet access has been facilitated exponentially due to the use of cell phones, as mentioned by Statista Research Department (2022) in its survey "Mexico: devices used by Internet users to connect to the Internet 2021" noting that 97% of participating users used a cell phone (smartphone) to access the Internet. This progressive increase in the number of internet users is shown in graph 3.

Gráfica 3

Crecimiento de usuarios en internet en México



Fuente: Statista Research Department (2022).

Nota. El gráfico permite comparar el crecimiento del aumento de usuarios de internet en México (en millones) abarcando un periodo de siete años y una proyección de cinco años, abarcando del año 2015 al 2026. Adaptado de *Número de usuarios de internet en México de 2015 a 2025*.

As can be seen, through the use of cell phones, users can satisfy their needs electronically, which is why the business sector has focused on creating digital platforms to avoid being overwhelmed by the dynamics and demands of users and thus continue to offer the same services, or even improve the traditional ones, to digital users in Mexico and the world.

4. REGULATION OF DIGITAL SERVICES IN MEXICO

Due to the analysis made by various organizations and the growing demand for digital services, the Economic Commission for Latin America and the Caribbean (ECLAC) focused its attention on this sector under the following statement:

In view of the exponential growth that these operations are experiencing worldwide, failure to establish feasible and simple collection procedures may result in increasingly significant losses of tax revenues for countries (Saucedo Ramirez, n.d., cited in ECLAC, 2019, p.59).

With the above, the Organization for Economic Cooperation and Development (OECD) suggested to Mexico (and other countries) to incorporate within its tax measures greater signals that would allow it to collect more taxes, with feasible and simple procedures, from these digital services. so that by not being regulated by law, taxes were not paid fairly compared to businesses that were established in a physical or traditional way; since these have the full tax burden with respect to the digital ones that obtain tax-free profits. That is, there was a regulatory problem at the global and national level, which should be addressed urgently.

In the case of Mexico, every company that generates income in the country must pay the taxes corresponding to its activity, which is established in the highest national regulation in Article 31 section IV, which states that it is the obligation of Mexicans:

To contribute for public expenses, both of the Federation, the States, Mexico City and the Municipality in which they reside, in the proportional and equitable manner provided by law (Constitution of the United Mexican States, 1917, art.31).

Such contributions are usually related to income, consumption and specific situations that are regulated by law; the opposite happens with digital services that did not have any specification in law that obliged them to do so. Hence, the Mexican government felt the need to add the necessary articles for a tax reform in 2020, complemented in 2021.

Recalling that, although such reforms seek to increase and facilitate tax collection, they also seek to guarantee competition in the market under equal conditions for companies, which is established in Article 28 of the Mexican Constitution, which specifies that

In the United Mexican States, monopolies, monopolistic practices, monopolies and tax exemptions are prohibited under the terms and conditions established by law (Constitution of the United Mexican States, 1917, art.28).

This new regulation presents reforms to the Income Tax Law (LISR) and the Value Added Tax Law (LIVA), which are the ones that apply to this type of companies with digital services.

Presenting one of these changes in Article 1° A BIS of the LIVA, as a result of the 2020 tax reform, it establishes that:

Taxpayers resident in Mexico that provide the digital services referred to in section II of article 18-B of this Law to recipients located in national territory, who operate as intermediaries in activities carried out by third parties affected to the payment of value added tax, in addition to the obligations established therein, will be obliged to comply with the obligations referred to in article 18-J of this ordinance. (Law 113, 2021, art. 18-B).

In addition, digital services are also regulated by Chapter III BIS On the rendering of digital services by residents abroad without an establishment in Mexico, which includes Articles 18-B to 18-M of the aforementioned law.

Regarding the LISR (Law 115, 2021) the regulation, added in the tax reform of 2020 and complemented in the reform of 2021, is found in Section III On income from the sale of goods or the rendering of services through the Internet, by means of technological platforms, computer applications and similar, which comprises Articles 113-A to 113-D, of Chapter II On income from business and professional activities, of Title IV On individuals.

These reforms (2020 and 2021) have been fulfilling their main objective derived from the OECD's recommendation, since Mexico has been able to establish better procedures for the collection of taxes on digital services, according to Noguez:

After the changes in tax matters, the collection of the digital economy in Mexico registered a growth of 642% in 2020, by adding 6,311.4 million pesos, coming from both the payment of platforms such as Uber, DiDi, Netflix, Amazon, Airbnb, among others (2021).

Furthermore, according to the Tax and Service Management Report that the Tax Administration Service (SAT) published in 2019, it mentions that "the income to the Mexican State for this concept was only 849.6 million

pesos, a difference of 5,461.8 million pesos with respect to those registered last year" (Noguez, 2021 cited in SAT, 2019), being a clear example that the tax reform for digital services has given results within its first year of implementation.

For Mexico to face the problem raised by ECLAC, it showed that the payment of taxes by these services contributes in obtaining income to the federation, being in evidence the great capital flight that previously existed in these digital services, being, undoubtedly, a way to ensure competitiveness in the Mexican market with fair conditions for all companies and that regulations -in turn- benefit the environment in which they are developed.

5. TAX REGIME FOR DIGITAL PLATFORMS

After the approval of this digital reform, several questions arise, such as the persons that must be within the regime, the payment modalities, among others. Although this reform covers various aspects, the most relevant is that the obligated taxpayers are all individuals or legal entities that provide services, have the sale of a product or allow the use of goods through any digital platform or mobile application, as may be the cases of: Uber, Rappi, Airbnb, Netflix, among others.

Within the regime there are two ways to be able to comply with the tax obligations of the taxpayer:

- **Definitive payment:** this is when the taxpayer may not exceed 300 thousand pesos of income in a fiscal year, in addition to this, deductions cannot be applied, due to the fact that the applications used to generate some income withhold ISR and VAT to pay it later to the SAT. Within this category are also individuals with business activity, who are subject to withholdings of 1 to 4% according to the LISR as long as they comply with the income part.
- **Provisional payment:** this modality withholds from income 2.1% of ISR and 8% of VAT and as obligations of the taxpayer is the Informative Declaration of Operations with Third Parties and Annual Return. In this case, deductibles can be applied for expenses that are indispensable for the business. This modality is only applicable if the income is greater than 300 thousand pesos through digital platforms. These withholdings can only be made if users

identify themselves with their RFC in the digital platforms or applications where they generate their income.

After this implementation, the taxpayer base has grown, according to what Molina tells us, stating that: "In the first six months of 2022, 348,421 active individuals were reported in the Federal Taxpayers Registry (RFC) with income from platforms, 41 percent more than the same period last year" (2022). (2022), with these data it can be seen that the tax reform was favorable for the state and the business environment, as it allows collecting a greater amount of taxes and fostering a fairer dynamic of competitiveness.

6. ANALYSIS OF THE DEMAND FOR THE STREAMING SERVICE "NETFLIX".

Companies had to adapt to the new regulatory framework of the country with the impulse of the 2020-2021 tax reforms, this to avoid the cessation of business activities and some reprimands by the authority. Within these changes, streaming services were one of the most affected business models, since with the eruption of the pandemic, several companies emerged offering different catalogs of movies and series at different prices, promoted by the demand from users who, not being able to leave home, needed a form of entertainment.

It is important to mention that, although due to the Covid-19 pandemic there was a generalized fall in different sectors, especially in the first year (2020), there were some others that resisted the economic impact that this represented; such is the case of streaming platforms, which obtained a good growth during this period.

A study conducted by PricewaterhouseCoopers Mexico (2021 as cited in Soto, 2021) called "the most complete entertainment and media industry value available in Mexico" detected that the segment grew by 24% in 2020, being on average that in Mexico there were 1 to 2 streaming services contracted in that year. This not only caused people to become interested in the existing platforms in the market, but also, during this period, several companies began to create their own streaming platforms when they saw the world of possibilities they offered.

This meant that at one point there were different online entertainment options, each with differentiators that made consumers choose one or the

other depending on what they offered. As mentioned by Soto: "The differentiators are price, quality of service and exclusivity of the content offer" (2021); these being determining factors to attract more customers, but companies also took these differentiators to create competitive advantages in order to differentiate themselves from other streaming services.

In the particular case of Netflix, which is considered one of the most relevant in the market since its founding in the late 90's, continuing with its consolidation in 2003 and its current performance as one of the most requested by users of these television services. With a business model based on allowing the user to watch movies or series on demand, with an intuitive platform and software that "knows the tastes" of those who use it, suggesting some titles that might interest them; all this under various payment plans that have certain benefits as their value increases.

Netflix made a profit during the pandemic, because it had an excellent growth in terms of user demand; as mentioned in his article González when referring to Netflix reported that during 2020 it obtained a total of 37 million new subscribers, of which 8.7 million were in the fourth quarter (...) managing to expand its customer base, it managed to already surpass the barrier of 200 million subscriptions worldwide, which consolidates it as the leading paid platform for movies and series (González, 2021).

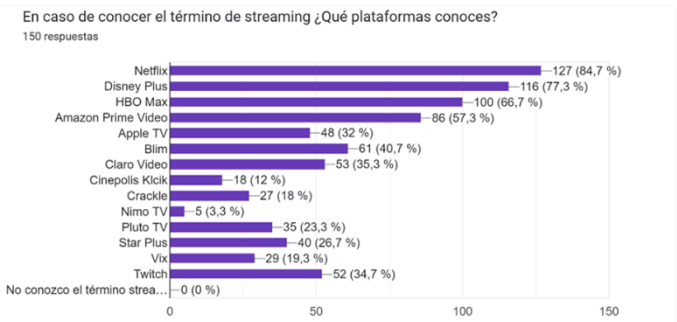
This is a clear example of the impact that Netflix had globally and nationally; which, in monetary terms, reflects the need for the income it could generate to be taxed fairly for national and international taxes. For, in addition to affecting the tax collection of governments, it had a great advantage over its competitors, leading to inequality in the market.

With all the reforms and the new regime, applicable to companies that offer digital services in Mexico, they were forced to make decisions to minimize the effects of such reforms; making, mainly, to raise their prices, as mentioned by Barco in his note:

In this last week, news has circulated that digital services such as Netflix, Spotify and Uber will see their prices increase due to the 16% tax that will be applied to them as of June 1, 2020 for VAT (2020).

Gráfica 4

Conocimiento de plataformas de *streaming*



Fuente: Elaboración propia (2023).

Nota. La gráfica muestra las plataformas que conocen los encuestados de la ESCA Santo Tomás de la carrera de contaduría, en el cuestionario se permitía poner más de una opción. Reproducida de *En caso de conocer el término de streaming ¿Qué plataformas conoces?*

In today's market, there is a wide variety of companies that offer a service similar to Netflix, as shown in Figure 4. Although most of the respondents are familiar with the Netflix platform, its competition has been gaining position in the market. Previously, when thinking about streaming services, consumers used to associate this term with Netflix, but nowadays this has changed due to the great competition in the market. In addition, during the pandemic the consumption of this type of products during the pandemic increased, which prompted to create more and more this type of services to entertain people during the confinement. This reaffirms what PricewaterhouseCoopers Mexico previously mentioned about the growth of this sector. As the demand for this product increases, the most logical response of the market was to create a greater offer so that users would have a wide variety of options to choose from; as a result, Netflix began to have a smaller market share.

With this scenario, companies began to look for different ways to increase their competitive advantage. One of the strategies used was the price, because in the absence of fair regulation in digital services, large companies began to "take advantage of this loophole". As a result, many companies could offer lower prices than their competitors without having to deal with a significant tax burden.

However, everything changed after the approval of the 2020-2021 tax reform for digital services, where a fairer payment in taxes for this type of

services was sought. As a consequence, these platforms will adjust their prices to meet this tax burden, including Netflix. Despite this, very few people knew the reason for the price increase, as shown in the results obtained in the survey, 71.3% of people did not know the reason for the increase, since when the change was announced, the company did not give much information to users (graph 5).

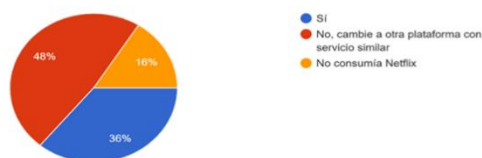
This increase resulted in two options for users: one was to pay for the service in order to continue using it, and two, to look for another streaming platform that meets their needs at a lower price. With these changes, competitiveness was a key factor for several users to make the decision to change platform, as shown in the following graph, 48% decided to consume these services on a different platform.

Gráfica 5

Continuidad del uso de la plataforma Netflix tras aumento de precios

En caso de consumir Netflix, tras el aumento de precios de esta plataforma, ¿Continuaste suscrito está plataforma?

150 respuestas



Fuente: Elaboración propia (2023).

Nota. La gráfica muestra la decisión tomada por los usuarios de Netflix tras el aumento de precios en sus planes. Reproducida de *En caso de consumir Netflix, tras el aumento de precios de esta plataforma, ¿Continuaste suscrito está plataforma?*

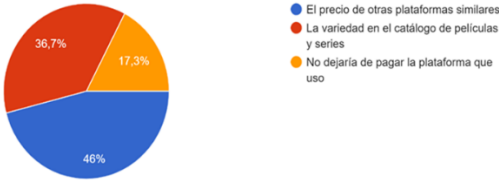
Nota., de García Miranda J. M. y López Duarte A. M., 2023, Google Forms, (https://docs.google.com/forms/d/1m922YkK_P3gIks7tFShmM5s0dq3hp9-bHeqUC999xsY/edit#responses)

With the price increase, Netflix was left, representatively, with 36% of the users who already consumed it (graph 5). After this, it was necessary to make use of strategies to attract audiences to the platform again; that is, it had to justify the price and quality of the product it offered, but to do so, it had to know the reason why its users might prefer other platforms instead of its own.

Gráfica 6

Factores que podrían influenciar en cambiar de plataforma de *streaming*

La principal razón por la que cambiaste o podrías cambiar de plataforma de streaming sería por:
150 respuestas



Fuente: Elaboración propia (2023).

Nota. La gráfica muestra la decisión tomada por los usuarios de Netflix tras el aumento de precios en sus planes. Reproducida de *En caso de consumir Netflix, tras el aumento de precios de esta plataforma, La principal razón por la que cambiaste o podrías cambiar de plataforma de streaming sería por*

According to the results of the surveys conducted, it was determined that the main reason why users might switch to another streaming platform is price, with 46%. With this, it can be said that demand was affected by Netflix's price change due to tax reforms, as the other services were offering more competitive prices. In addition, Netflix had difficulties in being able to justify the quality of its product, as many companies began to launch their own streaming platforms and therefore began to withdraw their content from other platforms, causing Netflix to have a reduction in its variety of its catalog of series and movies (graph 6).

CONCLUSIONS

The huge offer of online entertainment (streaming) has led national governments to collect resources from there, imposing a series of taxes in order to obtain income that they did not have before for this concept.

This fact has led to the various streaming services (including transportation services or online shopping services) being charged to the user of these services. Such is the case of Netflix and others in the sector.

This reality is recent in Mexico with the coming of the 2020-2021 tax reforms that imposed a tax on these services, particularly on streaming services, which has affected the demand for these services, including the cancellation of these services in Mexican homes.

Thus, although the Mexican market is experiencing a growing offer in the streaming service, the one that maintains a hegemony in this is the Netflix

platform, although it has been significantly reduced since its introduction in Mexican homes.

Netflix has grown compared to its peers; however, it has lost a significant sector of households even though it has its own series which, by the way, are successful and has had a range of promotions, they have not been enough to retain its audience, as the latter has been of limited duration, causing the viewer to look for similar content soon after.

Netflix offers a streaming platform of five services at the same time, which its peers do not have, even so users choose to change platform recognizing that the variety of content is a relevant factor for customers to continue using the platform without losing sight of the impact caused by the tax reforms that overcharged the cost for the streaming service.

It can be said that tax reforms in digital services were driven by the objective of promoting a fair and competitive environment for companies that offer these services. With these new conditions, one of the most affected companies was Netflix, which as a result of this has not been able to find a way to recover its audience. This is due to the fact that its decision was to increase the price of its different services in order to "pass on the tax to the consumer", causing it to lose a considerable percentage of consumers.

The tax reforms have had a direct impact on Netflix's competitiveness, which has been undermined by the impositions; although they foster a more competitive environment and ensure consumers' right to choose, they have affected Netflix's competitiveness and demand.

SUMMARY

The tax reform in Mexico from 2020 to 2022, specifically in regards to digital services, had a significant impact on the competitiveness of companies such as Netflix. Below is a summary of the changes implemented and their effect on the company. In June 2020, the Mexican government approved a tax reform that established the obligation to apply a tax on digital services provided by foreign companies. This measure was adopted with the aim of leveling the playing field between domestic and foreign suppliers, as well as generating additional tax revenue. The reform established that digital services, such as online streaming platforms, would be subject to a 16% value-added tax (VAT). This means that companies like Netflix, which offer content

streaming services in Mexico, must now collect and remit the tax to the Mexican government.

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CHAPTER 9

FACTORS AFFECTING COMPANY PROFITABILITY : THE CASE OF BORSA ISTANBUL-30

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INTRODUCTION

Risk is always present for companies. Companies that aim to achieve higher firm value undertake higher financial risks. A firm intends to use financial leverage to reach high profitability by borrowing capital. The use of debt as capital not only leads to an increase in the cost of capital but also brings along risks (Senol & Karaca, 2017:3). As a company explores various borrowing channels, the incremental benefits derived from borrowing gradually diminish. Eventually, there comes a point where the utilization of debt in the company's capital structure starts to have a negative impact on firm value due to the inherent risks involved (Ibis, 2015:7). The optimal level occurs when the marginal benefit gained from low-cost debt and the tax advantages it offers precisely balance out the increase in the cost of capital resulting from heightened financial risk. This concept is commonly known as the static trade-off theory of capital structure (Ercan et al., 2006). The notion of finding a delicate equilibrium between the costs associated with bankruptcy and the tax advantages of borrowed capital was initially proposed by Kraus and Litzenberger in 1973. Moreover, Niu (2008) argued that companies with greater profitability tend to target higher debt ratios. This is because higher debt ratios not only provide enhanced tax shields but also result in lower bankruptcy costs.

Firm value, also known as market capitalization or market value, is a critical measure that reflects the overall worth of a company in the financial markets. Numerous factors can impact firm value, and understanding these factors is essential for stakeholders to make effective investment decisions. Understanding the relationship between financial risks and firm performance is crucial for companies to make informed decisions and effectively manage risks (Damadoran, 2002). This study focuses on examining the impact of financial risks on firm performance, specifically within the context of BIST-30 companies. The BIST-30 index represents the top 30 companies listed on the Borsa Istanbul stock exchange, comprising a significant portion of the Turkish market. These companies operate in diverse industries, including finance, energy, telecommunications, and consumer goods. As these companies are prominent players in the Turkish economy, it is important to explore the influence of financial risks on their performance. Financial risks encompass various factors, such as market risk, credit risk, liquidity risk,

interest rate risk, and operational risk. These risks can arise from external economic conditions, industry-specific challenges, or internal factors related to financial management and decision-making. Understanding how these risks impact firm performance within the BIST-30 context can provide valuable insights for companies operating in similar environments.

1. LITERATURE REVIEW

The study by Kubo and Sakai (2011) emphasizes the importance of identifying risk factors in the management decision process and evaluating their impacts on firm performance, as highlighted in previous literature. The study conducted by Akhtar, Ali, and Sadaqat (2011) compares the management of liquidity risk between conventional and Islamic banks in Pakistan. The research aims to determine the impact of firm size, Return on Assets (ROA), Capital Adequacy Ratio, Return on Equity, and net working capital on the liquidity management of Islamic and conventional banks in Pakistan. The study reveals a positive and insignificant relationship between bank size and net working capital with liquidity risk.

Güvenç and Özcan (2015) investigate the relationship between financial risk management practices and firm performance. In an analysis conducted on BIST-30 companies, they found that financial risk management practices have a positive impact on firm performance.

In the study conducted by Krause and Tse (2015), the relationship between risk management and firm value was examined. The researchers found that more effective risk management practices, which serve as proxies for corporate governance, reduced cash flow volatility, increased financial performance, and enhanced firm value.

Hyun and Yo (2017) conducted a study to examine the association between default risk, as measured by Altman's Z-Score, and firm value, as measured by Return on Assets (ROA), within the transportation and logistics sector in Korea. Using panel data analysis, they analyzed financial statements and accounts from 281 Korean shipping and logistics companies over a period spanning from 2003 to 2012. The analysis of Z-Scores over the ten-year period revealed that the financial conditions of transportation and logistics firms in Korea ranged from weak to moderately healthy. The study observed a significant correlation between Altman's Z-Score and firm value, indicating

that companies with higher ROA, reflecting superior performance, also demonstrated stronger financial health as indicated by the Z-Score. Based on these findings, the study suggests the implementation of a systematic financial warning system within the Korean shipping and logistics industry. Such a system could effectively mitigate default risk, which holds considerable importance due to the significant impact of this industry on the Korean economy.

Ko, Lee, Anandarajan (2019) this study investigates the relationship between operational risk incidents and their impact on credit risk and firm performance. The study also explores the moderating influence of corporate governance on this relationship. The authors examine how operational risk incidents, such as system failures or human errors, can affect credit risk and overall firm performance. Additionally, they analyze how effective corporate governance practices can mitigate these risks and enhance firm performance.

Geyer-Klingeborg, Hang, Rathgeber (2020) this study investigates the relationship between corporate financial hedging and firm value. The authors conduct a meta-analysis, which involves combining and analyzing the results of multiple studies on this topic to draw overall conclusions. By examining a comprehensive set of research articles, the study aims to provide a comprehensive understanding of the impact of financial hedging on firm value.

Ozcan (2021) examined the impact of financial risks on firm performance. The study analyzed the period of 2010-2020 using panel regression analysis for 106 companies listed on BIST (Borsa Istanbul). The findings revealed that exchange rate risk significantly affects firm performance.

Senbayram (2022) the study titled "Investigating the Impact of Financial Risks on Firm Values of Companies Listed in BIST 30 Index (2010-2020)" focuses on examining the influence of financial risks on the firm values of companies listed in the BIST 30 Index. The study covers the period from 2010 to 2020. The aim is to analyze and understand the relationship between financial risks and firm values within the context of the BIST 30 Index. The findings of the study provide insights into how various financial risks affect the valuation of firms in the selected index. For further details and analysis, please refer to the full study.

As a result of the literature review, it is understood that not only the effects of financial risks on firm value have been examined, but also the effects of various factors such as financial performance, operational risk, and country risk on firm value have been investigated. Our study primarily focuses on BIST-30 companies, which are characterized by having the highest firm values and challenging management. Additionally, the chosen analysis period includes the COVID-19 period, which adds value to the literature by examining the effects of financial risks during this period. The studies conducted on BIST-30 companies have explored the impact of financial risks on firm performance, and in general, they indicate a negative effect of financial risks on firm performance. Specifically, findings suggest that credit risk, market risk, and liquidity risk can have adverse effects on firm performance. These studies emphasize the importance of effective financial risk management for BIST-30 companies.

2. DATA AND METHODOLOGY

This section provides information about the variables used as independent and dependent variables in the analysis. To represent financial risks, the independent variables used in the analysis included Interest rate, Credit risk, Liquidity risk, Exchange rate risk, and Financial leverage ratio. The financial performance measures Return on Assets (ROA) and Return on Equity (ROE) were employed as dependent variables to assess the impact of the independent variables.

The study utilized non-financial companies listed in BIST-30. Financial transaction-oriented firms (such as banks) were excluded from the scope due to their different financial statements and the need for different performance metrics. The financial data of companies included in the BIST-30 Index for the period 2010-2021 were analyzed in the study. The selection of the BIST-30 Index as the focus was primarily based on the fact that the stocks traded in the BIST-30 Index have high market value and trading volume compared to other stocks in the stock market. The balance sheet data for the BIST-30 companies used in the study were obtained from the website www.finnnet.com.tr, while market value and stock prices were sourced from www.isyatirim.com.tr.

In econometric research, panel data offers several advantages compared to using only cross-sectional or time series data. By incorporating both time series and cross-sectional observations, panel data analysis allows for a larger dataset to be utilized. This increase in the number of observations leads to a higher degree of freedom, which in turn reduces the issue of multicollinearity among explanatory variables. Consequently, econometric estimates become more efficient and reliable. Moreover, panel data analysis provides a unique opportunity to examine economic phenomena that cannot be adequately addressed solely by cross-sectional or time series data. In many analyses, it is common to encounter situations where the number of cross-sectional units (N) exceeds the number of time periods (T), denoted as $N > T$. This unbalanced panel structure enables researchers to study dynamic relationships and account for individual heterogeneity across various units while also capturing temporal variations. By utilizing panel data, researchers can overcome limitations associated with cross-sectional or time series data alone, leading to more comprehensive and robust analyses of economic issues.

Generally, the panel data model;

$$y_{i,t} = \alpha_{i,t} + \beta_{i,t} X_{i,t} + u_{i,t} \quad i = 1, \dots, N ; t = 1, \dots, T \quad (1)$$

The model can be expressed as follows, considering a panel data set. In this representation, Y represents the dependent variable, X represents the independent variable, α represents the constant parameter, β represents the slope parameter, and u represents the error term. The subscripts i and t correspond to the units (individuals, firms, cities, countries, etc.) and time periods (day, month, year, etc.), respectively.

To determine which approach to use, the suitability of the pooled model should first be tested using the Breusch-Pagan (B-P) test. If the pooled model is deemed unsuitable, the decision regarding whether to use the fixed effects or random effects approach is made based on the results of the Hausman test (Hausman, 1979, 1981). The Breusch-Pagan test is employed to examine whether heteroscedasticity exists in the model. If the test indicates the presence of heteroscedasticity, it implies that the pooled model is not appropriate, and alternative approaches such as fixed effects or random effects should be considered.

The Hausman test is then used to determine the choice between the fixed effects and random effects models. This test compares the efficiency and

consistency of the two approaches by analyzing the correlation between the individual effects and the regressors. If the test suggests that the individual effects are correlated with the regressors, indicating endogeneity, the random effects model may be suitable. Conversely, if the individual effects are found to be uncorrelated with the regressors, the fixed effects model is preferred. In conclusion, the determination of the suitable approach (pooled model, fixed effects, or random effects) is based on conducting the Breusch-Pagan test to assess heteroscedasticity and the Hausman test to examine the presence of endogeneity and ascertain the correlation between the individual effects and the regressors.

Due to the presence of autocorrelation and varying variances in our models, we will use the robust estimator proposed by Driscoll and Kraay (1998) among the resilient estimator models commonly used in the literature. Apart from Driscoll and Kraay, other resilient estimators such as Huber, Eicker and White, Arellano, Froot and Rogers, Wooldridge, Newey-West, Anselin Maximum Likelihood Estimator, Parks-Kmenta, and Beck-Katz are also used. Driscoll and Kraay (1998) have proposed a non-parametric covariance matrix estimator. The selection of this estimator is based on its usage in panel least squares and fixed effects models. Considering a large time dimension T , Driscoll and Kraay (1998) have shown that standard non-parametric time-series covariance matrix estimators can be developed to be resilient for all general forms of spatial and temporal correlation. Driscoll and Kraay's methodology provides Newey-West type correction for cross-sectional mean series. These corrected standard error estimations ensure the consistency of covariance matrix estimators regardless of the cross-sectional dimension N , even as N approaches infinity. Thus, Driscoll and Kraay's (1998) approach has been derived as an alternative to the Parks-Kmenta or PCSE approaches, which are weak in terms of producing consistent covariance matrix estimators only in the case of a large T with a large cross-sectional dimension encountered in microeconomic panels. This estimator produces consistent, resilient standard errors for heteroscedasticity, spatial and temporal correlation in general forms even in the case of large T and N .

In the following panel data model,

$$\gamma_{i,t} = \beta X_{i,t} + u_{i,t} \quad (2)$$

assuming heteroscedasticity, autocorrelation, and cross-unit correlation in the error term, the parameters can be consistently estimated using the Pooled Least Squares method:

$$\gamma_{i,t} = \beta X_{i,t} + u_{i,t}$$
 (3)

The regression models to be used for prediction are presented below:

MODEL 1= $ROA_{i,t} = \alpha_0 + \alpha_1 Liquidity_{i,t} + \alpha_2 Currency_{i,t} + \alpha_3 Credit_{i,t} + \alpha_4 Interest_{i,t} + \alpha_4 Financial_leverage_{i,t} + \varepsilon_{i,t}$ (4)

MODEL 2= $ROE_{i,t} = \alpha_0 + \alpha_1 Liquidity_{i,t} + \alpha_2 Currency_{i,t} + \alpha_3 Credit_{i,t} + \alpha_4 Interest_{i,t} + \alpha_4 Financial_leverage_{i,t} + \varepsilon_{i,t}$ (5)

Table 1. Definitions of Dependent and Independent Variables

	Ratios	Calculation Method
Financial Performance Ratios	Return on Equity (ROE)	Net Income/Equity Ratio
	Return on Assets (ROA)	Net Income /Total Assets Ratio
Financial Risk	Credit Risk	(Short-term trade receivables + Receivables from related parties + Other short-term receivables + Related long-term receivables + Other long-term receivables) / Equity
	Currency Risk	Net foreign currency position / Equity
	Liquidity Risk	Short-term liabilities / Current assets
	Interest Risk	Variable rate liabilities / Equity
	Financial Leverage	Total Liabilities/Total Assets

3. EMPIRICAL RESULTS

Table 2. Descriptive statistics

Variables	Sample size	Std. Dev.	Mean	Min.	Max
Return on Equity (ROE)	300	0.1439	0.1817	-0.3648	0.8672
Return on Assets	300	0.0736	0.0820	-0.0712	0.4333

(ROA)					
Credit Risk	300	0.1183	0.1660	0.0002	0.5910
Currency Risk	300	0.0450	0.0047	-0.1077	0.4381
Liquidity Risk	300	0.4185	0.7748	0.0574	3.5841
Interest Risk	300	0.5288	-0.2303	-0.3648	1.1624
Financial Leverage	300	0.2107	0.5657	0.0274	0.8970

When the means of the variables given in Table 2 are examined, Credit Risk is 0.17, Exchange Rate Risk is 0.005, Liquidity Risk is 0.77, Interest Rate Risk is -0.23, Financial Leverage is 0.57, ROE is 0.18, and ROA is 0.08. Credit risk indicates the risk of default, exchange rate risk represents foreign currency exposure, liquidity risk reflects short-term debt payment ability, interest rate risk suggests low variability in interest rates, and financial leverage implies that assets cover half of the financial obligations on average. ROA and ROE are financial performance indicators. Our variables do not contain extreme outliers, and the likelihood of distorting the analysis is very low.

The correlation and VIF (Variance Inflation Factor) values are presented in Table 3 and Table 4 below.

Table 3. Model 1 Correlation and Multicollinearity Analysis Results

	ROE	Credit	Currency	Liquidity	Interest	Financial	VIF
ROE	1						
Credit Risk	0.1261	1					1.22
Currency Risk	-0.0693	-0.1826	1				1.10
Liquidity Risk	0.0793	-0.0774	0.1772	1			2.26
Interest Risk	0.0060	-0.0670	0.0640	-0.2823	1		1.19
Financial Leverage	0.0461	0.0817	0.1802	0.7272	-0.3395	1	3.24

Table 4. Model 2 Correlation and Multicollinearity Analysis Results

	ROA	Credit	Currency	Liquidity	Interest	Financial	VIF
ROA	1						
Credit Risk	0.1335	1					1.22
Currency Risk	-0.0833	-0.1826	1				1.10
Liquidity Risk	0.2324	-0.0774	0.1772	1			2.26
Interest Risk	-0.0890	-0.0670	0.0640	-0.2823	1		1.19
Financial Leverage	0.1819	0.0817	0.1802	0.7272	-0.3395	1	3.24

When examining the results in Tables 3 and 4, it can be observed that there are no variables with a correlation above 0.80 and by Kennedy (1992) to calculate the VIF value does not exceed 10. These results indicate that the variables are suitable for the analysis (Tatoğlu, 2018).

Table 5. Autocorrelation Test and Heteroscedasticity

	Wooldridge Test Statistics (Autocorrelation Test)	Modified Wald Test Statistics(Heteroscedasticity)
MODEL 1	31.361 (0.0000)	4.50 (0,0000)
MODEL 2	31.361 (0.0000)	4681.70 (0.0000)

Upon examining the results in Table 5, it is understood that the significance level of the Wooldridge Test used to test for autocorrelation is significant, indicating the presence of autocorrelation. In order to test for heteroscedasticity in the study, tests applicable to the fixed effects model were employed. The Modified Wald Test was used to determine whether there is a problem of heteroscedasticity in the model. It was found that the probability value associated with the Modified Wald Test is statistically significant, indicating the presence of heteroscedasticity in the models. Driscoll and Kraay's (1998) model, which addresses these issues of heteroscedasticity and autocorrelation, was utilized as a solution.

Table 6. Model Selection Prediction Results

Model	Random Effects- Pooled OLS	Fixed Effects- Pooled OLS	Random Effects – Fixed Effects
Model 1	167.27 (0.0000) Result: Random Effects	193.28 (0.0000) Result: Fixed Effects	14.10 (0.0150) Result: Fixed Effects
Model 2	160.75 (0.0000) Result: Random Effects	170.79 (0.0000) Result: Fixed Effects	16.15 (0.0015) Result: Fixed Effects

The results in Table 6 indicate that applying fixed effects in both models would be more appropriate

Table 7. Factors Affecting Firm Performance (ROA)

Dependent Variable	ROA
Independent Variables	Coefficients
Credit Risk	0.07291 (0.0510)*
Currency Risk	-0.0150 (0.033)**
Liquidity Risk	-0.0111 (0.177)
Interest Risk	0.0162 (0.003)***
Financial Leverage	-0.0476 (0.018)**
Constant	0.1093 (0.000)***
R²	0,0661
F Statistics	9.81 [0.000]
Hausman	14.10
Model	FE
Sample size	300

Note: The values in parentheses represent standard error estimates. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8. Factors Affecting Firm Performance (ROE)

Dependent Variable	ROE
Independent Variables	Coefficients
Credit Risk	0.1702 (0.043)**
Currency Risk	-0. 0212(0.415)
Liquidity Risk	-0,00064 (0.661)
Interest Risk	0.0677 (0.002)***
Financial Leverage	0.0927 (0.108)
Constant	0.1217 (0.006)***
R2	0,0676
F Statistics	10.48 [0.000]
Hausman	16.15
Model	SE
Sample size	300

Note: The values in parentheses represent standard error estimates. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

In Tables 7 and 8, firm performance is represented by ROA and ROE, while credit, exchange rate, interest rate, liquidity, and financial leverage risks are used for financial risks. Based on the applied tests, it was determined that there are heteroscedasticity and autocorrelation in the models, and the Driscoll and Kraay's (1998) model was used as a solution. Model selection tests concluded that fixed effects should be used in both models. It was observed that credit risk and interest risk have a positive effect on ROA, while exchange rate risk and financial leverage have a negative effect. On the other hand, it was found that credit risk and interest risk have a positive effect on ROE, while other risks do not have a significant impact.

SUMMARY

The aim of our study is to determine which types of risks have an impact on firm performance. To identify these risks, we have selected companies from the BIST-30, which represents the Istanbul Stock Exchange and is characterized by high political and economic vulnerability. Return on Assets (ROA) has been used as a performance indicator for asset returns, while Return on Equity (ROE) has been used as a performance indicator for capital returns. Financial risks play a significant role in influencing a

company's profitability, liquidity, and sustainability. Therefore, it is crucial for companies to effectively manage and understand these risks in order to gain a competitive advantage and achieve long-term growth.

The analysis revealed interesting findings regarding the impact of different financial risks on firm performance measures. Specifically, credit risk and interest risk were found to have a positive effect on Return on Assets (ROA), indicating that firms taking on higher credit and interest risks tend to have higher profitability. Conversely, exchange rate risk and financial leverage were found to have a negative effect on ROA, suggesting that firms exposed to these risks may experience lower profitability. When examining Return on Equity (ROE), similar patterns were observed, with credit risk and interest risk having a positive effect on ROE. This implies that firms taking on higher credit and interest risks tend to generate higher returns for their shareholders. On the other hand, the study did not find any significant impact of other risks on ROE, suggesting that factors such as exchange rate risk, liquidity risk, and financial leverage may not significantly influence the return generated for equity holders.

These findings highlight the importance of effectively managing credit risk and interest risk in order to enhance profitability and shareholder returns. It also suggests that mitigating exchange rate risk and carefully managing financial leverage may be crucial for maintaining strong financial performance. Overall, the study provides valuable insights for firms in understanding the relationship between different financial risks and their impact on performance measures. The findings will assist practitioners, policymakers, and investors in developing strategies to effectively manage financial risks and enhance firm performance in the dynamic Turkish market.

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CHAPTER 10

ANALYSIS OF THE GLOBAL ECONOMY DURING THE COVID 19 PANDEMIC

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INTRODUCTION

The COVID-19 pandemic has had a significant impact on the global economy. As the virus spread around the world and governments took steps to contain it, various restrictions and closures of business activities were implemented, resulting in a widespread economic slowdown.

The pandemic led to a global economic recession, as many countries experienced a significant contraction of their economies. Business activity shrank, supply chains were disrupted, and millions of people lost their jobs. Some sectors were particularly affected by the restrictions imposed to contain the spread of the virus. Tourism, aviation, hospitality, entertainment and live events were hit hard, with a massive decline in demand and business closures in many cases. On the other hand, certain sectors, such as e-commerce, technology and home delivery services, experienced an increase in demand.

Many governments implemented economic stimulus policies to mitigate the impact of the pandemic. These policies included financial aid packages for affected businesses and workers, unemployment benefit programmes, low-interest loans and measures to support the most affected sectors. Financial markets experienced great volatility during the pandemic. Stock indices fell sharply in the first quarter of 2020, but recovered to some extent as governments and central banks implemented measures to stabilize the economy.

The pandemic has exacerbated existing economic inequalities. Workers in vulnerable sectors, informal workers and those in precarious employment were particularly affected. In addition, low-income and developing countries faced greater challenges in coping with the pandemic due to a lack of less developed health resources and systems. The pandemic accelerated the adoption of remote work and online shopping models. Many companies implemented work from home and virtual meetings, which had an impact on demand for commercial real estate and transportation. In addition, the rise of e-commerce and home delivery transformed consumption patterns.

It is important to note that the economic situation during the pandemic remains dynamic and subject to rapid change as the public health situation evolves and different measures are implemented by governments.

Research Design

To carry out this study, descriptive research was used, in order to have a greater scope on what happened in the world economy as a result of the covid-19 pandemic. Descriptive research design is a methodology used to describe characteristics, behaviors or phenomena of interest in a given population.

It seeks an initial knowledge of the reality that is produced from the direct observation of the researcher and the knowledge that is obtained by reading or studying the information provided by other authors. It refers to a method whose objective is to expose with the greatest methodological rigor, significant information about the reality under study with the criteria established by the academy. (Abreu, 2014)

The main objective is to provide an accurate and detailed picture of what is being studied, without looking for causal explanations or relationships between variables. Descriptive research design is useful when you want to get a general and detailed overview of a particular population or phenomenon. However, it is important to take into account its limitations, since it does not allow to establish causal relationships between variables or explain the motives or causes of the observed behaviors.

What is the world economy?

The world economy refers to the set of economic interactions that occur globally between different countries and regions of the world. It is the study and analysis of how goods and services are produced, distributed and consumed internationally, as well as the economic and political forces that influence these interactions.

The World Economy examines international trade, foreign investment, capital flows, migratory movements, trade and monetary policies, and other aspects related to economic activity between countries. It also focuses on how national economies interact and affect each other, and how changes in one economy can have repercussions in other parts of the world. In definitional, political, and economic terms, the relationship between exchange rates and economic growth is critical. (Emek, 2021)

The main objective of the world economy is to understand global economic dynamics, analyze patterns of economic exchange and cooperation between countries, and examine policies and measures that are implemented at the international level to promote economic growth, stability and sustainable development.

This is presented as the study of economic interactions at the global level, including trade, investment, financial flows and economic policies that affect countries and regions of the world as a whole.

Here are some key aspects to understanding the global economy:

- **Interconnection:** The world economy is characterized by economic interdependence between countries. Trade transactions, capital flows, migration and other economic aspects cross national borders and generate interactions and dependencies between economies.
- **Globalization:** Globalization has been an important factor in the development of the world economy. It has facilitated the growth of international trade, the expansion of multinational enterprises, the integration of financial markets and the diffusion of technology and innovation.
- **Global economic indicators:** To analyze the world economy, various indicators are used, such as global Gross Domestic Product (GDP), international trade, foreign direct investment, exchange rate, unemployment and other data that allow evaluating the state and evolution of the economy at a global level.
- **International organizations:** Organizations such as the International Monetary Fund (IMF), the World Bank, the World Trade Organization (WTO) and the Organization for Economic Cooperation and Development (OECD) play an important role in the analysis and management of the global economy. These institutions promote cooperation, provide economic advice, facilitate trade agreements, and provide financing and technical support to countries.
- **Global economic policies:** The economic policies adopted by governments have a significant impact on the world economy. Decisions related to international trade, financial regulation, fiscal

and monetary policies, and other measures influence global economic dynamics and relations between countries.

- **Challenges and trends:** The global economy faces various challenges and experiences changing trends. Challenges include economic inequality, financial volatility, environmental risks, trade protectionism, and macroeconomic imbalances. Trends include digitalization, sustainability, the knowledge economy and demographic changes.

Approaching the covid-19 pandemic

The COVID-19 pandemic is an unprecedented event that has had a significant impact on public health, society and the economy globally.

SARS-CoV-2 belongs to the family of coronaviridae, its structure is similar to betacoronaviruses (SARS-CoV and MERS-CoV), having high virulence capacity. The case fatality rate of COVID-19 in Ecuador is higher than the estimated global average. (Sanchez et. al. 2021)

Origin and spread: COVID-19 is caused by the SARS-CoV-2 virus, which was first detected in Wuhan City, Hubei Province, China, in late 2019. Since then, it has spread globally, becoming a pandemic. So it has led to the implementation of various public health measures to control its spread. These measures include social distancing, wearing masks, frequent handwashing, mass testing, contact tracing, and implementing lockdowns and restrictions to varying degrees. COVID-19 has had a significant impact on the health of people around the world. It has caused millions of infections and a large number of deaths. Some infected people may experience mild or moderate symptoms, while others may develop serious illness or complications.

With the health crisis that has been unleashed as a result of the COVID-19 pandemic, the global economy is facing its biggest challenge since the Great Recession. This is an unprecedented crisis in recent history, due to its characteristics that combine a reduction in productive capacity with a collapse of international markets and

domestic demand, together with strong restrictions on the movement of people. (Véliz and Vargas, 2021)

The COVID-19 pandemic has disrupted people's daily lives and had significant social impacts. School and university closures, travel restrictions, cancellation of events, and limitations on social interactions have been implemented. In addition, it has generated emotional and mental health challenges due to stress, isolation and uncertainty. This pandemic has had a significant impact on the global economy. Many companies have had to close or reduce their activity, which has led to a decrease in production and employment. Sectors such as tourism, hospitality and entertainment have been particularly affected. Governments have implemented economic stimulus policies to mitigate the negative effects.

The rapid spread of the disease led the World Health Organization, on January 30, 2020, to declare it a health emergency of international concern, based on the impact the virus could have on underdeveloped countries with fewer health infrastructures and recognize it as a pandemic on March 11. (Abreu et. al. 2020)

The response to the pandemic has involved intense scientific research to develop effective vaccines against the virus. Several countries and pharmaceutical companies have managed to develop and approve vaccines in record time. Mass vaccination has become a key strategy to control the spread of the virus and reduce the impact of the pandemic. Greater cooperation and coordination between countries and international organizations has been required. Collaborations have been established to share information, resources and experiences in the fight against the disease. In addition, there have been calls for global equity and accessibility in vaccine supply and crisis response.

The COVID-19 pandemic has created all sorts of economic shocks; first, purely medical shocks; secondly, economic impacts resulting from containment measures and thirdly, shocks of expectations. The medical shock will be transitory as a vaccine and curative treatments will be developed, however, the economic damage could be persistent. (Clavellina and Domínguez, 2020)

Importantly, the COVID-19 pandemic situation is constantly evolving and that measures and impact vary in different countries and regions. On the other hand, Rodriguez et. to the. (2020). He mentions that human coronaviruses commonly share viral structures and infection mechanisms, along with the potential for invasion of the host CNS.

Global economy in pandemic

During the COVID-19 pandemic, the global economy faced a number of significant challenges and changes. Here is an analysis of the key aspects of the world economy during this period:

- **Economic contraction:** Most economies experienced a significant contraction in their economic activity due to restrictions imposed to contain the spread of the virus. Business closures, travel restrictions and social distancing negatively affected production, trade and consumption.
- **Unemployment and job losses:** The pandemic resulted in massive job losses in many sectors. Businesses were forced to close or reduce their staff due to falling demand. Millions of people around the world found themselves out of work, leading to high levels of unemployment and financial hardship for many families.
- **Economic stimulus and government support:** Governments implemented economic stimulus measures to mitigate the impact of the pandemic. These included financial rescue packages, low-interest loans for businesses, unemployment benefit programs, and direct support to hardest-hit households. The aim was to keep money flowing in the economy and provide support to affected workers and businesses.
- **Uneven sectoral impact:** Some sectors were more affected than others during the pandemic. The tourism, hospitality, air transport and entertainment industries were severely hit by travel restrictions and social distancing measures. On the other hand, technology companies, e-commerce and online services experienced an increase in demand.

- Supply chain and international trade: The pandemic significantly disrupted global supply chains and international trade. Travel restrictions and lockdown measures affected the transport of goods, resulting in product shortages and delivery delays. In addition, there was a decline in international trade due to falling demand and trade restrictions imposed by some countries.
- Digitalization and changing consumption patterns: The pandemic accelerated the adoption of digital technologies and online commerce. Companies had to quickly adapt to remote work models and online sales to survive. Consumers also changed their shopping habits, opting for e-commerce and home delivery. This led to a significant increase in online sales and the transformation of traditional business models.

Global dynamics have changed drastically and organizations were somehow not prepared for this change brought about by the pandemic, because they occurred in a short period of time, probably nobody expected it and the times to respond were not enough to assimilate the abrupt change that covid-19 brought, so they had to take on the task of closing their businesses, Others reinvented themselves leaving the traditional figure by using new information technologies as a way to be more competitive. (Zuñiga et. al. 2020)

Overall, the COVID-19 pandemic had a profound impact on the global economy. Containment measures and restrictions imposed to curb the spread of the virus led to widespread economic contraction and massive job losses. Governments implemented stimulus and support policies to mitigate the impact, and significant changes occurred in consumption patterns and the digitalization of companies.

The impact on the economy of all countries, by this pandemic, is devastating. All governments have been forced to take measures in a general way, shortly before seen globally, seeking to alleviate this catastrophic economic situation, with more and more people having to leave their jobs, lowering or eliminating the average family income. (Leather,2020)

Conclusion

In conclusion, analysis of the global economy during the COVID-19 pandemic has revealed significant impacts and unprecedented challenges. The spread of the virus has led to the implementation of containment measures that have generated widespread disruption in economic activities globally.

During the pandemic, a widespread economic contraction was observed, with recessions in many countries and economic sectors. Restrictions imposed to contain the spread of the virus, such as business closures and travel restrictions, had a negative impact on people's production, employment and incomes.

Particularly affected sectors, such as tourism, hospitality, transport and the entertainment industry, were identified as experiencing a significant decline in demand and facing major challenges to their recovery.

However, changes and adaptations in the economy were also observed during the pandemic. The increase in teleworking, the acceleration of the digitalization of companies and the greater adoption of digital technologies have allowed to maintain some economic activity and have boosted related sectors, such as e-commerce and information and communication technologies.

Governments and international organizations have implemented economic stimulus policies and measures to mitigate the negative effects of the pandemic. Financial aid packages have been earmarked, interest rates have been reduced, subsidies have been provided to businesses, and social protection programs have been implemented to support workers and the most vulnerable.

International cooperation has been critical during the pandemic, with collaboration between countries and organizations to share information, resources and experiences in managing the economic crisis. Trade agreements have been established and global vaccination initiatives have been promoted to achieve a stronger and more equitable economic recovery.

As vaccination progress is made and recovery strategies are implemented, a gradual improvement in the global economy is expected. However, challenges and risks remain, such as the emergence of variants of

the virus, inequality in vaccine distribution, and uncertainty about the duration and long-term impact of the pandemic.

The global economy during the COVID-19 pandemic has demonstrated the magnitude of the challenges faced and the widespread negative impacts. However, it has also highlighted the adaptability and resilience of economic actors and the importance of international cooperation in the search for solutions. Economic recovery will require a combination of effective policies, innovation and global collaboration to overcome challenges and lay the foundations for sustainable and equitable growth in the future.

SUMMARY

The COVID-19 pandemic has had a significant impact on the global economy. The following is a summary of the analysis of the global economy during this crisis; The pandemic triggered a global economic recession, with a contraction in production, trade and investment in most countries. Lockdown and shutdown measures to control the spread of the virus led to a decline in demand, business closures and job losses. Many economies experienced a significant decline in their economic growth. The most affected sectors were tourism, aviation, hospitality, retail and manufacturing. In addition, there was a decline in global demand for products and services.

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CHAPTER 11

THE RELATIONSHIP BETWEEN HEALTH EXPENDITURES AND ECONOMIC GROWTH IN BRICS COUNTRIES

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INTRODUCTION

Considering the historical process, health has been one of the most important values of human beings since the first periods of human history. Undoubtedly, this value of human beings depends on their economic self-sufficiency. In order for individuals and societies to live in a better health level, develop their skills and increase their welfare level, public expenditures, which are called health expenditures in the literature, have contributed significantly to economic growth by causing an increase in the level of health in the individual and social structure.

In its most general definition, economic growth, which is defined as the increase in the amount of goods and services produced in any country in a certain period of time, is one of the issues that all countries attach importance to and are interested in on a global scale. These interests and pursuits in economic growth and the detection of some serious deficiencies in the Solow model have led to the emergence of modern approaches that try to explain how the said growth occurs and what factors affect economic growth.

the studies that first started with Romer (1986) and continued with Lucas (1988) and Barro (1990) accelerated the emergence of new theories about economic growth (Ağır & Tıraş, 2018, p.1559). The endogenous growth theories suggest that there will be increased returns on existing capital and will increase growth in the long run (Sala-i Martin, 1990). While the internal growth models clearly state the factors affecting the formation of an economic growth, they emphasize that the importance given to physical capital is exaggerated and that the most important factor for a long-term growth is human capital (Kibritcioğlu, 1998, p. 224).

Considering the studies conducted by Newhouse (1977) and Kleiman (1974), it has been revealed that one of the most important variables explaining the development differences between countries in terms of health expenditures and economic growth is the income levels of the countries. In this context, when interpreting how much a country allocates to health expenditures and services, which are a public investment, and the change in this situation over the years, it would not be correct to consider only health expenditures, which is a public service. As a matter of fact, it would be a more accurate and effective approach to evaluate the data on health expenditures and services as a whole, taking into account other structures.

Prior to the Covid-19 outbreak, global health services and expenditures continued to increase, albeit somewhat slowed down. Global health expenditures rose to \$8.3 trillion in 2018 and its share in global GDP reached 10% . While more than 75% of these expenditures on health services occurred in the Americas and EU regions, 19% was in the Pacific region, 2% was in Asia and 1% was in the African region. With the Covid-19 epidemic, the increase in health expenditures of countries and regions has become more evident and health expenditures have become more important in evaluating and interpreting the development levels of countries (Kartal, 2022 p. 61).

When the literature on the relationship between health expenditures and economic growth is examined, many theoretical and empirical studies have been conducted. However, in the context of emerging economies, the scarcity of studies explaining the aforementioned relationship is striking. In this study; The relationship between health expenditures and economic growth, BRICS countries (Brazil, Russia, India, China, South Africa) will be discussed in particular.

The health expenditure and economic growth literature shows that different econometric tests and forecasts have been made. Some of the studies in the literature focus on cointegration and regression estimates between variables. While cointegration estimates in related studies generally report statistically significant and economically positive results of health-related indicators on the economic growth variable (Piabuo & Tieguhong , 2017; Hesmati , 2001; Cebeci & Ay, 2016; Okunade & Karakuş, 2001; Badri & Badri , 2016; Gerdtham & Löthgren , 2002; Hayaloğlu & Bal, 2015; Gyimah-Brempong & Wilson, 2004; Selim et al., 2014; Dreger & Reimers , 2005; Rhee , 2014; Koying & Young- Hsiang , 2006; Georgiou , 2013; Beraldo et al., 2009; Mehrara et al., 2012; Baltagi & Moscone , 2010; Ding, 2012; Narayan et al., 2010; Wang, 2011) although few studies in the literature suggest that health expenditure indicators have a negative effect on economic growth. It is seen that there is no effect from the line where it has an effect (Hartwig , 2010; Çetin & Ecevit 2010; Mohammadi et al., 2012 Ang 2008; Coondoo & Dinda 2008; Seldon & Song 1994; Pao & Tsai 2010; Saboori , Sulaiman , & Mohamed 2012 ; Saboori & Sulaiman 2013)

In addition, in the relevant literature, it is revealed that health expenditures, which are a form of public expenditure, make significant

contributions to economic growth by increasing the general health level of both the individual and the society (Badri & Badri 2016 ; Bloom et al., 2001-2004; Aydemir & Baylan 2015; Mayer 2001). ; Majdi 2014; Sab & Smith 2001; Nyamwange 2012; Asghar et al., 2012; Bak et al., 2008).

DATASET AND METHODOLOGY

Recently, increasing global diseases and threats around the world have increased the share of health expenditures and have caused serious budget separations in the public and individual incomes of individuals. In the study, the public expenditures of the BRICS (Brazil, Russia, China, India, South Africa) countries between 2002-2022 in the field of health and the relationship of the private health expenditures of individuals within the country to economic growth were examined by panel data analysis. In the model, economic growth was determined as the dependent variable, and the independent variables were public health expenditures and private health expenditures.

VARIABLES	VARIABLE TYPE	DEFINITION	RESOURCES
GDP	The dependent variable	GDP per capita growth (annual %)	World Bank
Public health expenditures (GHE)	Independent variable	domestic general health expenditure (% of current health expenditure)	World Bank
Private Health Expenditures (PHE)	Independent variable	domestic private government health expenditure (% of GDP)	World Bank

Using panel data has significant advantages over using only time series or cross section data only. It has been extensively covered by Frees (2004). The additional information provided by the panel data allows for more accurate estimates. Panel data estimation methods require fewer assumptions and are generally less problematic than simpler

methods. It combines the values of using both cross-sectional data and time-series data and provides greater problem-solving benefits.

$$RGDP_{it} = \beta_0 + \beta_1 p_{heit} + \beta_2 g_{heit} + u_{it}$$

$$i = 1, \dots, 5 \quad t = 2002, \dots, 2022$$

HORIZONTAL SECTION DEPENDENCE

Cross-section dependency test is used in panel data analysis to determine whether other countries are affected by a macroeconomic shock that occurs in one of the horizontal sections that make up the panel.

LMadj tests were used to test the presence of cross-section dependence. The LM test proposed by Breusch and Pagan (1980) can be used to test the presence of cross-section dependence in cases where the cross-sectional dimension is less than $N < T$ time dimension. LM statistics can be calculated using the panel data model given below (Hsueh et al., 2013, p. 296):

$$Y_{it} = \alpha_i + \beta_i x_{it} + \mu_{it} \quad i = 1, \dots, N \quad t = 1, \dots, T$$

Under these assumptions, the first of the horizontal cross-section dependency tests was “*Lagrange*” developed by Breusch and Pagan (1980). *Multiplier (LM)*” test. According to this test:

$$LM = T \sum_{i=1}^{N-1} \sum_{j=i+1}^N \hat{\rho}_{ij}^2$$

CD_{LM} test $T \rightarrow \infty$ and $N \rightarrow \infty$ when it works. However, it shows deviations in case of $N > T$. That is why Peseran et al. (2008) LM_{adj} created the deviation-corrected test.

$$LM_{adj} = \sqrt{\left(\frac{2}{N(N-1)} \right)} \sum_{i=1}^{N-1} \sum_{j=i+1}^N T \hat{\rho}_{ij} \frac{(T-k) \hat{\rho}_{ij}^2}{\sqrt{v_{Tij}^2}}$$

H_0 = No Horizontal Section Dependency.

H_1 = There is a horizontal section dependency.

HORIZONTAL SECTION ADDICTION TEST RESULTS

VARIABLES	TESTS		
	Breusch -Pagan LM	pessary Scaled LM	Pesaran CD
RGDP	0.0000 [83.61844]	0.0000 [16,46158]	0.0000 [8.732868]
GHE	0.0000 [109.2711]	0.0000 [22.19769]	0.0000 [10.25103]
PHE	0.0000 [45,56292]	0.0000 [7.952110]	0.0041 [3.605426]

• F statistics values are given in parentheses.

As a result of the cross-section dependency test, the results of three different tests used in case the time dimension is greater than the cross-section dimension are included. In the analysis, it is seen that the probability values obtained for all variables are less than the critical value of 0.05. At this stage, it turns out that the H0 hypothesis is rejected and the H1 alternative hypothesis is not rejected. The results show that there is a dependency between the determined cross-sections.

HOMOGENEITY TEST

In this part of the analysis, it is useful to examine the homogeneity and heterogeneity structure of the variables before proceeding to the unit root tests . Because the similarity of the economic schemes of the countries is expected to be homogeneous in terms of the significance of the study. In addition, unit root tests should be preferred according to cross-section dependence, heterogeneity and homogeneity.

While applying the homogeneity test, Hsiao (1986) Panel Homogeneity Test was used. The Hsiao test has three different hypotheses.

H1(0)= Homogeneous HA= H2

H2(0)= Homogeneous HA= Heterogeneous

H3(0)= Homogeneous HA= Partially Homogeneous.

HYPOTHESIS	F-STATISTICS	P VALUE
H1	[4,808038]	5.73E-06
H2	[2.349734]	0.024724
H3	[8.713013]	5.11E-06

In the table above, the F statistics probability values of all hypotheses H1, H2 and H3 are less than the 5% significance level. Therefore, the H1 and H2 null hypotheses were rejected and the alternative hypothesis was accepted. The results show that the variables are heterogeneous. In the H3 Hypothesis, the null hypothesis was rejected and the alternative hypothesis could not be rejected. That is, the coefficients are considered to be partially heterogeneous. At the stage of unit root and cointegration tests, tests that take into account cross-section dependence and heterogeneity will be selected.

UNIT ROOT TEST RESULTS

In the study, cross-section dependency was determined and since the test result is heterogeneous, 2nd generation unit root tests should be preferred. Among these tests, the Peseran CIPS test , which takes into account the group effect, was preferred.

H0=Series Has Unit Root

H1=No Unit Root in Series.

VARIABLES	LEVEL T STATISTICS	PROBABILITY VALUES	CONCLUSION
RGDP	-2.66079	<0.01	I(0)
PHE	-2.11207	>0.10	I(1)
GHE	-1.98667	>0.10	I(1)

Applied pessary When the CIPS unit root results were examined, it was determined that the dependent variable was stationary at the level, that is, the probability values were less than the 5% critical value. Therefore, it is accepted that the H0 hypothesis is rejected and the H1 hypothesis cannot be rejected. If the independent variables are greater than 5% critical value, it indicates that the series contain unit root , that is, the H0 hypothesis is not rejected . At this stage, Panel LS will be applied by taking the differences in the level of the independent variables.

Panel LS

The Breusch -Pagan (1980) test was developed to test the pooled least squares model against the random effects model. If the variance of the unit effects is equal to zero, the model can be solved using the least squares

method. The F test, on the other hand, was developed to test the pooled least squares model against the fixed effects model. In case the model cannot be solved by the least squares method, the Hausman (1978) test is applied. This test is used to choose between fixed and random effect models (Güriş , 2015, p, 68-69).

Fixed Effects Model or Random Effects Model can be selected in cases where there are cross-sectional or time-dimensional effects, whereas Pooled Regression Model can be chosen in cases where there are no cross-sectional or time-dimensional effects (Gujarati, 2004, p. 650). In the study, when the effect of the model was examined, it was seen that it showed random effects.

RANDOM RESULTS IN HORIZONTAL SECTION AND TIME

VARIABLES	COEFFICIENTS	F-STATISTICS	P VALUE
RGDP	3.629751	3.119329	0.0024
GHE	-6.289177	-2.983801	0.0036
PHE	-0.497729	-3.523100	0.0007
Powerful Statistics	$R^2 = 0.133110$	P Value (F-Statistics) = 0.001399	

In the study, it was evaluated whether there was a relationship between the relationships between variables, fixed effects, random effects and pooled models, and random relationships were observed between cross sections and times. The table shows the results of the random effects model. The elasticity of economic growth to public expenditures (ghe) is 6.289177. In other words, when public expenditures increase by 1%, economic growth is negatively affected by 6,289177%. The elasticity of economic growth to private health expenditures (phe) is 0.497729. In other words, when private health expenditures increase by 1%, economic growth decreases by 0.497729%.

Granger Causality Analysis

In panel data analysis, causality tests are applied to test the relationship between variables. The basis of these tests is Granger causality analysis. In this context, in order to perform a causality analysis, first of all, the

stationarity of the data must be ensured. The assumptions of the Granger causality test for a model with a classical error term are as follows:

$$Y_t = \sum_{i=1}^k \beta_i Y_{t-i} + \sum_{i=1}^m \delta_i X_{t-i} + U_{it}$$

When Granger defines causality: “If the prediction of Y is more successful when the previous values of X are used than when the previous values of X are not used, then X is the Granger cause of Y .” used the phrase. If there is a relationship according to this definition, this situation \rightarrow is expressed as $X \rightarrow Y$. If the relationship is bidirectional, this expression \leftrightarrow will be $X \leftrightarrow Y$. The fact that the series are not stationary during the analysis will cause the relationships to be detected incorrectly (Granger, 1974).

$$Y_t = \sum_{i=1}^k \beta_i Y_{t-i} + \sum_{i=1}^m \delta_i X_{t-i} + U_{it} \quad (7)$$

- $H_0: \sum_{i=1}^m \delta_i = 0$
- $H_1: \sum_{i=1}^m \delta_i \neq 0$

Classic Granger Causality Test results of the data are given in Table 6.

HYPOTHESES	T-STATS	P VALUE	RELATIONSHIP STATUS
PHE \ GHE	[3.31502]	0.0411	ACCEPT
GHE \ GHE	[1.47966]	0.2335	ACCEPT
RGDP \ GHE	[5.18988]	0.0755	REJECT
GHE \ RGDP	[3.20597]	0.0455	ACCEPT
RGDP \ PHE	[4.67142]	0.0119	ACCEPT
PHE \ RGDP	[1.44252]	0.2421	REJECT

H_0 =Not a Granger cause. H_1 =Granger cause.

the P values are greater than $\alpha = 0.05$ significance level, the null hypothesis is rejected. When the values given in the table are interpreted, no causal relationship was found between public expenditures and private health expenditures. There is a one-way causality relationship between economic growth and public expenditures and private health expenditures.

CONCLUSION

Health expenditures, which is a type of public expenditure, cause an increase in productivity on human capital and cause serious effects on economic growth. However, these excessive and unnecessary expenditures may cause budget imbalances in the economic structure and may affect macroeconomic targets negatively. The Covid-19 epidemic, which started in November 2019 and created a negative shock effect on the global economy, had serious effects on the economic growth of countries and health expenditures, which is a public expenditure, on a global scale during its effective period. This situation has paved the way for an increase in the health expenditures and investments of the countries.

Human capital investments, which constitute an important part of the expenditures of developed and developing countries, appear as the most important structure in the integration of developing countries into the global economic structure. For this reason, even if there is a negative relationship between health expenditures, which is a form of public expenditure, and economic growth; In order to develop and protect the social and human capital in the society with long-term programs, it is imperative to give priority to health policies, taking into account the economic structure. In this context, in order to achieve the most basic human achievements that a social state is obliged to offer to its citizens, such as freedom, equality and the right to a good life, it is necessary to have an effective health policy.

In developed and developing countries, good or improving economic conditions result in more investment in the health system. Therefore, health indicators are relatively higher. However, it cannot be said that every additional health expenditure will result in a positive improvement in the health system and economic growth. The fact that developed and developing countries have close health levels despite different health expenditure levels or different health indicators despite similar expenditures is the biggest proof of this.

In this context, in this study, the relationship between health expenditures, which is a public expenditure, and economic growth has been examined and investigated. BRICS countries (Brazil, Russia, India, China, South Africa) were chosen as the country sample in the study . Pesseran CIPS test was used to reveal the relationship between the variables . The results

obtained in the study; There is cointegration between health expenditures and economic growth , therefore, there is a one-way long-term relationship between the variables considered for the BRICS countries (Brazil, Russia, India, China, South Africa). In addition, the long- term significance coefficient of the variables was positive and statistically significant at the 1% level. In addition, according to Granger causality analysis, while there is no causality relationship between public health expenditures and private health expenditures, there is a one-way causality relationship between economic growth and public expenditures and private health expenditures.

As a result of the analysis, a statistically significant relationship emerged between intermediary health expenditures, which is a public investment, and economic growth, but the direction of the relationship was determined as negative. To interpret this situation econometrically; The dependent and independent variables preferred in the analysis, the analysis methods used and the differences in time dimensions were effective in the negative results. In the context of economic policy, it is estimated that the reason for the negative relationship between health expenditures and economic growth is that health expenditures lag behind the population growth rate or that the quantitative increase in health expenditures is insufficient in terms of quality. For this reason, qualitative improvements should be made in health expenditures to meet the needs of the population growth rate in accordance with the understanding of the social state, and policies should be followed in this direction. In addition, the government that manages public investments should pay more attention to planning, supervising and regulating these investments rather than financing health services. In addition , partnerships of the private sector, which constitutes an important part of the health system, with the public structure should be encouraged and more service production should be supported.

SUMMARY

Due to the global health problems experienced in the world recently, the sum of public and private health expenditures includes serious proportions in the gross domestic product shares of countries. The causality relationship between growth relations was examined. Studies in the literature were examined. Health expenditures and economic growth data of the countries

between 2000-2022 were obtained from the World Bank. The results obtained were evaluated by panel data analysis. A one-way causality relationship was found between economic growth and health expenditures, and it was evaluated with a policy proposal.

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CHAPTER 12

THE EVER-EVOLVING NIGERIA CREATIVE INDUSTRY AND ITS LANDSCAPE¹

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¹ This publication is based on the current waves in the Nigeria creative industry and data from different sources as indicated in the various sections owing to the fact that Nigeria has no central data system for the industry

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INTRODUCTION

Creative business has become a dynamic, robust, and undeniable force in today's fast-paced and global village. Creative industries comprise a broad spectrum of economic pursuits that rely heavily on creativity. The digital era has brought a significant development to creativity through the new technologies and internet, and these has resulted to new potential for creative enterprises to reach new and large audiences and produce new revenue streams.

How has thinking outside the box of a vast population with different ethnic groups and languages impacted the nation Nigeria, which is trying to move from monolithic to more diversify economy and where has it place the nation in the worldview? Fashion, film, and music which are part of the creative industry are reviewed and their noticeable impacts which are achieved through creativity, coupled with technology and globalization, and the evolving landscape which come with challenges and opportunities are discussed.

1. THE NATION NIGERIA

Nigeria is a country located in the Western part of African, who shares border with the Benin in the west, Niger in the north, Cameroon, and Chad in the east. The country's coastline has the Atlantic Ocean in the south and the Africa's third largest river, Niger River, enters the country through the northeast and travels south flowing into the Gulf of Guinea.

Nigeria population as of 2022 according to world bank data is 218,541,212. It has 250 different ethnic groups with more than 500 languages and English as its official language. The three major ethnic groups are Yoruba, Hausa and Igbo, and there are three major religions namely, Christianity, Islamic and Traditional religion.



Nigeria gained her independence from the British in 1960 and became a republic in 1963. Nigeria's cultural diversity is her identity.

Economically, Nigeria is blessed with abundant of natural resources ranging from solid minerals which include crude oil, natural gas, coal, gold, iron ore, tin, lead, zinc, niobium, limestone and many more to a productive land with various agricultural produce both cash crops and staple crops such as groundnut, palm oil, cocoa, cotton, sesame, millet, sorghum, corns, rice and lot more. Nigeria is indeed a land flowing with milk and honey, Chowdhury et al, (2008) justify this by saying that Nigeria has the tenth largest oil reserves and the seventh major natural gas reserves worldwide and Africa's largest.

The Nigerian economy can be classified into two groups according to Moudio, (2015) the oil sector and non-oil sector. Nigerians are majorly employed in the non-oil sectors like agriculture, communications, transportation, wholesale/retail and others.

Agriculture was the pillar of the Nigerian economy at independence (1960) and for significant part of that decade, offering food and employment for the public, raw materials for the emerging industrial sector, and generating most of the government revenue as well as foreign exchange earnings. Following the discovery of crude oil and its exportation and exploration in commercial amounts, the fortunes of agriculture gradually faded while petroleum replaced it as the leading source of revenue and export earnings

(Chete et.al., 2014). The genesis of Nigeria's economic problem began in the era of oil boom in the 1970s. As established by Sertoglu et.al., (2017), agriculture is the bedrock of a country's economic growth, development, and poverty eradication and it is also regarded as the engine and panacea to economic prosperity. For this reason, Nigeria has since then been a victim of monolithic economy. The heart of the nation's economy before the discovery of oil in commercial amount was agriculture, but with the arrival of oil, there was a shift in focus from being agricultural dependent country to crude oil dependent nation (Ikpor, 2016). In the words of Gunner Myrdal (1984), as cited by Sertoglu et.al., (2017) the battle for long-term economic development will be won or lost in the agricultural sector. However, the manner in which this path leads to economic prosperity is still subject to debate among development specialists and economists according to Sertoglu et.al., (2017).

Oil revenue henceforth accounts for almost 90% of the nation's gross export revenue, leaving a paltry 10% to other commodities such as agricultural produce and solid minerals. Between the 1970 oil boom period and now, substantial dependence was on oil revenue and with the instability of oil prices and a consequent sharp decline in the world oil price in the current times, it became obvious that over-dependence on oil as chief source of revenue may perhaps fail the country and it may be impossible to finance the budget as usual (Ikpor, 2016). Nigeria was growing economically in the 2000s due to the implementation of several structural reforms in a context of increasing oil prices; yet this fast growth was not accompanied by robust job creation. Within the period of 2001 and 2010, the nation ranked among the top 15 world's fastest growing economies, with an 8.2 average annual growth rate (World Bank, 2022).

A nation's economic is based on her performance in three sectors: the primary sector (e.g., agriculture), secondary sector (like manufacturing) and the tertiary sector which include services like IT, tourism, and banking that provide information or services to consumers. The performance of these three sectors is an indication of how much a nation contributes to GDP and subsequently to its own economy. For example, the chart below shows how Nigeria's activity sectors have contributed to the nation's GDP.

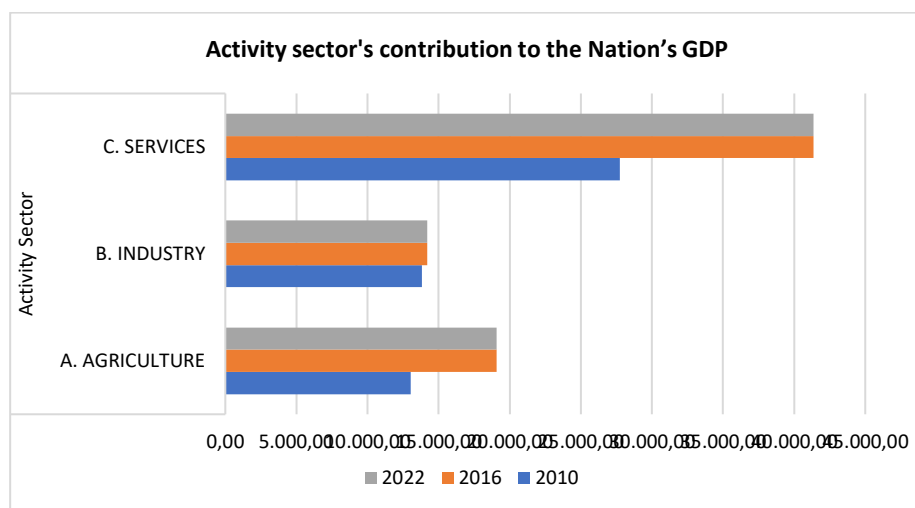


Figure 2: Activity sector's contribution to the GDP (Central Bank of Nigeria)

In addition, statista report, (2023), indicated that agriculture contributed about 23.36% to Nigeria's GDP, while 31.41% was from industry, and 43.79% from the services sector in 2021.

2. THE CONCEPT OF CREATIVITY

"In the realm of human existence, creativity stands as the radiant force that illuminates our world with endless possibilities and infinite wonders." (Sternberg and Lubart, 1995).

Creative business has become a dynamic, robust, and undeniable force in today's fast-paced and global village. Creative industries comprise a broad spectrum of economic pursuits that rely heavily on creativity. The digital era has brought a significant development to creativity through the new technologies and internet, and these has resulted to new potential for creative enterprises to reach new and large audiences and produce new revenue streams. The concept of creativity has been the subject of different perspectives, nevertheless it is nested in culture and environment. Sternberg and Lubart (1995) also propose other influences like personality, intelligence, knowledge, thinking style, motivation, and environment as factors associated with creativity. Creativity has a significant internal and external impact on people and societies. From stimulating the mind, liberating ideas, encouraging empathy, allowing for self-expression, and building social ties to ultimately enhancing our lives on a variety of levels.

Fagundes, (2014) wrote that it might be challenging to describe creativity because it has such a wide range of uses. He explained that one can also utilize creativity to deal with life's ups and downs in a more social way, or one can apply it to one's career in order to fundamentally differentiate it from any other job. Franken & Brown, (1995) on the other hand defined creativity as the tendency to generate or recognize ideas, alternatives, or possibilities that may be useful in solving problems, communicating with others, and entertaining ourselves and others. Also, it is "any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one.... What counts is whether the novelty he or she produces is accepted for inclusion in the domain" according to Franken & Brown, (1995).

Another study by Sternberg, (2006) advances the notion that just as investment is a decision, so also is creativity one, according to him, Creative individuals are like investors who take the risk to buy low and sell high. Idea creation is the moment of investment, it is sometimes perceived as novel and perhaps slightly ridiculous. Figuratively, they purchased low in the world of idea through their creative minds, then, sell high to the public immediately their ideas gain acceptance, therefore, harvesting the good fruit of their great idea and proceeding to the next unpopular one. From the above definitions, there is a central theme which is a person's idea or skill. When defining the creative business, expression or display of this idea or skill and innovation which is the ability to recreate an idea to make it attractive enough to compete in economic pursuit should also be considered and included in the definition because the materialization brings it to limelight.

Both creativity and innovative ideas according to Hennessy & Amabile (2010) as cited by Da Costa et al., (2015) emphasize the creation of fresh concepts and methods. Innovation to them is the successful implementation of creative ideas and in this sense is understood as a broad process which includes the generation of ideas or creativity but also the application of these in real environments (at work, in education, etc.). Anderson et al., (2004) as cited by Da Costa et., (2015) argued that creativity is about absolute novelty, however in innovation, relative novelty may comprise of the application of procedures, processes, or products, that have been used in a diverse condition in a different or new way.

3. THE CREATIVE INDUSTRY

Creative business has become a dynamic, robust, and undeniable force in today's fast-paced and global village. Creative industries comprise a broad spectrum of economic pursuits that rely heavily on creativity. This industry has been for decades, and the term has been used in different countries over the years. Švob-Đokić, (2005) state that it was coined in Australia in the 1990s though a bit unpopular but the late 1990s and 21st century brought it to limelight when the UK Department of Culture Media and Sport (DCMS) establishes the Creative Industries Unit and Task Force, a position also confirmed by Flew, (2012) as cited by Gross, (2020). Creative industries just as creativity is also acknowledged by several authors as controversial and can cover a wide range of activities, products, and services that provide experiences.

Švob-Đokić, (2005) elucidated that the official definition of the creative industry concept that was created in the beginning is still in use till date, he said that creative industries are "those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property." Onyeator, (2019) agreed and confirmed that the DCMS definition was conceptualized to include those industries that not only require creativity and skill; but also, those which have the capacity to create wealth and jobs (DCMS, 2001 cited by Onyeator, 2019). Hartley et al, (2013) also assert that "the creative industries are a hybrid environment because they mix industry, culture, and creativity and operate within the market." The concept of the creative economy broadens creativity in the aggregate of the economy, incorporating socioeconomic procedures and the management of labor and creative means. Moore, (2014) linked the creative industries and creative economics, according to him, the latter is derived from the term creative industries, which was previously referred to as cultural industries. In response to this, Snieška, & Normantienė, (2012) citing Howkins (2007) said that creative activity may only become an economic activity only when it produces an idea with economic effects or a trade able product. He therefore added that the result of creative process is a creative product which is refer to as "economic good or service that results from creativity and has economic value". Li Wuwei (2008) in China defines creative industries are those

industries that rely upon creative ideas, skill and advanced technology as core elements, increase value in production and consumption and produce wealth and offer wide-ranging jobs for the society by a series of activities.

However, in 1998, DCMS listed thirteen activities; advertising, architecture, the arts and antiques market, crafts, design, designer fashion, film, interactive leisure software, performing arts, publishing, music, television and radio – “which have their origin in individual creativity, skill, and talent and ... have a potential for wealth creation through the generation of intellectual property” (Newbegin 2016). Davies et al., (2013) in their book “Introducing the Creative Industries: From Theory to Practice” cited by Fagundes, (2014) said "The creative industries are a metaphor, which implies that creative production has been industrialized, set up in factory-like structures and managed along the same principle as the manufacturing of any other mass-market goods.... like any other industry, the creative industries are driven by the work of people." Here, they claim that the creative industries have evolved into what is now being run in factory-like structures with emphasis on efficiency, like other mass-market products.

3.1 Creative Industries in UK and other Nations

“The birth of an idea is seldom traced so precisely to a time, place and group of people as the ‘creative industries’ is to the 1998 Creative Industries Mapping Document, and the Task Force that commissioned it” (Gross, 2020).

Studies have shown that the 1997 Blair government renamed the Department of National Heritage which had earlier been created by John Major, the previous Prime Minister in 1992 to the Department of Culture Media and Sport (DCMS), to the new minister, according to Gross, (2020) this was seen as an important step towards making culture more important as a policy and the aim was to “achieve recognition within government that there was something called the creative industries, that they could be measured, and that they were a significant part of the economy”. Against this backdrop the Creative Industries Task Force was set up with four objectives set by Chris Smith, the UK's first Secretary of State for Culture, Media and Sport, which included "creative industries" because “Members of the Task Force felt that these areas of the economy were being overlooked by government”. The creative industries idea was therefore developed by a small group of people in

the ruling Labor Party, including film producer David Putnam, who had been active in the party since the 1980s.

In 2001, DCMS having worked with others to develop a statistical definition in order to allow the Creative Industries to be measured, defined creative industries as “those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property”. Note that DCMS uses a measurement that builds on its original definition but based it on “creative intensity” of an industry. Nine subsectors were considered as creative industries as against the original thirteen, these includes Advertising and Marketing, Architecture, Crafts, Design and designer fashion, Film, TV, video, radio and photography. These were chosen based on level of creativity. initially, a list of creative occupations was created through consultation, then the percentage of creative occupations in each industry (the creative intensity) was computed and the industries that have a level of creativity over a predetermined one are referred to as Creative Industries.

DCMS has built creative industries and has watched it grow to become an important part of the UK economy. The creative industries have been increasingly contributing significantly to the economy. Statistics show that the Creative Industries is growing more than five times faster than the national economy, contributing almost £13 million to the UK economy per hour, for example in 2018 it contributed £111.7 billion to the economy. UK had an anticipated 2.29 million creative industry jobs in 2021, including 1.62 million permanent positions. There were 663,000 more self-employed positions in the creative industries. 6.9% of all occupations in the UK were in the creative sectors, an increase from the 5.8% in 2015. Report however also shows that the pandemic did not have a negative impact on employment in the creative industries as it was previously anticipated. In 2021, the UK economy's creative industry generated \$109 billion, 5.6% of the UK economy.

Apart from UK other nations have also explore the economic advantage in creative industries, Creative economy has also offers countries path to development, according to UNCTAD 2022 report. UNCTAD report, for example, discloses that the exports of creative goods globally rose from \$419 million to \$524 million between 2010 and 2020, and that of creative services rose from \$487 billion to almost \$1.1 trillion within the same time frame.

China for example in 2020 was the largest exporter of creative goods (\$169 billion), seconded by the United States (\$32 billion), next was Italy (\$27 billion), then Germany (\$26 billion) and Hong Kong (China) (\$24 billion). The report also explains that developing countries export more creative goods than developed ones.

3.2 Nigeria creative industries

Unlike the UK and other countries that has a framework that maps out sectors to be classified as the creative industries, there has not been a distinct structure that map out sectors for classification in Nigeria. Nevertheless, the origin of Nigeria's creative industry is recognized as potential drivers of economic growth and job creation. Even before the mapping, it is dated back to Pre-colonial era when numerous artistic, musical, and cultural manifestations flourished among the nation's various ethnic groups. The transmission of history, values, and traditions from one generation to the next was facilitated by these cultural representations. The first time there was an organized gathering with a focus on the creative industries in Nigeria was in 1977, during the Festival of Arts & Culture or FESTAC celebration. The official policy for the Nigeria creative industries which is National Council for Arts and Culture (NCAC). Samuel, (2022) explains that “the closest attempt at official policy for the CCI in Nigeria is the National Council for Arts and Culture (NCAC) and its equivalent in all the states of Nigeria. The NCAC Act identifies the segments and activities that are covered and supervised by the agency.” The introduction of European art and culture to Nigeria with the advent of colonialism sparked the formation of fresh forms of artistic expression that combined both European and African aspects. Authors like Amos Tutuola and Chinua Achebe made Nigerian literature flourished during this period. Nigeria's creative sector continued to expand following the country's independence in 1960 thanks to the birth of fresh forms of art including music and movies. Artists like Fela Kuti, King Sunny Ade, and Ebenezer Obey rose to prominence in the music industry and popularized Nigerian music both domestically and abroad. However, there has not been any official mapping document or framework for the Creative and Cultural Industries (CCI) in Nigeria, this makes the evaluation of their impact on economy to be difficult. (Samuel, 2022).



In 2013, the British Council carried out a mapping effort to better understand the scale and scope of the Nigerian creative economy. A pilot study on the CCI in Lagos was carried out in Nigeria. The study was sponsored and conducted in collaboration with some key stakeholders and organizations. It attempted to map some traditional cultural and creative segments in Nigeria. The study set out to determine what constitutes the creative industries in Nigeria considering the lack of a general understanding of what the term "creative industries" means. This was accomplished through several stakeholder meetings and focus group talks with selected national key stakeholders. In line with the UK DCMS's definition of creative industries as proffered in the 2001 Mapping, the following were described to be creative industries in Nigeria; Home video/film/television and radio, Performing arts (theatre, festival, carnival, dance, drama, stand-up comedy), Music, Visual art and animation (photography, painting, graphic design, drawing, sculpture etc.), Tourism and hospitality (museums and monuments, cuisine, night clubs, events managements etc.), Arts and crafts, Fashion and design, Publishing (literature, book fairs, e-resources etc.), Architecture (interior décor, landscaping etc.), and Advertising. (Dandaura, 2013). Attention is drawn to a quick assessment that indicates that the Nigeria organized NCAC listing, the British Council preliminary delineation and the DCMS template are remarkably similar even though an official definition of the CCI by the Nigerian government is yet to be seen. The Creative Enterprises Association of Nigeria (CEAN) was established with support from the British Council, which also sponsors CEAN-organized events. The British Council has made effort to increase awareness of the potential benefit the creative industries can

have on a country's socioeconomic development. As a result, the idea is slowly making its way into the Federal Government of Nigeria and several state governments' official planning documents. In order to get reliable estimates of the creative industry in Nigeria especially in the entertainment sector, Samuel, (2022) carefully considered reports and opinions from various agencies and researchers. He further reported that an online publication, THISDAY of January 6, 2019, submitted that Nigeria's creative industry contributed about 2.3% of the Nation's GDP in 2016. A similar report published on April 2, 2019, by the Guardian, another leading national daily newspaper, corroborates the earlier report by THISDAY. Both reports suggest that in monetary terms, the creative industries contribute about US\$660million to GDP. The writers of both reports further projected that this figure would have grown by 2019 and opine that the creative sectors hold the key to reducing the unemployment levels which was put at about 23%. However, these reports did not clarify which segments they considered while making these estimates. But the content of the reports seemed to center more around the music, fashion and entertainment segments.

4. A REVIEW OF THE NIGERIA FASHION, FILM, AND MUSIC INDUSTRY.

4.1 The Fashion Industry

Famous trend in clothing, personal grooming and accessories is Fashion. It stands for the styles, or designs that are embraced and accepted by a group of people or culture. Adedeji and Adedapo (2021) further explains the concept of fashion as not consisting of dresses alone as many usually believe but that it also includes other forms of clothing and apparel like shoes, accessories (head wears, jewelries, wristwatches, ties etc.), make up, skin care and other things that adorns the human body. Taking it a bit further, Agu and Onuoha (2016) state that fashion can be seen in furniture, art, cars, food, jewelries, hairstyles, cosmetics etc. The clothing topic is "predominantly classified under fashion in sociological literature and dealt with as ongoing scene of competition and struggle, as ostentatious consumption, which primarily indicates the social status of those buying, owning, and dressing in specific garment" according to Bohn, (2004) as cited by Ajani, (2012).

The fashion industry on the other hand according to Khali (2023) is defined as a business that involves the design, production, marketing, and selling of clothing, footwear, accessories, and other lifestyle products. It includes numerous subsectors like haute couture, ready-to-wear, streetwear, and luxury goods. Nigeria comprises of 250 ethnic group, so its fashion is born out of rich, unique and attractive multi-ethnic culture. The people's culture is greatly affected as a result of the three main environmental regions - the savanna, tropical forests, and coastal wetland. Nigerian apparels or dresses genuinely mirrors the diversity of her culture. Each of the 250 ethnic group in Nigeria has its own unique dressings which represent their culture and reflects conservativeness. Probably, because of Khali definition Adedeji and Adedapo (2021) concluded that in relation to the expansion of fashion to other areas, there is a growing sentiment among Nigerians towards fashion in all walks of life; students, civil servants, clergy, politicians, bankers, businessmen, celebrities, football players, etc.



Image source: <https://234star.com>

Both male and female have their unique and attractive fashion. The clothes include different colors, textures, and decorations. Among the materials used to prepare dresses in Nigeria are the African fabrics; adire, (tie dye) aso-oke, ankanra, and java, silk, Lace Dry lace, George, guinea french

lace, Jacquard, and many more. Over the years in Nigeria, just like other countries, fashion is constantly moving, changing and being reinvented and reinterpreted all over the world, leading to demand increase and quest for the newest style and fashion trends (Tomlinson 2003). Example of this can be seen in the 2023 Africa Magic Viewers' Choice Awards (AMVCA) The fashion shows at the AMVCA showcased the talent and creativity of the Nigerian fashion industry. The exhibitions also showcased the work of some of Nigeria's best designers like Tolu Bally, Lanre Da Silva Ajayi and others who gave the public an idea of the latest African fashion trends. These served as a reminder that African fashion is on the rise and something to celebrate. This supports the words of Ajani, (2012) who asserted that clothing is no longer just as an integral part of a normal life but has advanced from being an object designed to cover nudity among humans or as an object for 'good look' to a tool for the representation of cultural identity and solidarity amongst households and friends. And added that individuals, through clothing, create their sense of self - confidence and position in society (Ajani, 2012). Earlier studies on the fashion industry in Nigeria have demonstrated that the people have a negative opinion regarding home-made products. A study of the Nigerian textile industry using a quantitative self-administered questionnaire also confirms that Nigerians have a negative attitude towards home products (Koleagha et al. 1983; Njoku 2004). Adedeji and Adedapo (2021) see this as the result of the colonial master's condemnation of African ways of life including fashion. Because fashion itself is a modern European and American development according to them. This gave rise to a mindset amongst the people that what is African or made in Nigeria was not good enough. Despite the influx of foreign model, the Nigeria dressing is still very relevant home and abroad especially in occasions like marriage, naming, burial, birthday and other ceremonies. Fasinu, (2020) explains that Nigerian fashion is being positioned as a key driver for the Nigerian economy as there is increase in the number of Nigerians wearing Nigerian-made, he added that once all that's missing is in place, fashion is going to thrive.

In Africa, fashion and textile industry is the second largest industry, with a worth of \$31 billion, and Nigeria accounts for around 15 % of this. The Nigerian fashion industry is one of the largest and fastest growing in Africa, it plays an important cultural role in Nigeria and contributes

significantly to the country's economy. New generation of talent is learning and embracing gentle production methods and crafts with strong aesthetics and African wax. The fashion industry in Nigeria has long embraced sustainable crafts, although the fashion industry is forced to address its impact on the environment. Huard, (2022) noted that it is noteworthy that host of Nigerian designers and fashion labels are celebrated for their quality and styles outside Nigeria, showcasing the rich cultural tradition of the nation and of Africa, offering a stage for the exhibition and conservation of traditional designs, styles, and fabrics. The fashion industry in Nigeria is a major employer of labor, providing jobs for a large number of people, especially, women and youth, both in the rural and urban area thereby reducing unemployment rates. Creating revenue from taxes, exports, and various economic activities, the fashion industry is a substantial contributor to Nigeria's GDP. The value of fashion industry in Nigeria is over ten billion dollars and it accounted for 0.47% of Nigeria's Gross Domestic Product (GDP) (Agu and Onuoha, 2016 cited by Adedeji and Adedayo 2021). Concerning economic diversification, Fashion is a non-oil subdivision and offers a pathway for the diversification and reducing the over-dependence on the oil sector. It has generated lots of entrepreneurs, granting people the opportunity to start small and grow it. In Nigeria, the fashion industry has recently developed more presence, participants, structure, influence, income and education. Today, many Nigerians work in the industry as fashion stylists, fashion designers, fashion artists, models, fashion photographers, makeup artists, hair stylists, beauticians, fashion journalists and more (Adadeji and Adedayo, 2021).

The African Continental Free Trade Association Agreement (AfCFTA) has supported this course by provides a duty-free market for Nigerian fashion products in other African countries, increasing the competitiveness of Nigerian fashion brands in the African market. Due to the country's strategic location and membership in multiple trade sectors, agreements such as the African Free Trade Agreement (AfCFTA) allow fashion companies to expand in other African countries and beyond.

4.2 The Music Industry

If there is one African nation where the highs and lows of its music reflect its destiny it is unquestionably the Federal Republic of Nigeria. It is a gigantic reservoir of mixed rhythms, reflecting the internal migrations of its countless ethno-linguistic groups. (Servant 2003)

The Nigeria's music industry has undergone various transformations over the years, it is highly dynamic, stimulating, and is rapidly expanding, coupled with its rich cultural heritage, it is one of the most thriving music industries. This industry over the years has grown to a sizable level, and its vibrant popular music culture has gained attention on a global scale as a reflection of the country's cultural diversity. Undoubtedly, Servant, (2003)'s remark is still very much relevant as Nigeria still maintains an active and strong power center of African popular music with its great artists. The Nigeria music industry is becoming an emblem of Nigerian culture and a significant contributor to the nation's economy.

The Nigeria music is broad, it includes both folks and contemporary categories. This is accredited to the country's diverse ethnicities, and each possesses their own unique musical genres, instrumentation, and compositions. In earlier times, Nigerian music had a utilitarian origin and was often utilized to commemorate events such as weddings or funerals. Traditional music in Nigeria is strongly associated with oral history and subsistence agriculture, a type typical in village communities. There was also an agricultural function, which was to maintain motivation. Laborers in the fields and on canoes sang work songs when working on each other's farms, the musician encouraged other working farmers by singing songs of praise about the client and the group as a whole. Among the prominent Nigeria songs today is Afrobeat, Fuji, highlife, Juju, Apala, Ogene, Afro-juju, Waka, Igbo rap, etc.



Image source: Microphone and Headphone PHOTO: Pixabay

The Nigerian music industry is a hotbed of talent and creativity, the artists have created a new global sound Afrobeats that is truly unique and from Afrobeats to Afropop, hip-hop, and R&B, combined with the above-mentioned music. According to Ofochebe, (2020) the widespread of this contemporary music is rooted in traditional practices and culture, and its development and modernization is influenced by necessity, foreign influence, religion, economy, governance system and urbanization etc. The combination of these reflects the vibrant nature of culture coupled with creativity and innovation. As Nigerian artists continued to break boundaries and explore new frontiers, it is difficult to doubt that it is the most creative and successful in Africa. Due to its creativity, the industry has produced successful musicians who are leaders in Africa music industry and their music penetrate even beyond Africa no wonder its widely recognized, and most times been described as the musical heartbeat of Africa. These growth in the industry has not gone unnoticed as several musical genre afrobeats is having a transnational and global moment, with recognition among American award ceremonies as well as global audiences (Osiebe, 2022). Several prestigious awards have been won to the industry with artists like Wizkid, Burnaboy, Tiwa savage, D'bang, Davido, Tems, 2face and many more both locally and internationally. Nigeria music industry has the "highest number of

internationally successful and decorated contemporary music acts” (Iweka, 2018) and the impact can’t be over emphasized both economically and otherwise. Premium times a Nigeria newspaper report that in 2021, the industry has over 500 music producers, 1000 record label, over 30 million monthly listeners and generates over \$2 billion in revenue per year. Pwc (2017) reported (Figure1) that the music industry recorded meaningful growth over the years, Total music revenue rose 9.0% in 2016 to \$39 million, and is projected to rise at a 13.4% CAGR to \$73 million in 2021. While Statista report (Figure 2) shows that Nigeria's music revenue grew from \$26 million in 2014 to \$34 million in 2018 and projected that by 2023 the revenue is expected to amount to \$44 million. Following these reports projections, International Trade Administration media and entertainment 2023 report that the industry generated over \$8 billion for the economy and created job for about a million people. This revealed that the reality is far beyond what was projected. The Stakeholders in Nigeria music industry include producers, managers, artists, musicians, promoters, distributors, and marketers.

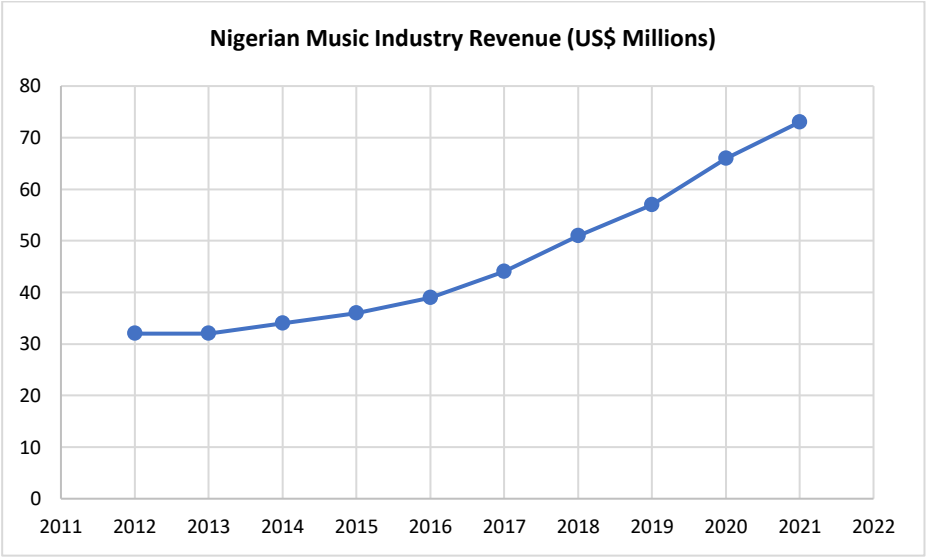


Figure 1: PWC’s report

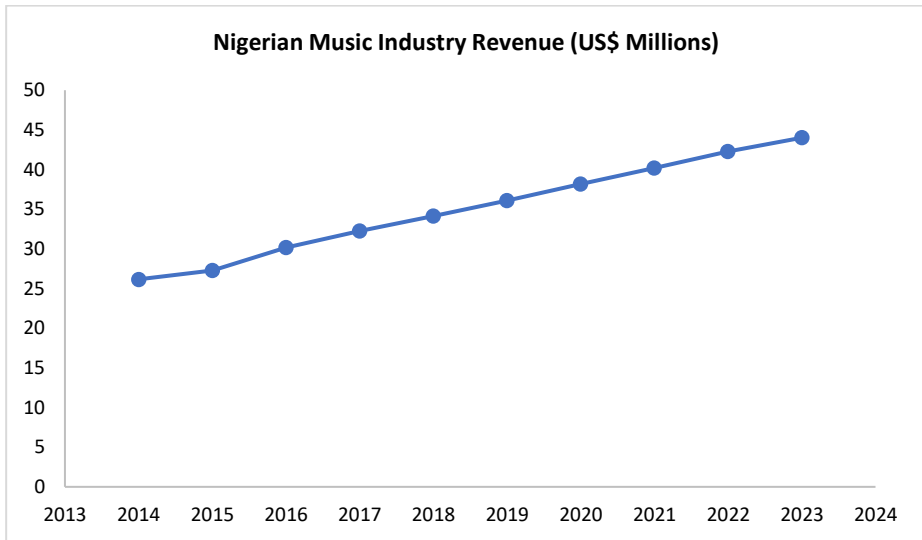


Figure 2: Statista's report

4.3 The Film Industry

The Nigeria movie industry did not start with Nollywood but has evolve over the years to become the popularly known Nollywood. The history of the Nigerian movie industry dated to the 19th century. It can be divided into four eras; the colonial period, Independence period, Indigenization Decree period, and Nollywood period (Onuzulike,2007). The substitution of peephole viewing of motion picture devices by improved motion picture devices, facilitated the screening of the first set of films at the Glover Memorial Hall in Lagos Nigeria. During this period, the film production, exhibition and distribution were controlled by the British colonial government whose motive was majorly political and less of social and they were largely documentaries as reported by Onuzulike, (2007) and for the purpose of producing propaganda newsreels according to Azeez, (2019). Around 1920s film makers began to produce films for local audiences within Nigeria, employing the use of mobile cinema as a means of exhibition. In 1926, the film “Palaver” was produced by Geoffrey an English producer which first feature Nigerian actors in a speaking role. As noted by Olubomehin, (2012), the colonial government made extensive use of films as a means of promoting both religious and British principles. After Nigeria’s Independence in 1960, the colonial film Unit was replaced with the federal and state unit (Onuzulike,

2007). This led to the increase in Nigeria theatres' content in the late 1960s into the 1970s, especially productions from the theatre practitioners like Hebert Ogunde, Moses Olaiya, Ladi Ladebo, Jab Adu, Ishola Ogunsola and others who were from the western Nigeria.



Image source: <https://www.bellanaija.com>

Several factors undoubtedly have contributed to the birth of the name 'Nollywood' 'one of which is economics. While International Trade administration said Nollywood came to being in 1992, according to Onuzulike, (2007) the term "Nollywood" was coined by a foreigner and first appeared in a 2002 article by Malt Steinglass in The New York Times. The British council magazine (2015), however named Norimitsu Onishi, a journalist with the New York Times, as the first user of the term "Nollywood" in 2002 after observing film production in Lagos, Nigeria. The phrase according to him refers to Hollywood in the US and Bollywood in Bombay, India, two of the most well-known centers of motion picture production. Nollywood refers to a collection of the thousands of films that have been produced there, while for others it refers to the diverse cast of actors and actresses emerging from the Nigerian film industry.

Nollywood have large followership throughout Africa and among the Africans in diaspora. According to Msugh-ter Teddy and Hanmakyugh, (2022) the industry produces more than 2,500 movies per year, and it is the

second largest in the world. The Nollywood industry has highly unique content that is generated in a variety of languages to reflect various cultural projections. Among the languages used are English, Yoruba, Igbo, Ibibio, Hausa, and so on. Early Nollywood films portray the lively culture, architecture, and, in many cases, relative wealth in current Nigerian society, they nonetheless uphold the integrity of an original, convincing narrative however Igwe (2015) explained that themes of love, betrayal, deception, conflict, and triumph are common to most of their storylines. They further explained its contribution to the Nigerian economy which has greatly appreciated generating \$600 million per year and creating thousands of jobs. According to Tella, (2021) as cited by Hanmakyugh et al. (2022) the revenue generated from cinema is estimated to be around \$22 million. Even though Nollywood doesn't have the same annual revenue as Hollywood or Bollywood, it is recognized for producing a prodigious amount of work in less favorable circumstances.

The Nollywood industry is very distinctive in its content, it is produced in different languages which allows different cultural projections. These films maintain the integrity of authentic, convincing narrative while depicting the vibrant culture, architecture, and, in many cases, relative riches in contemporary Nigerian society. Onuzulike, (2007) added that "the Nigerian film industry addresses social conscience and contributes to world culture, and It have a huge influence and impact on popular opinion and culture there".

The Nigerian film industry (Nollywood) has become a global force with a sizable follower in Africa and among the African diasporas. PwC (2017) disclosed that the sector is an important part of the arts, entertainment and recreation sector that have contributed 2.3% to Nigeria's GDP in 2016. Omanufeme, (2016) otherwise stated that the industry accounted for \$7.2 billion which is 1.42% of Nigeria's GDP. The report published in December 2021 by statista.com shows motion picture and music recording accounted for about \$53.5 billion of Nigeria's GDP in 2021. Although statista.com reported that the arts, recreation, and entertainment industry was responsible for 0.21 % of Nigeria's GDP in the second quarter of 2022, showing that the industry's participation declined compared to the second quarter of 2021, when it reached 0.3 percent. PwC Global Entertainment and Media Outlook 2022–

2026 wrote that Nigeria's media and entertainment sector is one of the world's fastest-growing creative industry. With a projected annual consumer growth rate of 8.8% (CAGR), it has the potential to become one of the nation's exports. PwC added that, Nigeria's film industry contributed \$239 billion (2.3%) of the country's GDP in 2021. They project that the sector's export revenue will rise to more than \$1 billion. The GDP of the nation was boosted by the film and music industries in 2020 by around \$1.8 billion. The industry is sometimes also referred to as the country's second-major source of jobs aside from agriculture as it records more than a million employees. Omanufeme, (2016) stated that the industry accounted for \$7.2 billion which is 1.42% of Nigeria's GDP.

5. The Nigeria Creative Industry Evolvment

The Nigerian creative industry has undergone and still undergoing growth and change. The growth of the Nigerian creative industry can be attributed to globalization and technology. Globalization has shaped every area of human lives and activities. Nigerian consumers are becoming more demanding and more discerning, and they yearn for more creative and innovative products and services. Therefore, their tastes and preferences are changing. The evolving landscape does come with both challenges and constantly emerging opportunities.

Globalization in creative sector has cause a significant change in recent years which has allowed growth and movement from a small, divided sector to a major contributor to the country's economy. Jayeola & Nwonye, (2019) in their definition of globalization said, "interconnectivity of the activities of people irrespective of distance, race and regional boundaries". The world has transformed into a "Global Village" due to significant shift in how people moved around, in terms of culture, technology, and trade in goods and services. These are made possible by improved ICT, transportation, political and sociocultural cooperation, and applied technological development (Jayeola&Nwonye,2019).



Image source: <https://www.istockphoto.com>

Globalization which is also a process where people, companies, and governments from different nations interact and integrate through international trade and investments has effects on the environment, culture, political systems, economic development and on the human physical well-being in societies around the world (Onaja, 2020). It is a process depicted by rise in communication speed, economic incorporation, technological complexity, and ideological spectrum. The world has become a global village and the Nigerian creative industry is not excepted from this globalization trend as its creative professionals collaborate with international partners, and creative products and services are being exported to markets around the world. The journey of Nigeria entertainment sector so far, an aspect of creative industry, is attributed to the liberty that globalization offers (Omojuwa, 2013).

While creativity is the generation of new ideas, innovation is the successful exploitation of those ideas (Johnson, 2022). Technologies reshape the way things are done, a key enabler of growth and sustainable development because it plays a significant role in all sectors. Cocorocchia et al., (2018) said “New technologies are reshaping the way we live and work, and their effects naturally touch the creative economy”. Small and medium-sized enterprises have also tapped into the wealth of excellent chances that

technology has offered, enabling them to grow. Following the Integration of technology, the sale of goods and services has grown exponentially, with businesses now making excellent sales to a bigger customer base through the internet. (Brand press 2022). Johnson, (2022) explained that the world generally is undergoing a digital revolution that began in the early 2000s with the introduction of new digital technologies and, more recently, advancements in robotics and artificial intelligence. Creative industry is one of the sectors that has undergone the digital transformation which has ushered in new perspectives of thoughts about work, with far-reaching consequences for business and social activities across range of disciplines and industries. This revolution witnessed is fueled by innovative technologies and tools which has resulted in significant advancements, expansion, visibility, and a wide range of opportunities. Also, the barriers between creators and their audiences have been further closed by these technologies, which have also changed how people engage with creative works and produced a variety of new digital mediums. One of these technologies is seen in Cocorocchia et al., (2018) research that shows how AI assists creators in more successfully matching viewers with their content. Algorithms based on neural learn and categorize a user's interests based on the movies they watch on Netflix, the music they listen to on Spotify, or the things they buy on Amazon. Then, providers can provide material that is specifically suited for a given user.

The Nigerian creative industry is becoming increasingly globalized. Nigerian entertainment industry's professionals are working with international partners, and Nigerian creative products and services are being exported to markets around the world. The artists are collaborating with international musicians and their music is being listened to worldwide. Eleanya in 2022 noted that out of the "top ten exported songs from Nigeria, nine are collaborations between local and international hitmakers", following this, Spotify confirms that Nigerian music is gaining worldwide attention and recognition. Offiah, (2017) reported that as of 2016, several social programs both in Nigeria and the diaspora depends on Nigerian music for guests' entertainment. He added that the Nigerian music is becoming foremost on radio and television across about 35 countries, (presently, more than 80% of music aired on Nigerian local radio stations are of Nigerian origin). On YouTube, Nigeria music was reported to have more than 2 billion views

within 15 months according to JRC Technical Report, 2016 as cited in Offiah, (2017). Eleanya (2022) wrote that Nigeria ranks second globally in countries with most streams on Spotify. Dataleum cited by Hassan (2023), January publication listed the 2022 top 10 most viewed Nigerian music videos on YouTube which gives a total of about 906 million views. Generally Nigerian music is listened to worldwide and still continues to attract global attention. The Nigerian fashion on the other hand is making a global statement and influencing design creations in the Global North (Europe and North America). Even amongst top European fashion brands, there is a growing trend that has seen more and more African concepts being introduced into Western designs. Examples of such are seen in the recent collections of Anna Sui, Tory Burch, Stella McCartney and other celebrity designers. creations by Nigerian designers have been worn by Michelle Obama, celebrities and other pop culture icons in Europe and the United States of America.

6. RESTRAINTS TO OPPORTUNITIES

The Nigerian creative industry has proven its ability to get recognition internationally and create partnerships with foreign businesses, Okocha & Echoi, (2022) the entertainment sector has been in the limelight which has helped to show the country on the world map in very positive ways as Its income increased from around \$36 million in 2014 to \$60 million in 2020. It has a deep pool of creative potential that can contribute immensely to the growth of the nation's economy and that of the continent at large. The Nigerian entertainment industry like music, movie and fashion which have launched themselves into international reckoning are major contributor to the country's economy and can do more despite the recent boom because there is still so much to be tapped into to reach that height to measure up with other nation's creative industry and boost the nation's economy. Numbers of challenges are causing setback for the Nigerian creative industry. To start with, the global cankerworm that affects both developed and underdeveloped nations is piracy (Nwogu, 2014). Piracy is the "unauthorized use or reproduction of another's work." Nigeria copyright commission (NCC) is the body charged with copyright issues, copyright law came to existence and have been amended over the years to curb piracy. Although there are rules and regulatory bodies set to guard and shield the right to intellectual property.

Despite this, piracy has persisted. it is a major problem for the creative industries everywhere including Nigeria. Nwogu (2014) cited Kunle who remarked that Nigeria is one of the nations with the highest rates of piracy; it was 82% in 2007, 83% in 2008, 83% in 2009, 82% in 2011, and it was still 83% in 2012. The Copyright Society of Nigeria (2012) cited by Offia, (2017) shows that piracy havoc cost the industry 50% potential revenue annually in Nigeria music industry. Nwogu, noted that the entertainment sector has been most affected by piracy, and these have cost the sector billions of naira. Like other authors, he added that the emergence of technology has empowered Pirates' activities according to him, it took a different dimension with the advancement of digital technologies and the emergence of social media....people can share and download music online, via their mobile devices or through portable music and storage devices (flash drives, iPods, etc.) and enjoy them both in private and public spaces, even earn some revenue off them, all without spending a dollar. (Offiah, C. 2017). Unini (2022) shed light on piracy in the fashion industry, he explained that when a fashion designer's original design is partially or completely duplicated or distributed under the control of an unauthorized party, this is known as fashion design piracy.

Although the Nigerian entertainment industry has made a significant contribution to the economy, still, sourcing for finance has always been a big obstacle for the industry. They have a low budget for production which allows stories/production quality to be diminished and sometimes even destroy the story. Also, Onyeator, (2019) added that it has led many industry players to engage in self-funding which cannot help the industries in Nigeria optimize their potentials. He made references to nations like UK and Australian where governments are committed through many forms to funding their creative sectors like direct investments, partnership with private sector, grants and sponsored programs, the Nigeria creative industry lack access to funding. Adeola, (2016) remarked that Nollywood size is mainly in terms of volume of output rather than monetary size. Investors themselves require adequate education on the creative sector, Investors like venture capitalists and debt financiers like banks, are familiar with how to finance oil and gas deals because they have been doing so for several years, but the question of how money is made in the creative industry is a relatively recent one and seems

they are not ready to take the risk, even when there is a willingness to invest, the mechanism is frequently ineffective; as a result, they require education on the resources available to participate in the creative economy.

Infrastructure and technological know-how are other issues bothering the industry, (Hamilton, 2022) and productions demand heavy, high-end hardware, this still boils down to lack of finance because the equipment needed can't be afforded by young and upcoming enterprises, Entertainment industry cannot rely on creativity alone, the place of innovation and implementation of technology is necessary for effective production. Unreliable power supplies also have a lot to do because once electricity is available half of the problem is solved. The power sector is a medium for industrial development, these industries -fashion, movie and music in Nigeria create their own basic structure to remain relevant in business. Such a situation invariably limits the ease of doing business in the industry. The failure by the governments to provide basic infrastructure like power, accessible road, soundstage, postproduction facilities, equipment, rented house, concert venues, creative hubs, a recording studio, rehearsal space etc. increases the cost and, in some cases, collapses the business completely. Other limitations are the unsupportive act of the government, the economic situation of the nation, sometimes lack of adequate training for the creators, unfavorable environment for the potential skills amidst others.

7. POLICY'S IMPACT IN DEVELOPMENT PROCESS

The Nigeria creative industry have covered a landmark, especially the fashion, film and music sector. Yet there are more opportunities to tap into if well managed and this will give back into the nation's economy. In 2012 UNCTAD was invited to attend the first National Policy Dialogue on the development of creative/entertainment industries in Nigeria. The aims were to accelerate interactions between the Government and stakeholders to support and re-position the creative industries, to identify the numerous issues affecting the progress of creative industries and to develop a workable roadmap to sort it out. to emphasize the contribution of creative industries to the nation's economy, trade, tourism and the country image promotion. Though from 2012 till date, tremendous change is being experienced by the creative industry. Recently, the punch newspaper in April 2023, report that the House of Representatives moved the

motion titled 'Need to Strengthen the Nigerian Creative Industry'. They urged the Federal Government to implement policies that will reinforce the Nigeria's creative industry's ability in becoming a significant source of income. Great Policy and its implementation have a whole lot of benefits including helping to develop the creative industry. For instance, encouraging diversity and inclusion by ensuring creative industry is open to everyone, notwithstanding their background. Establishing a supportive atmosphere which will help to attract and retain potential creative talent. Supporting innovation, aiding collaboration, protecting intellectual property, investing in education, and training, create policies that make it easier for creative industries to operate, such as tax breaks and relaxed regulations.

8. CONCLUSION

Studies shows that Nigeria has a heavy reliance on oil, which led to the neglect of other sectors. This over-dependence on oil has caused the nation an economic setback, as the instability of the oil market and the recent decline in oil prices revealed the vulnerability of this reliance. Although globally the economy is undergoing significant challenges and changes, driven by technological advancements, and changing consumer preferences. Nigeria therefore must adapt to these changes and seize new opportunities in emerging industries to remain competitive. To revamp Nigeria's economy and meet the challenges of the new century, it is imperative to move away from the monolithic economic approach and diversify.

Creative industry has proven itself, with great potential, it has risen to prominence and its creative products especially music is in high demand globally, providing an opportunity for increased export earnings. It thrives despite limited government support, piracy, lack of modern equipment and infrastructure, absence of training and retraining among others. It also has the potential to create a substantial number of jobs for the vast population and therefore contribute to the nation's GDP. Still, further support and attention from the government and private sectors are germane to unleash their full potential and establish it as the new oil industry of Nigeria. Supporting the creative industries is not only economically beneficial but also crucial for preserving and promoting Nigeria's rich cultural heritage. These industries serve as a platform for cultural expression, fostering national identity and

pride. By strategically promoting and supporting the creative industries, Nigeria can tap into new markets and diversify its export base.

SUMMARY

Creative industry in Nigeria has received limited attention over the years and has often been categorized along with other sectors. However, considering the music, film, and fashion industries, which are just a fraction of the creative industries in Nigeria, it is obvious that their impact is perceived and has demonstrated incredible growth and resilience. These industries have gained international recognition, attracted global audiences, and contributed to the nation's cultural diplomacy. This success shows the immense potential of the creative industries to drive economic growth and create a positive image of Nigeria on the global stage.

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CHAPTER 13

RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT AND HUMAN DEVELOPMENT INDEX: AN EMPIRICAL ANALYSIS FOR SCHENGEN AREA

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INTRODUCTION

There are many variables to measure the socio-economic development levels of countries. Various indices have been developed based on these variables. The Human Development Index, the most widely used of these indices, was developed in 1990 by Pakistani economist Mahbub ul Haq. This index is used by the United Nations Development Program (UNDP) in its annual Development Report. Human development is considered an investment in people. It shows the investment made in people formally but does not show the distribution of income. People who are healthy and educated in societies are seen as productive and by participating in the workforce, they increase productivity and contribute to economic growth. Human development is only associated with economic growth. Economic growth and human development are not possible without sufficient resources (Bolat and Arıcıgil, 2007). The Human Development Index (HDI) aims to evaluate the development levels of countries. Economic growth is only a tool, not the main goal of the HDI. The HDI is also used to question the national policies of countries and the choices they make in policy. It tries to understand and explain why there are differences in the human development results of two countries that have the same level of Gross National Product (GNP) per capita (United Nations Development Program, 2018:1).

Foreign Direct Investment (FDI) started to gain importance in 1990 and this importance continues today (Artan and Hayaloğlu, 2015: 553). FDI creates significant effects primarily on production, exports, employment, technological development, new production, management knowledge and competition (Vergil and Ayaş, 2009: 3). Direct investments are made in the form of acquiring a firm in a country, providing capital for the establishment of a newly established firm or increasing the capital of an existing firm. It refers to the investments made by companies in the relevant country to companies located in another country. Thus, the firm and the firm in which it invests; technology, business knowledge and investor's control authority. FDI occurs in the form of transferring capital between countries from one country to another without any market transaction (Demir, 2005: 155). It accelerates economic growth by creating FDI employment, developing management skills, transferring new technology, providing capital inflows to the country, increasing production, contributing to marketing, and improving export

volume for the developing country (Türk and Berköz, 2015: 61). FDI is accepted as an important tool for the realization of economic growth and development in both economic and political environments with its contribution to the country's economy (Yapraklı, 2006: 23).

Economic growth and development also enable a country to transfer its savings to other resources. Developments in financial markets reduce IT costs, shift savings to areas with high social returns and accelerate economic growth. The developments in the financial markets also enable poor individuals to increase their earnings thanks to the funds they obtain from the financial system, by ensuring the efficient distribution of resources and reducing uncertainties. Thus, thanks to a developed financial system, the differences between the rich and the poor are closed, income inequality is reduced and poverty is reduced (Kaya, 2018: 170). The most important contribution of FDI is reducing the country's dependence on external resources, increasing management skills, and contributing to human capital. In which country FDI will be made is determined by many factors. The size of the population and national income and the size of the measured market are among the most important factors that determine where FDI will be made. FDI is also important in terms of affecting the human development index data for the country. FDI is made to countries whose values match the economic structure, employment type, use of technology, and human structure of the country (Kar and Tatlısöz, 2008: 6).

The aim of this study is to investigate the impact of Foreign Direct Investments on the Human Development Index in the Schengen Area. Considering the theoretical background and other studies in the literature, this research examines the relationship using the Eviews Program, with the Panel data method.

1. HUMAN DEVELOPMENT INDEX (HDI)

In the 1950s-1960s, per capita income expressed the development of the country. In the 1970s, new definitions and discussions emerged on the concept of development, which led to the redefinition of development. Definitions and purposes of development are broad and their content is unclear. In the report published by the United Nations, it was stated that "improving living standards can be seen as the main goal of economic

development". This definition does not specify how to improve living standards. In the following years, this situation was overcome and the development did not consist only of increases in income and production; It has been concluded that it also includes human, social, cultural, and political improvements (Çağlar and Keten, 2018: 566).

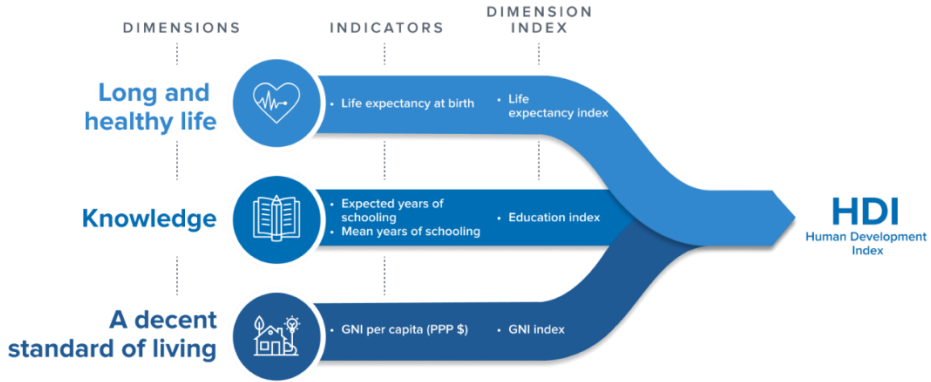
In order for a country to be considered developed, it is not sufficient to have only a high national income. Today, there are social problems in many economically developed countries with high national incomes. These problems show that the level of economic development is not simultaneously reflected in the quality of life. The concept of development is kept different from growth. The United Nations Development Program (UNDP) has developed different indices to reveal the development of countries. One of them is the Human Development Index (HDI) (Kizilaslan and Karaömer, 2013: 48). The United Nations Development Program (UNDP) defined human development in 1990 as: "Human development is the process of increasing people's choices". The most important are the long and to lead a healthy life, to be educated and to have a good standard of living. Additional options include political freedom, protected human rights, and self-respect, which Adam Smith describes as the ability to mingle with others in society without shame. This definition shows that human development has a meaning that goes beyond economic development. Human development, which is a concept that aims to raise the living standards of societies to the living standards of the contemporary world, is defined as the process that enables individuals to live their lives as they value and to use their basic human rights by enriching the opportunities in front of them and increasing their capacities (Doğan and Tatlı, 2014:102). At this point, the high incomes of individuals and the high criteria such as human living conditions and welfare level do not always show parallelism.

Economic development, based on income and consumption, defines development in terms of per capita national income growth. While measuring, the 'human development' approach, which does not consider an income-oriented development approach sufficient, puts people at the center of development. It emphasizes the expansion of all economic, cultural, political, or social preferences and options of individuals. This approach accepts the increase in people's income as an important factor and a prerequisite for

development, but argues that the improvement in income alone is insufficient to measure real well-being. Undoubtedly, higher income is an important factor that enables people to realize their dreams and improve their living conditions. However, when considered with a holistic approach, income increase is a necessary but not sufficient prerequisite for development” (Gürses, 2009: 340). Even though owning property and saving provides many opportunities for the individual, it is not correct to talk about human development if there are no other social opportunities to benefit from using these savings (Baykal, 2020).

(UNDP), as it is measurable and accessible data to determine living standards, income, education, health, employment, wages, gender differences, participation in decision-making mechanisms, environmental pollution, access to electricity services and clean water, type of fuel used for heating, vehicle ownership as indicators aiming to measure human development (Kizilaslan and Karaömer, 2013: 48). The HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone (UNDP Site). It means that the HDI is focused both on income and on social indicators thus it captures various dimensions (Majewska and Gierałtowska, 2022). The human development index is formed using three sub-indices. These are the welfare standard, education standard, and health standard. These three standards, which contribute to social development goals with different weights, are generally achieved as follows:

- **Health Standard:** This standard takes into account the average life expectancy of individuals living in the country.
- **Education Standard:** In this standard, the education level of the country is taken into account. Two different criteria are used to determine the level of education. These; literacy rate and the average length of education among adults.
- **Welfare Standard:** Measured by Purchasing Power Parity (PPP). PPP is calculated by adjusting per capita income to local living costs.

Figure 1. Human Development Index Criteria According to UNDP Research

2. FOREIGN DIRECT INVESTMENTS (FDI)

Foreign capital investment: It is defined as the capital made by a person or organization in one country to another country. Foreign capital can enter countries in various ways. Foreign Direct Investments are one of these ways. **Foreign Direct Investment:** One or more international investors undertake the investment together by establishing a partnership with one or more institutions residing in the country where they want to invest, or undertake the entire investment itself (Yılmaz, 2008: 37). The person or organization to be involved in FDI can make the company or organization in the country market they want to enter use their technology or brand. The investor who will make FDI gives permission to the company or organization in the country where they want to enter the market to use their own brand and a license agreement is made between the companies (Acar, 2016: 94).

In general, Foreign Direct Investment is defined as a country providing resources by investing in other countries, providing financial and technical resources that will affect its economic power, and paying for them later. FDI contributes to the economy of the country in which it invests. These contributions can be listed as providing employment, increasing the fixed capital stock, improving technology and business knowledge, improving competitive conditions, bringing mobility to the domestic market, and reducing the shortage of technical staff and managers. Even if FDI has positive and negative contributions to the country in which it invests, it clearly benefits capital accumulation. FDI has certain criteria for country selection. In order for FDI to be positive in a country, it is stated that the country must:

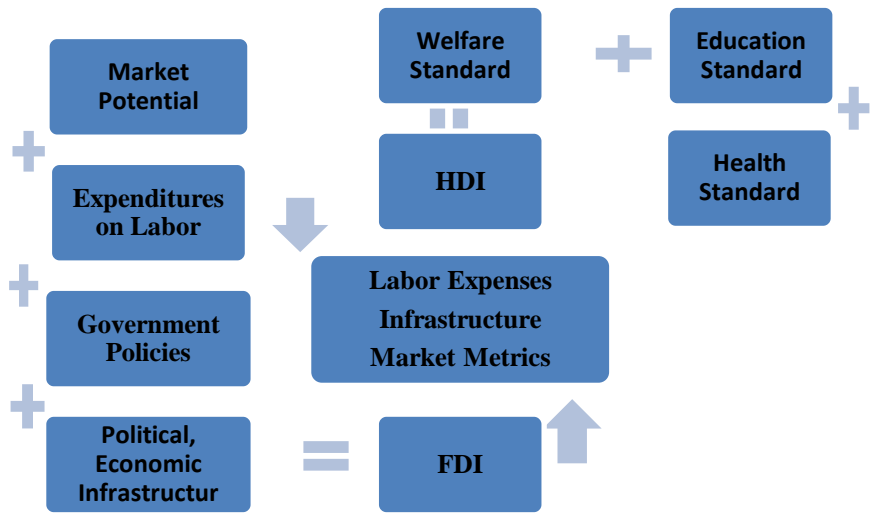
provide economic stability, improve the management environment, reduce production input costs, and provide ease of entry and exit. In addition, factors such as the social and cultural structure of the country, unregistered employment, political structure, and corruption can be added to this list (Kar and Tatlısöz, 2008: 5).

The development process in FDI includes not only the economic structure but also social and environmental changes. However, in today's conditions of globalization, economic development cannot take place without economic growth. If a country does not have sufficient savings, technology, resources, and foreign currency to achieve a certain growth level and to ensure the continuity of its economic development, especially when developing countries are considered, FDI seems to be the most effective way to overcome these deficiencies. If FDI is well planned and managed effectively, it creates positive economic effects in the investee country. These effects are an increase in employment, an increase in exports, new technology, improvement in management knowledge, economic growth, development, increase in welfare level. Therefore, FDI is important for economic growth and development in developing countries such as Turkey which experiencing capital insufficiency (Yapraklı, 2006:25).

3. THE RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT AND HUMAN DEVELOPMENT INDEX

In the country where FDI is made, the characteristics of the country affect the investments. Foreign direct investment entering a country is determined by many factors. These factors do not only consist of economic variables but also political variables that are seen to be effective on FDIs. These factors are the country's market potential, its expenditures on labor, economic growth, the policies implemented by the government, and also the country's political, economic, legal, and infrastructure which are included in the literature. As it was mentioned before the human development index is measured using three sub-indices i.e. welfare standard, education standard and health standard (Kar ve Tatlısöz, 2008: 6). The interaction between the above-mentioned factors is illustrated in Figure 2.

Figure 2. Relationship between FDI and HDI



Source: E. Baykal, S. Cece and H. Yorulmaz (78: 2021).

4. LITERATURE REVIEW

The Human Development Index (HDI) is a statistic developed and compiled by the United Nations since 1990 to measure the level of social and economic development of various countries. It consists of four main areas of interest: average years of education, expected years of education, life expectancy at birth, and gross national income (GNP) per capita. This index is a tool used to track the changes in development levels over time and to compare the development levels of different countries. In this part of the study, various academic studies that have been made on the Human Development Index and have made significant contributions to the literature are included. Table 1 presents the summary of the literature review.

Table 1. Summary of the literature review.

Number	Title	Author(s)	Highlights	Variables	Data Period
1	The Impact of Turkey's Human Life Index Data on Foreign Direct Investments	Elif Sinem Halil	The aim of this study is to reveal how effective the Human Life Index data is on Direct Investments in Turkey. In this study, a literature review was conducted using the current Human Life Index and Foreign Direct Investment data. In the study, it was seen that there is a significant relationship between FDI and HDI.	Human Development Index. Foreign Direct Investment.	2005-2017
2	Introduction : Liberalization of Investment and Human Development	Olivier Swinnen Wouters	Economic growth and human development in general have benefited from the arrival of FDI, and contrary to the widely accepted assumption, investors do not seek to enter jurisdictions with 'lower' standards.	Human Development. Foreign direct investment.	There is no data as it is a literature study.
3	The Nexus Between CO ₂ Emissions and Foreign Direct Investment, Human Development Index and Technology	Ebru	According to the analysis result; The existence of a long-term negative-directional relationship between HDI and FDI and CO ₂ / GDP, and a positive and statistically significant relationship with technology has been determined.	Foreign Direct Investments. Human Development Index. Technology. CO ₂ .	1980-2012
4	Analysis of Relationship Between the Human Development and Financial Development	Ersin	As a result of the Granger tests, it has been determined that there are causality effects from the financial development index and the human	Total premium production/ gross domestic product.	2009-2016

	Indices with Total Gross Premiums in OECD Countries		development index to the total premium production / gross domestic product variable in OECD countries.	Financial development index. human development index.	
5	The Effect Of Trade Openness On Human Development: Panel Data Analysis For V4 Countries	Mustafa	As a result of the analysis, it was found that trade openness affects human development positively in Czechia, Poland, Slovakia and Hungary, which are described as V4 countries.	Human Development Index. Trade Openness Ratio. Share Of Public Health Expenditures In GDP. Share Of Public Education Expenditures In GDP. Inflation Rate. Foreign Direct Investment. Population Growth Rate. Economic Growth Rate.	1995-2014
6	The Relationship Between Human Development And Economic Growth: An Application On Some African Countries	Ekrem Bekir	Contrary to the results of the short-term analysis, according to the long-term ARDL results, the relationship between human development and income variables was found to be negative and statistically significant, while the relationship between human development, education and health variables was positive and statistically significant.	Human Development Index. GDP. Education Expenditures. Health Expenditures.	1995-2014

7	A Comprehensive Approach to Investigate the Relation between Political Risk and Economic Development	Hasan Soner Furkan	The results reveal that (1) there is a significant and highly positive relationship between political risk and economic development, and (2) corruption control for political risk and human development index for economic development are the indicators with the highest interaction within the framework of standard coefficients.	Economic Development. Human development Index. Politic Risk.	2013-2014
8	Analysis Of The Relationship Between Environmental Pollution And Macroeconomic Determinants With Panel Data Method	Saharnaz	Dinamik En Küçük Kareler Yöntemi (DOLS) sonuçları ise yine uzun dönemde insani gelişmede meydana gelen artışın çevre kirliliğini azaltırken vergilerin çevre kirliliğini artırdığını ifade etmektedir.	Environmenta l Pollution. Income Per Capita. Foreign Direct Investment. Human Development Index. Environmenta l Taxes.	1995-2016
9	Analysis Of The Relationship Between The Human Development Index And The Exchange Index Using The Panel Var Method: A Case Of G 20 Countries (1995-2017)	Selahattin Merve Alırza	According to the results of the analysis, it has been observed that there is no significant relationship between the human development index of the G 20 member countries and the stock market index.	Human Development Index Stock Market Index	1995-2017
10	The Relationship Between	Mustafa	When the results obtained in the study, in which the long-term relationship between the two variables were examined with the	Human Development	1993-2017

	Economic Complexity And Human Development: An Analysis for E7 Countries		Westerlund Panel Cointegration test, it was observed that there was no cointegration relationship between economic complexity and human development variables in E-7 countries. Then, in the study where Dumitrescu-Hurlin panel causality analysis was carried out, it was determined that there was a one-way panel causality relationship from human development variable to economic complexity variable.	Index Economic Complexity Index	
11	Economic Complexity Index, Human Development Index And Carbon Emissions In Eu15 Countries And In Turkey: Panel Data Analysis	Çağla	In addition, the fact that the Human Development Index causes carbon emissions per capita shows that there is a chain effect. Since the Economic Complexity Index causes carbon emissions per capita and the Human Development Index causes the Economic Complexity Index, the Human Development Index variable also causes carbon emissions per capita.	Economic Complexity Index. Carbon Emissions Per Capita. Human Development Index.	1995-2014
12	Analysis On The Relation Between The Countries' Globalization, Democracy, And Economic	Senem	There is an inverse relationship between the level of democracy and globalization of countries and their place in the Gender-Based Development Index, and there is no statistically significant	Gender Development Index. Globalization. Democracy. Economic Size.	2013

	Size Indicators And Gender Development Index		effect of the countries' Gross Domestic Product level on their place in the Gender- Based Development Index.		
13	Relationship Between Financial Development And Human Development: Evidence From Advanced And Emerging Countries	Zekai	In the results of working; It has been determined that there is a long-term relationship between financial development and human development and that there is a causality from human development to financial development in developing countries, and from financial development to human development in all countries.	Financial Development. Human Development.	1990-2015

Source: Authors' summary from literature review.

5. Dataset And Model

In the economics literature, which variables are effective on the Human Development Index has been a subject of constant debate. In this direction, it has been tried to reach a final result by taking into account the different variables in the literature. The study benefits from the data between 1992-2021 of the 21 Schengen area Countries (Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, and Switzerland). The purpose is to analyze the relationship between Human Development Index and Foreign Direct Investment. The countries listed above are taken into account in the Human Development Index, foreign direct investment, GDP Growth, and population dataset. Table 2 provides detailed information about the variables.

Table 2: Variable Definitions and Resources

Variables	Type of Variable	Description	Data Resources
HDI	Dependent Variable	Human Development Index (HDI)	UNDP& countryeconomy
FDI	Independent Variable	Foreign Direct Investment, Net Inflows (% of GDP)	World Bank
GDP	Independent Variable	GDP Growth (annual %)	World Bank
POP	Independent Variable	Population Growth (annual %)	World Bank

Source: own study.

EViews statistical program was used for analyzing panel data tests. The cross-sectional dimension (N=21) includes data from 21 countries, while the time dimension (T=22) includes data covering 22 years. Since panel data analysis was aimed at data from 26 countries and 22 years, primarily cross-sectional dependency analysis was carried out, and appropriate unit root and tests were carried out according to the cross-sectional dependency result. Finally, the direction and severity of the relationship between the variables were determined by the regression analysis selected according to the Cross-Section Dependence test result.

5.1. CROSS-SECTION DEPENDENCE TEST

In the first stage of the analysis, it is necessary to test the cross-section dependence first in order to decide which unit root test will be appropriate. A cross-section independence analysis is performed to determine whether all the countries detected are equally affected by the shock affecting one of the units forming the panel, or whether the shock experienced by one of these countries in macroeconomic terms does not affect the other countries. The importance of the cross-section dependency test is that the results of the analysis that do not take the cross-section dependence into account will be inconsistent and inadequate.

Cross-sectional test hypotheses:

H_0 : No cross-section dependence (correlation)

H_1 : Cross-section dependence

The first of the Cross-Section Dependency tests developed under these assumptions is the Lagrange Multiplier (LM) test developed by Breusch and Pagan (1980).

Table 3. Cross-Section Dependency Test Result

Variables	Tests		
	LM	LM _{Adj}	CD _{LM}
HDI	6116.34 (0.000)	226.53 (0.000)	72.08 (0.000)
FDI	735.53 (0.000)	15.48 (0.000)	15.43 (0.000)
GDP	3639.65 (0.000)	129.39 (0.000)	59.16 (0.000)
POP	1111.36 (0.000)	30.22 (0.000)	3.13 (0.000)

Source: own study.

Note: “F-Statistics” values are without brackets and Probability values are in regular brackets.

As seen in the table above (table 3), the results of 3 different tests show that the variables are cross-section dependent. Therefore, the second generation unit root test was deemed appropriate for this study. At this point, homogeneity test results should be used to determine the second generation unit root test.

5.2. HOMOGENEITY TEST

The homogeneity assumption states that all units of the panel data show the same characteristics, while the heterogeneity assumption states that the units that make up the panel data do not show the same characteristics. The structure and properties of the data are critical for this test (BALKAYA, 2021: 79). Using the Hsiao (1986) test, the study examined the presence or absence of homogeneity in the slope coefficients. The hypotheses of the homogeneity test are given below:

- H_1 = Null Hypothesis: panel is homogeneous vs Alternative Hypothesis: H_2
- H_2 = Null Hypothesis: H_3 vs Alternative Hypothesis: panel is heterogeneous
- H_3 = Null Hypothesis: panel is homogeneous vs Alternative Hypothesis: panel is partially homogeneous

One good feature of the Hsiao test is the interpretation of the H_2 hypothesis which gives the best results. Homogeneity test results are shown in Table 4.

Table 4: Homogeneity Test Results

Hypotheses	H_1	H_2	H_3
F-Stats	32.92698	0.358343	143.3363
P-Value	7.0E-160	1.000000	1.4E-220

Source: Created by the Authors.

When we look at the results of the analysis, it is seen that two hypotheses (H_1 and H_3) that accept homogeneity are rejected and one (H_2) is accepted at the 5% significance level. Within the framework of these probability values, the H_1 and H_3 hypotheses are rejected, but the alternative heterogeneity hypotheses are accepted. In line with these results, a unit root test that defends heterogeneity under cross-sectional dependence should be

performed and the level at which the variables are stationary should be determined.

5.3. SECOND GENERATION UNIT ROOT TEST

As mentioned above, first generation unit root tests are applied under cross-section independence in panel data analysis. However, due to the recent development of international trade and relations between countries, it is a rational assumption to assume that other countries are also affected at different levels by a shock to one of the countries, taking into account the dependency on the horizontal sections that make up the panel. For these reasons, it is necessary to use second generation unit root tests to increase the accuracy of predictions in panel data analysis. Among the second generation unit root tests, MADF (Multivariate Augmented Dickey Fuller), developed by Taylor and Sarno (1998), Breuer et al. (2001) SURADF (Seeming Unrelated Regression Augmented Dickey Fuller) and finally CADF (Cross-Sectional Augmented Dickey Fuller) developed by Pesaran (2007) unit root tests are shown (TURGUT ve UÇAN, 2019: 10-11).

Bai and Ng (2004) developed a simple and one-factor analytical model and evaluated the assumptions in the test that both heterogeneous and homogeneous assumptions can be examined and the important criterion is cross-section dependence (Bai ve Ng, 2004: 1127).

In this context, Bai and Ng (2004) performed the PANIC test under the assumption of cross-sectional dependence and heterogeneity. Table 5 shows the results of the second generation unit root test for the variables in this scope.

Table 5: Second Generation Unit Root Test Results

Bai and Ng (2004) Unit Root Test (PANIK)		
Level		
Variables	Value	P-Value
HDI	+/- Inf	0.000
FDI	2.97646	0.002
GDP	6.45387	0.000
POP	2.71521	0.006

Source: Created by the Authors.

As shown in Table 5 the dependent variable HDI and independent variables are stationary at the level, according to the results of the PANIC test, one of the second generation unit root test which is developed by Bai and Ng (2004). When we look at the Table above, it shows that the series are stationary at all levels and therefore we can use the panel LS method.

5.4. HAUSMAN TEST RESULTS

In the study, the Hausman test was applied first and it was investigated whether the models were suitable as Random Effect or Fixed Effect models. In the Hausman Test statistics, the probability value of $p > 0.05$ showed that the Random Effect Model was suitable against the Fixed Effect Model. Therefore, the probability value of $p > 0.05$ shows that the Fixed Effect Model is suitable against the Random Effect Model. The Hausman Test hypotheses and results are presented in Table 6. The Hausman test hypotheses are shown below:

H_0 : Random Effect model

H_1 : Fixed Effect model

Table 6: Random Effect Model-Fixed Effect Model (Hausman Test) Results

Hausman Test	Chi-Sq. Statistic	Chi-Sq. d.f.	Probability	Decision
Cross-section random	172.649808	3	0.000	H_0 =Reject H_1 =Fixed Effect Model

Source: Created by the Authors.

The Hausman Test results indicate that the Random Effect model can be used statistically.

5.5. CHOW/F TEST RESULTS

Accordingly, the Chow Test was used to make a comparison between the Pooled Effect Model and the Fixed Effect Model in selecting the most appropriate model for Panel Data Analysis after the Hausman Test. Chow Test results are presented in detail in Table 7. The Chow/F test hypotheses are shown below:

H_0 : Pooled Effect model

H_1 : Fixed Effect model

Table 7: Pooled Effect Model-Fixed Effect Model (Chow/F Test) Results

Chow/F Test	Statistic	D. F	Possibility	Decision
Cross-section F	143.336299	(25,543)	0.000	H ₀ = Reject H ₁ = Fixed Effect Model
Cross-section Chi-square	1160.046390	25	0.000	

Source: Created by the Authors.

As the Chow test results show in Table 18, the probability value is 0.000 at the 5% significance level and has a probability less than 0.05 and the statistical value is 143.3362. For this reason, H₀ was rejected in the model and it was decided that the Fixed Effect Model was a more appropriate analysis technique.

5.6. BREUSCH-PAGAN (LM) TEST RESULTS

According to the Hausman test results in Table 6, H₀ was rejected and its alternative H₁ was accepted, that is, the Fixed Effect model was chosen statistically. Then, in the selection of the most suitable model for panel data analysis, according to the Chow/F test results in Table 7, H₀ was rejected and its alternative H₁ Fixed Effect model, was deemed appropriate. After the F test, the LM test was used for panel data analysis, and the most appropriate model was selected between the Pooled Effect model and the Random Effect model. LM test results are presented in Table 8. The LM test hypotheses are shown below:

H₀: Pooled Effect model

H₁: Random Effect model

Table 8: Pooled Effects Model-Random Effects Model (Breusch-Pagan LM) Test Results

Breusch-Pagan	Cross-section	Time	Cross-Section and Time	Decision
	2560.412 (0.0000)	0.186209 (0.6661)	2560.598 (0.0000)	H ₀ = Reject H ₁ = Random Effect Model

Source: Created by the Authors.

The table above (LM test results) shows that the LM test (Cross-Section and Time) value is 2560.598 and the probability value is (0.000). Therefore, the H_0 reject and Random Effect model with a small probability value according to the 5% significance level was deemed appropriate. LS Fixed Effects model was applied to verify the decision made according to the results of the F and Hausman tests. As in Table 9, the results of the LS Fixed Effects model were statistically concluded by using the Fixed Effects model in the study and its coefficients were interpreted.

5.7. LS FIXED EFFECTS MODEL RESULT

The LS Fixed Effects model was considered appropriate to justify the decision made according to the results of the F and Hausman tests. The result of the Fixed Effects Model is given in Table 9.

Table 9: LS Method Fixed Effects Model Results

Variables	Coefficient	Standard Error	t-Statistics	probability
FDI	0.550318	0.175313	3.139067	0.0018
GDP	2.172278	1.393240	1.559155	0.1195
POP	2.960602	10.47004	0.282769	0.7775
C	60.71093	6.794088	8.935846	0.0000
R-squared		90.786%		
Prob(F-statistic)		0.000		

Source: Created by the Authors.

The table above shows the results of the Least Squares method according to fixed effects for 21 selected Schengen countries. As Table 9 shows, it can form the short-run equation for the growth rate relative to other economic indicators. The emergence of the fixed effects model shows that the 21 selected Schengen countries have different starting points (intercept) among themselves.

$$HDI_t = 60.71 + 0.55FDI_t + 2.17GDP_t + 2.96POP_t \tag{1}$$

Since GDP and POP independent (Control) variables were statistically insignificant, they were removed from the equation and a more meaningful equation was tried to be created. In this framework, equation 2 was established.

$$HDI_t = 60.71 + 0.55FDI_t \quad (2)$$

The Constant value of the second Equation is 60.71. That means, the Human development index (HDI) will be 60.71 units when all variables are constant. All other variables being held constant, when foreign direct investment (FDI) increases by one unit, the Human Development Index (HDI) will increase by 0.55 units. FDI has been found to have a positive effect on the Human development index; foreign direct investment is a major source for the establishment of new industries in countries. At the same time, FDI's are useful in creating jobs, reducing poverty, increasing GDP, and improving people's living standards. The positive effect of FDI on the human development index is supported by most of the literature.

R-squared (R^2) is a statistical measure that represents the rate of variance of an independent variable or a dependent variable explained by variables in a regression model. The fact that R^2 is 90.786% indicates that the dependent variable largely explains the independent variables. Since the P (F-statistic) was less than 0.05, it was concluded that all independent variables had a statistically significant explanatory power for the dependent variable (HDI). So the model as a whole is meaningful.

CONCLUSION AND RECOMMENDATIONS

Economic growth is the situation in which real gross domestic product (GDP) increases continuously over time. The subject of economic growth is one of the most fundamental subjects of economics. After the Second World War, countries turned to a growth-oriented approach to achieve their development goal. After this period, only national income was accepted as an indicator in measuring the level of development. However, despite the countries' economic growth in the post-1970 period, no progress has been made in people's living standards. For this reason, since the 1990s, it has become a worldwide view that it is not correct to explain the development levels of societies only on the basis of income and that economic growth should be human-oriented.

The need to re-explain growth in its human, social, cultural, and environmental dimensions has paved the way for the emergence of a new approach that deals with the reduction of poverty, meeting the needs such as nutrition, shelter, health, and protection, giving more importance to human

values, increasing the quality of life with people and increasing social options. The name of this multi-faceted approach, which aims at a quality level of knowledge, a healthy and long life, as well as income, has been human development.

Within the framework of the econometric application we have carried out on 21 Schengen countries, it has been investigated whether FDIs that actually entered the countries in the period between 2000-2021 contribute to the human development of the countries as a result of their effects on economic growth. In this study, the Human Development Index was evaluated as the dependent variable and foreign direct investment as the independent, and GDP and population control variables. The data were taken from the World Bank website, UNDP and country economy official sites annually, and the Eviews 12 program was used to analyze the data in the study.

According to the results of the tests (Hausman, Chow/F, and Breusch-Pagan/LM) applied in the study, Table 9 shows the results of the Least Squares method according to fixed effects for 21 selected Schengen countries. Table 9 shows that has created a short-term equation for human development according to other economic indicators. The emergence of the fixed effects model shows that the 21 selected Schengen countries are different among themselves and their starting points are distinct. According to Equation 2, foreign direct investments in 21 Schengen countries have a positive impact on human development. In the regression analysis made with the least squares method within the Eviews 12 program, the R^2 and F statistics were significant. The fact that R^2 was 90.786% indicates that the dependent variable largely explained the independent variables. P (F-statistic) less than 0.05 indicates that the model as a whole is significant. As a result, foreign direct investments have revealed that 21 selected Schengen countries have a positive effect on human development. When foreign direct investment (FDI) increases by one unit in countries, the Human Development Index (HDI) will increase by 0.55 units.

A developed country, also called an industrialized country, has a mature and sophisticated economy, usually measured by gross domestic product (GDP) and/or average income per resident. Developed countries have advanced technological infrastructure and various industry and service sectors. When looking at the subject of Human Development, it is imperative

to look not only at numerical indicators but also at qualitative indicators. Over the years, significant progress has been made towards human development in many societies. These studies show that only monetary wealth does not mean human development, besides monetary wealth, people should have the wealth of life standards.

SUMMARY

The Human Development Index is a measure designed to measure the life expectancy of countries, the rate of literate people in the country, the education level of the country and the standard of living. Since 1990, the Human Development Index (HDI) has been published annually by the United Nations Development Program (UNDP). The Human Development Index shows the data on the development levels of countries. It also shows how the impact of the country's economy affects the quality of life of individuals. In this study, it was primarily aimed to analyze the relationship between direct investment and human development index, and gross domestic product and population growth were evaluated as independent variables and added to the model as auxiliary variables. In order to carry out the analysis, panel data analysis was carried out by using the annual data of 21 Schengen countries between the years 1995-2021. According to research results, foreign direct investments in 21 Schengen countries have a positive impact on human development.

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CHAPTER 14

ENTREPRENEURSHIP AND CITIES

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INTRODUCTION

Economy is one of the most prominent concepts among the many criteria that people use to classify the places they live in. As a matter of fact, although many aspects draw attention in the definitions made to describe cities, the economy has been one of the main determinants not only in this age but also in every period. Cities, which have assumed different identities over the centuries and accordingly undertaken different missions, have affected and been affected by the individual and the society he/she forms with the opportunities they offer. In this mutual interaction, traces of all factors that are effective in the formation of the city can be seen. Urban spaces, which are formed by the reflection of location, topography, climate and similar physical characteristics, have an impact not only on the material dimension but also on the sociological and psychological dimensions. In this context, many thinkers consider cities as living structures. The reflection of the changing world order in cities after the industrial revolution has brought very serious changes. In this framework, industrialization has brought urbanization and urbanization to the agenda in parallel, dragging masses of people from places that can be generalized as the countryside to the city (Akıncı, 2018: 2130). The city is the home of capital and, of course, of the bourgeoisie, which is the elite of the new world order and even referred to as the urban nobility. The fact that the landed nobility, that is, the aristocracy, remained cumbersome at the point of integrating into the new system made the city a center of attraction again.

The bourgeoisie, more narrowly defined" It would not be correct to say that the European bourgeoisie is uniform". In order to distinguish them, it would be simplest to enumerate their common characteristics, which, at the simplest level, distinguish them from their successors and contemporaries: they are structures or individuals who desire to vertically increase their property and wealth, who seek to own goods and property with new financial instruments, who are free from the old rules of investment, who are not afraid of taking risks, who anticipate downsizing or contraction processes, and who do not hesitate to experiment with different production and consumption items and channels (britannica, 2023). These characteristics largely overlap with the definition of entrepreneur in modern literature (Karakurt and Yazıcı, 2021: 1). This does not mean that the concepts of bourgeoisie or entrepreneurship are post industrial revolution. However, it is a reality that they came to the fore

and assumed important missions in this period. In this context, the relationship between the entrepreneur and the city is not new. More precisely, the pattern that can be understood as the city-bourgeoisie relationship, even if it is not coded as city-entrepreneur, is not a new case or process. In addition, what should be emphasized is that the entrepreneurial city and urban entrepreneurship, which constitute the main axis of the study, are two concepts that are confused with each other. While one focuses on the entrepreneurship of the city, the other is a concept that focuses on entrepreneurship in the urban area. The concept of entrepreneurial city, which is the subject of this study, can be evaluated in the context of the city having an entrepreneurial spirit with all its dynamics. At the forefront of these dynamics are, of course, city administrators. In this context, while constructing the study, the concepts of city, urbanization and local government were first clarified in order to create a conceptual basis. Subsequently, a number of concepts within the new urban movements, starting with the sustainable city, were explained. The concept of entrepreneurial city, which is one of the new urban movements, is discussed under a separate heading and the basic dynamics of the entrepreneurial city are tried to be explained. In the conclusion, a general evaluation is made and entrepreneurial cities and their examples are evaluated.

1. CONCEPTS OF CITY, URBANIZATION AND LOCAL GOVERNMENTS

The concept of city has meanings beyond the definitions of physical space and population. At the same time, the city is studied by many different disciplines as it expresses deep-rooted structural processes. Therefore, the city is a multidimensional research field with unclear boundaries. It is very difficult to try to explain the concept of city with a single definition because the city is a multidimensional element that varies from society to city. When the definitions are combined, it comes to the fore that the city is a place where non-agricultural production is made, where control functions are gathered, and which has reached certain levels of size, heterogeneity and integration (Hayta, 2016: 166).

Definitions of the concept of city have various dimensions. These can be listed as population, economic, sociological and administrative criteria.

According to the population criterion, in order for a place to be a city, it must have a certain population density and a projected population amount. The population criterion varies from one country to another and may be set forth as different amounts at different times in the same country. For example, in Turkey, according to the Municipal Law No. 1580, the population requirement for the establishment of a municipality was two thousand. This law was amended in 2005 and replaced by the Municipal Law No. 5393. According to Law No. 5393, the population requirement for the establishment of a municipality is 5000.

According to Weber, who draws attention to the political and economic organization of the city instead of population and administrative measures, in order for a settlement to be an urban community: a- a defensive fortress, b- a market, c- a court or relatively autonomous laws, d- a partial economy and autonomy. According to Weber, a city with these qualities is a political unit (Pustu, 2006: 130). An urban environment can be broadly defined on the basis of population density, concentration of administrative bodies and infrastructure, and various livelihoods and income-generating activities. Urban areas are characterized by high population density compared to other areas. While some cities are defined by municipal boundaries, many urban centers are not. They are often characterized by the presence of administrative structures such as government offices and courts and the relative concentration of services such as hospitals and financial institutions such as banks. In an urban environment, livelihoods and income-generating activities will be diverse and, unlike rural areas, not primarily dependent on agricultural production. If the area in question fits some, if not all, of these basic characteristics, it can be considered an urban area (www.wvi.org, 02.05.2023).

The European Urban Charter provides a definition of the city. According to this definition, a city is "a historical and legal formation that constitutes the basic nucleus and character of community life, autonomous administrative units where communities of people with common interests come together today, and self-governing living centers that offer regularly structured public services" (Kaya, 2007: 154 cited in Çelebi Zengin, 2018: 86).

The beginning of the urbanization process is generally accepted as the beginning of civilization. Accordingly, urbanization does not have a specific start date. However, in order to eliminate the ambiguity regarding the beginning of urbanization, researchers consider the transition from hunting and animal husbandry to settled life due to agricultural activities as the beginning of civilization and urbanization. Here, the main criterion for the progress of urbanization is the qualitative change in economic activity. Therefore, this criterion has traditionally been used in the analysis of urbanization processes in our time (Es and Ateş, 2004: 206).

Urbanization, in a narrow sense, refers to the increase in the number of cities and the population living in cities. The increase in the urban population stems from the widening of the gap between births and deaths in favor of births and the population coming from rural areas, i.e. migration. If urbanization is defined in a narrow sense, it is incompletely defined. As a matter of fact, this narrow definition has a demographic character. The phenomenon of urbanization results from changes in the economic and social structure of a society. Therefore, when defining urbanization, it is necessary to include the economic and social changes that cause population mobility. A broad definition of urbanization that takes into account economic, social and political dimensions can be as follows: "A process of population accumulation that leads to an increase in the number of cities and the growth of today's cities in parallel with industrialization and economic development, creates increasing organization, division of labor and specialization in the social structure, and leads to changes in human behavior and relations specific to cities" (Keleş, 2017: 37). When the concept of urbanization is considered; Although there are many definitions of urbanization, urbanization can be generally defined as a state of economic, social and cultural development with the increase in population and the number of cities (Yılmaz, 2019: 215).

Urbanization is, first and foremost, changes in economic, social, physical and population areas that require the state to act in terms of the services it undertakes. In other words, urbanization is a change. Secondly, urbanization requires an increase in the duties of the state. Finally, the problems that the state will face due to urbanization are complex and technical in nature. When their definitions and characteristics are considered together, it is seen that there are many factors that bring about the phenomenon of

urbanization and that the process has important consequences (Çelebi Zengin, 2018: 87). In the literature, the causes of urbanization are listed as economic, technological, political and socio-psychological reasons.

Another concept that emerged with the development of cities and urbanization processes is local government. One of the most important reasons for the emergence of local government is the rapid increase in the urban population and the consequent increase in the need for municipal services. As can be seen, one of the reasons for the emergence of local government is administrative necessity. Another reason is the need for a commune structure that includes concepts such as justice, equality and solidarity.

In the face of local problems growing in parallel with social development and the need for quick solutions, the increasing democratic demands of the people and the policy of international and supranational institutions and organizations to support local governments, the central authority is burdensome and distant from social participation, and the need for greater freedom of action of local governments has brought it to the fore. Undoubtedly, local governments are by nature separate and autonomous institutions compared to the central government. They are often viewed with suspicion, believing that the quality and quantity of discretionary power given to local governments may cause problems in compatible countries. However, the need to provide local governments with more freedom of decision-making and action in the face of the pace of development of society, the rapid resolution of the problems of urban residents, and the expectations of society for an effective and efficient public service is also emphasized (Anbarlı Bozatay and Kızılkaya, 2016: 610).

Local governments are public legal entities that have their own special revenues and budgets for local affairs concerning local people residing in a certain geographical area, and have executive autonomy through elected decision-making bodies. Local governments constitute one of the most important areas of debate in today's public administration due to how local people want to be governed and the representation it brings with it. Local governments can be considered as one of the main factors in developing democracy and ensuring efficiency in providing local services. In terms of the principle of decentralization, there is a structure that allows public services to

be provided to the public and local community members to play a role in the decision-making process. These qualities make local government an indispensable democratic institution (Yılmaz and Telsaç, 2021: 239).

Article 127 of the 1982 Turkish Constitution states that there are three types of local governments. These are municipality, special provincial administration and village. In addition to these three types of local government units, metropolitan municipalities, a type of municipality, were established based on the Constitution. Prior to the 1982 Constitution, there was no metropolitan municipality organization in Turkey. According to the relevant article of the Constitution, "Local administrations are public legal entities whose principles of organization are specified by law in order to meet the local common needs of the people of the province, municipality or village and whose decision-making bodies are elected by the voters, also specified in the law."

2. NEW URBAN MOVEMENTS

The changing structure of urbanization and emerging social needs have led to the emergence of new movements and formations related to urbanization and local processes. These new urban movements, which appear in the literature with concepts such as sustainable city, ecological city, smart city, slow city, are briefly mentioned below.

The concept of sustainable development is mainly discussed for cities. This is because especially large cities are the main consumers of natural resources and the main producers of pollution and waste. In order for the concept of sustainable development to function in a healthy way, the problems that arise in cities need to be solved effectively. Although it is not accepted by some authors in the literature, cities where the principle of sustainability has found an application area and the principles and objectives of sustainable development can be defined as sustainable cities (Pınarcıoğlu and Kanbak, 2020: 17).

Many cities are currently struggling with environmental degradation, traffic congestion, inadequate urban infrastructure and lack of basic services such as water supply, sanitation and waste management. The environmental footprint of cities is highly concerning and can threaten the natural resources needed to sustain economic development and poverty reduction rates.

Sustaining economic growth while creating sustainable livable cities for all is the greatest urban challenge facing Asia and the Pacific today. The United Nations Environment Programme (UNEP) assists Member States and stakeholders in achieving policies and targets related to sustainable buildings in cities, including SDG 11 (sustainable cities and human settlements), the per capita environmental impact of cities and global warming and climate change, efficient resource use and minimizing disaster risk, with a special focus on access to housing and basic services, sustainable transport networks, sustainable cities and urbanization, and effective access to public space and services. The main areas of current work on sustainable cities are (UNEP, 2023):

- 1) A roadmap for urban sustainable consumption and production across all sectors
- 2) Upstream interventions through policy, technology and financing to reduce and manage environmental pollution and resulting waste.

The concept of ecological city is also related to the concept of sustainable city. As a matter of fact, both approaches deal with the ecological problems of cities. The concept of green city is a common term similar or related to sustainable city and ecological city. It is argued that ecological urbanism draws on ecology to inspire a more environmentally sensitive and socially inclusive urbanism, based on the assumption that ecology is concerned with the relationships between all organisms and the environment. Ecological urbanism is driven by ideas that are less ideological, i.e. political or economic in nature, than green urbanism, whose principles are based on a triple-zero framework. These principles are zero fossil fuel energy use, zero waste and zero emissions (Bibri, 2020).

Another new approach to cities is the smart city concept, which has been applied in many countries, including Turkey. It is difficult to say that there is a consistent definition of the smart city concept in the literature. As a matter of fact, each smart city definition emphasizes different aspects of the subject and addresses the issue from different angles. However, it should not be forgotten that as the technological opportunities that cities need change and develop, the definition of the smart city concept also changes (Seçkiner Bingöl, 2021: 1253). In this context, it should be taken into consideration that the definition of smart city may change over time. Smart cities refer to

environmentally friendly cities where information technologies are used in the provision of urban services, individuals and institutions actively learn and follow innovations, and participation is guaranteed by technology (Bilici and Babahanoğlu, 2018: 127). Smart cities are defined by the British Standards Institute as "the effective integration of physical, digital and human systems in the built environment to offer its citizens a sustainable, prosperous and inclusive future". A smart city can be defined as an urban area (possibly covering different areas and scales of the city - streets, plazas, neighborhoods or eventually the whole city) that uses electronic data collection sensors in infrastructures, buildings, vehicles (Aydın and Temel, 2020: 14). Institutions and devices (IoT, Internet of Things) to provide real-time information about the operating systems of major cities. The latter include energy, transportation, water supply, sewage, waste, law enforcement, and information and communication. By integrating all sensorized data into information and communication technology (ICT) platforms, city managers and decision makers can optimize the efficiency and resilience of city operations and services by remotely connecting and commanding these systems, as well as connect and communicate with stakeholders (Moura and Silva, 2019: 1).

The concept of slow city is one of the slow movements that emerged in different fields after the slow food movement. Slow city is a word derived from Italian as Cittaslow. The slow city movement was founded in 1999 under the leadership of Paolo Saturnini and supported by the mayors of Bra, Orvieto and Positano. The movement was supported by Carlo Petrini, who later became president of Slow Food. The movement promotes the use of technology to improve environmental quality and urban structure, communication between local producers and consumers, food production using natural and environmentally friendly technologies, environmental protection and sustainable development. Cittaslow is composed of the words "citta" in Italian and "slow" in English and means "slow city" in Turkish. With Cittaslow, an international network of cities, alternative living spaces have been created in order to create sustainable cities where people can communicate socially, preserve their unique culture and nature, be self-sufficient, have no infrastructure problems and use renewable energy. In

addition to preserving local values in these cities, the benefits of technology have been mentioned (Belli&Çelik, 2022: 71).

Another approach to innovative cities is resilient cities. Resilient cities are cities that have the ability to absorb, recover and prepare for future shocks (economic, environmental, social and institutional). Resilient cities support sustainable development, prosperity and inclusive growth. The OECD is exploring how cities can increase their resilience. In this context, it makes some recommendations in four main areas. These are (OECD, 2023);

Economy

- A wide range of industries,
- A dynamic economy to drive growth,
- Conditions that allow innovation to take place,
- People can access employment, education, services, skills training.

Governance

- Clear leadership and management,
- Strategic and integrated approaches are taken by leaders,
- The public sector has the right skills,
- The government is open and transparent.

Society

- Society is inclusive and unifying,
- Citizen networks in communities are active,
- The neighborhood is safe,
- Citizens live healthy lives.

Environment

- The ecosystem is robust and diverse,
- Infrastructure can meet basic needs,
- There are sufficient natural resources,
- Coherent policy on land use.

3. AN EVALUATION ON THE ENTREPRENEURIAL CITY

The concept of entrepreneurial city, which is considered within the new urban movements, is a concept that needs to be handled in a wide range. From this perspective, this assertion of thinkers who consider the existence of entrepreneurial cities as new, as well as those who state that they have existed for thousands of years, is not empty. As a matter of fact, many cities that embody the conceptual content of the entrepreneurial city show themselves in the historical process. However, regardless of the thought that feeds this argument and the methods by which it has come about, it sees cities as the driving force of wealth creation. On the contrary, those who consider the entrepreneurial city as a new concept envisage a city that paves the way for the accumulation of capital and focuses on new economic dynamics as well as innovative methods in all production items.

Cities, whose importance has increased in the post-industrial revolution period, have sought solutions for their rapid growth and the problems they have fallen into. The entrepreneurial city, which does not have a clear and agreed definition, is a city that pursues innovative strategies to maintain or improve its economic competitiveness against other cities and economic areas, and does so in a holistic manner. These strategies can be real and reflexive as well as virtual and endogenous (Jessop and Sum, 2023).

It should be emphasized that not every rich, large and well-known city can be an entrepreneurial city. It distinguishes cities that perform well economically, for whatever reason, from cities that are entrepreneurial. Not all cities that perform well are entrepreneurial and not all entrepreneurial cities perform well. While Doha or Dubai may be very wealthy cities, they have managed to stand out from other wealthy cities around them and become entrepreneurial cities at the same time. Indeed, Riyadh is not considered an entrepreneurial city despite being similarly wealthy. Likewise, the fact that a city has both a large population and a large sphere of influence does not make it an entrepreneurial city. The examples of Cairo and Damascus from the Arab geography can be given in this regard. Finally, as in the case of Jerusalem, no matter how much it is recognized by the whole world, this in itself is not enough to be entrepreneurial.

4. ENTREPRENEURIAL CITY TYPOLOGIES

The manifestations of policies for entrepreneurial city-building can be manifested in a variety of strategies, including expanding the local tax base, attracting investment, encouraging the growth of small firms, and supporting companies in new branches of the economy, such as knowledge-intensive firms, information communication technology or events. Promoting the city in various ways to both internal and external audiences is another commonly used strategy. Talking about marketing a city may seem remarkable because cities are not exactly well-defined products. However, a growing theoretical approach uses the concept of place marketing to show that Western cities are applying marketing ideas from the economic sphere to the urban context (Dannestam, 2004: 8). It is also noteworthy as a method of highlighting the places that make up the city and promoting these places in a way that is almost independent of the city³.

Approaches to the basic criteria for identifying the key characteristics of entrepreneurial cities can be constructed through Schumpeter, an iconic thinker of contemporary capitalism, who defined entrepreneurship as creating opportunities for surplus profit through 'new combinations' or innovation (Schumpeter 1934: 129-136; Kitapçı, 2019: 59-60); and by Harvey, arguably a more controversial thinker on post-modern capitalism, who offers some influential ideas on the transition from urban managerialism to urban entrepreneurship or entrepreneurial governance (Harvey 1989: 8-10), which are very useful in defining the nature of entrepreneurial strategies to enhance the competitiveness of cities and regions. However, both Schumpeter and Harvey seem to have treated the topic as a sub-topic rather than deepening it (Jessop and Sum, 2023). Therefore, it is obvious that the literature on entrepreneurial city typologies is not very extensive. However, as a result of a general evaluation, the following classification is appropriate.

Inventive Entrepreneurial Cities; This city anticipates the next big thing and positions itself accordingly. By managing the city's change trend, it looks for what is not yet there and prepares itself for it. Residents see the big

³ At this point, it is important to note that urban marketing and urban entrepreneurship should not be confused with each other as they are overlapping concepts. At this point, it is important to note that urban marketing and urban entrepreneurship should not be confused with each other as they are overlapping concepts. Extensive.

picture, imagine products or business ideas that do not yet exist and work to make them a reality. The city prepares the ground for this as much as possible. These cities can be megacities (Shanghai, Hong Kong, Seoul, Tokyo, New York, etc.) or smaller cities (Copenhagen, Dubai, etc.) with a proven international reputation. In these cities, all kinds of production professionals are present and the city offers an environment where different income groups live together.

Boutique Entrepreneurial Cities; These are cities that are not very large in normal times or seasons, but rather aim to build a qualified wealth, especially by focusing on sectors such as tourism. These cities want international recognition and do not desire internationalization. The city is generally formed by a qualified labor force. They are cities with a more horizontal social structure and architecture and a strong middle class. The most typical examples of these cities are Scandinavian and Italian tourism cities.

Online Entrepreneurial Cities; These are cities that reach large circles with the networking opportunities they provide and build their investments on how to increase communication. They can be large-scale, but they can also have small examples, and small examples are trying to attract new populations. As in the case of Talin, there is an effort to build an international city to the best of its ability in order to remove the city's identity as a Soviet city (of course, there are many traces of imperial powers, Germany, Sweden and Poland in the city, as well as the traces of the old period classical Estonian traces). By investing in information and communication technologies, these cities have the opportunity to develop a direct relationship with their target audience, wherever they are, through online methods, and to populate the city with non-local residents.

Productive Entrepreneurial Cities; These cities use the city, its peripheries, houses and land as their main production base. In certain cases, these cities may have turned into warehouse areas or supply areas for the big cities they are close to. On the other hand, the low rent and production costs of large areas that have not fallen victim to rent-seeking make these cities livable, productive and distributive. If these cities do not fall into the spiral that megacities have fallen into, they can be more stable and stress-free for

people, while still retaining their entrepreneurial character. In this sense, the example of New Jersey is appropriate.

5. KEY FEATURES OF THE ENTREPRENEURIAL CITY CONCEPT

A general ranking of the characteristics of entrepreneurial cities can be listed as follows (entrepreneur, 2023; archive.mbda, 2023; jbcnschool, 2023; monster, 2023; indeed, 2023; vistage, 2023; lumenlearning, 2023; betterup, 2023; hbs, 2023): stability, openness to innovation, risk-taking, networking, openness, high livability, managerial flexibility and the ability to move quickly.

If a city maintains its stability in all areas and reflects this to the individual and society, it will both receive and attract investment. However, each new investment will increase the likelihood of capturing the entrepreneurial spirit in the next one. In addition, the formation of a tradition of stable entrepreneurship will keep the city always dynamic and alive (Ersoy, 2010: 73).

A city structure that is open to innovation keeps alive the hope that something that may seem strange or even absurd at first sight can change the fate of the city. As a matter of fact, although Facebook, which originated in Boston, is worth billions of dollars today, it was a strange move of a university student for that day. However, the pioneering attitude of local actors (in this case, the university, which is a decentralized government institution) during the maturation process of that idea was instrumental in bringing it to this point.

Not every initiative can be expected to achieve one hundred percent success. In this context, a good entrepreneur is one who does not hold back from taking risks. Of course, it is important to take steps with social costs in mind and to anticipate potential problems⁴.

⁴ Although it is not the direct subject of this study, social entrepreneurship is one of the concepts emphasized in the local government and public administration literature. While some scholars have tried to explain this concept in terms of non-profit organizations, others have addressed the concept from the perspective of public institutions, private companies and non-governmental organizations. As a matter of fact, despite this conceptual conflict, social entrepreneurship describes the activities carried out with the aim of generating income to provide social benefit without the

Cities that are well connected to their surroundings and the world are always one step ahead in entrepreneurship. Today, only cities that have managed to manage their networks well have been able to break out of their shells. From the location of the city to the variety of transportation channels or amenities offered to the internet infrastructure, the ability to network is an important tool that opens the city to a wide range of people.

The ability to use the maximum possibilities offered by information and communication technologies in the simplest and cheapest way in daily life also gives the city an entrepreneurial spirit. This is because the strength of the city's connection with the outside, as well as the fact that the spaces within the city are equipped with internet technologies, make the city accessible to both the outside and the inside. For example, the smart city concept and its applications, which seriously occupy the agenda of urban researchers, make the city as open as possible.

Livability has been an important criterion in increasing the attractiveness of a city. In an environment where globalization is felt so much, distances have shortened and transience between places has increased. In this respect, the ease of mobilization pushes people from the centers to the peripheries and even to the provinces. Attracting those who are eager to leave the old place, especially those looking for a new place, or keeping them as an entrepreneurial city is related to livability (Firat and Kömürcüoğlu, 2015: 288). Building a livable city is one of the most emphasized issues by policymakers, as it is not only the main goal within the framework of an entrepreneurial spirit, but also in all other matters.

One of the most serious indicators of a city's entrepreneurial character is the degree of flexibility, especially in the public sector. This is because channeling sensitive and timid capital to invest in a subject or a city requires quick action. On the other hand, city administrations that are not flexible and do not have the ability to make quick decisions make the city and its dynamics cumbersome. On the other hand, the state may have determined slow action as a basic method within itself. Without prejudice to this preference, the existence of semi-autonomous structures that can be considered both inside

aim of profit, while the activities of profit-oriented public and private sector enterprises that create social benefit are categorized as corporate social responsibility (Demir, 2014: 351; Şimşek & Altun, 2020: 57).

and outside the state, and the delegation of authority to decentralized institutions are steps taken to keep the spirit of entrepreneurship alive. In fact, Turkey has taken many bureaucratic steps in this regard. But of course, policy success is not the subject of this evaluation.

CONCLUSION

Why some metropolitan areas are more entrepreneurial than others, or why it is so easy for a new venture to spring up on every street corner in Silicon Valley, are questions that come to mind quickly in understanding the city-entrepreneur relationship. High levels of entrepreneurship are closely linked to regional economic growth. Places with an abundance of new start-ups also experience faster income and employment growth. The magnet effect makes the city entrepreneurial as well as the citizen entrepreneurial, the foreign entrepreneur local, the local entrepreneur national and transnational. In this way, local policymakers looking for ways to turn on the economic engines of their cities increase their interest in policies that can create more entrepreneurship. The state, which has become minimal in the liberal understanding, is aware that creating new added value by creating centers of attraction means new tax gates⁵. Therefore, they seek to understand the determinants of entrepreneurship and take steps to guide the development of more effective economic development policies at both local and national level. However, it is difficult, if not impossible, to compete with cities that have established a tradition and a school of entrepreneurship. In fact, these cities, which get stronger as they win and win as they get stronger, take steps by knowing themselves and their potential and by choosing the right shirt to wear. In the case of Turkey, the dream of making every city New York, Dubai or Shanghai would be a big mistake. It is necessary to build an integrated policy by taking into account the unique characteristics and realities of each

⁵ Although it is a subject of another debate, it wants to increase public resources and manage them well for its own interests. The public administration does not want the will to be taken away from itself at the point of deciding on essential issues such as determining, acquiring, spending and distributing resources (Eren and Kahraman, 2020: 301). However, since the liberal order is centered on suppressing or minimizing the state and its desires, it directs the resistance of the entrepreneur at this point. The public also prefers to steer towards places where it has the opportunity to act selectively at certain points.

city. It is necessary to adopt the spirit of entrepreneurship individually and socially as well as building an integrated policy alone, and to influence local policy makers who are likely to be the most cumbersome structure of the city.

SUMMARY

After the industrial revolution, cities came to the fore. In this framework, growing cities became the home of capital and of course the bourgeoisie, the elite of the new world order, also referred to as the urban nobility. As a concept, the city has meanings beyond the definitions of physical space and population. In general terms, the city can be understood as a place where non-agricultural production is carried out, where control functions are gathered, and which has reached certain levels of size, heterogeneity and integration. The concept of the city, which has been widely studied due to the crises it has experienced as a result of rapid development and change in the modern period, has experienced new trends especially in the postmodern period. In this context, the changing structure of urbanization and emerging social needs have led to the emergence of new movements and formations related to urbanization and local processes. Along with concepts such as sustainable city, ecological city, smart city, slow city in the literature, many types of cities have emerged, especially the entrepreneurial city concepts discussed in the study.

This assertion of the thinkers, who have stated that the existence of entrepreneurial cities, which are at the center of the study, has existed for thousands of years as well as the point of view that evaluates the existence of entrepreneurial cities as new, is not empty. As a matter of fact, many cities that embody the conceptual content of the entrepreneurial city show themselves in the historical process. However, regardless of the thought that feeds this argument and the methods by which it has come about, it sees cities as the driving force of wealth creation. On the contrary, those who consider the entrepreneurial city as a new concept envisage a city that paves the way for the accumulation of capital and centers on new economic dynamics as well as innovative methods in all production items.

When a general ranking is made regarding the characteristics of entrepreneurial cities, the striking headings can be listed as follows: stability, openness to innovation, risk-taking, networking, openness to the outside

world, high livability, managerial flexibility and the ability to move quickly. High levels of entrepreneurship are closely linked to regional economic growth. Places with an abundance of new start-ups also experience faster income and employment growth. The magnet effect makes the city entrepreneurial as well as the citizen entrepreneurial, foreign entrepreneurs local, local entrepreneurs national and transnational. In this way, local policy makers looking for ways to turn on the economic engines of their cities increase their interest in policies that can create more entrepreneurship. It is necessary to build an integrated policy taking into account the characteristics that distinguish cities from each other. In addition to building an integrated policy on its own, the spirit of entrepreneurship needs to be embraced individually and socially, and it needs to influence local policy makers, who are likely to be the most unwieldy structure in the city.

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