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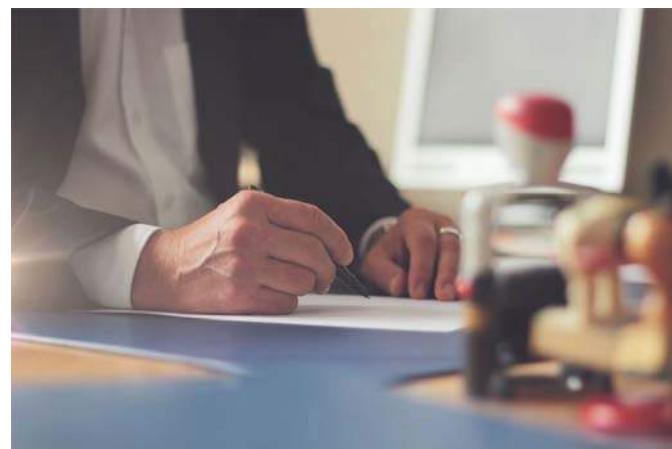
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Poverty Reduction in Africa: A Continental Industrial Policy that Enhances Productive Capability and Creates Permanent Employment to Increase Disposable Income that Fosters Effective Demand in Africa's Economy

Stephen H. Gobewole

ABSTRACT

The objective of achieving effective demand for the minimization of poverty in Africa is revealed by economic, governance and survey data collected by The Heritage Foundation's Index of Economic Freedom, BTI Transformation Index Report, Transparency International's-Corruption Perception Index, Fund for Peace's Fragile State Index, The World Bank Data, The End of Poverty (Sachs, 2005), and Poor Economics (Banerjee et. al., 2011). These nongovernmental entities' reports, and scholarly books explain Africa's poverty and what makes it perpetual and suggest ideas for minimizing it. This data is used to measure correlation among indicators of rule of law, public corruption, quality of governance, and fragility of states, and to determine trends toward policy enactment while documenting the current level of Africa's poverty. In addition, this statistical analysis allows the study to show strengths or weaknesses of the international community's poverty reduction method and the need for its transformation. The lack of substantial reduction in poverty on the continent makes it essential for African governments to automate and industrialize their economies, particularly their agricultural sectors where a majority of Africans work.

Keywords: poverty reduction, productive capability, capability, effective demand, agricultural industrialization, Africa's economy.

Classification: JEL Code: O55, I32, Q18

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Keywords: poverty reduction, productive capability, capability, effective demand, agricultural industrialization, Africa's economy.

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I.   INTRODUCTION

One potential reason for abject poverty in Africa (specifically Sub-Saharan Africa) is the lack of equilibrium in effective demand. This is an economic phenomenon that motivates companies to produce or manufacture goods or services for increased revenues based on consumer spending and in pursuit of profit. Effective Demand is the level of demand that represents a population (consumers) of a market's real intention to purchase (expenditure) products or services with the disposable income (earnings) or means to pay. This analysis takes into consideration that "purchasing power" is the value of a currency expressed in terms of the number of goods or services that a unit of money can buy, which can be adversely affected or weakened over time due to inflation (Hayes, 2022; Investopedia economics). Such buying power can be beneficial to a developing nation or region's economy, such as Sub-Saharan Africa's, if domestic firms manufacture the commodities (goods or services) involved. In other words, increased income is the kind of market transaction that can ignite economic growth and

development. However, this is only possible when populations (consumers) with buying power are constrained in another or a different market, in this case that of advanced countries. Basically, this is the opposite of notional demand (Hayes, 2022; Investopedia economics).

Due to the need for internal demand, the acquisition of purchasing power or disposable income for their population, citizens, and consumers, becomes a critical issue for African governments. Stated differently, the issue African and developing countries' populations are encountering is acquiring disposable income, which is usually earned from permanent employment, as in developed countries. However, the vulnerable employment that Africans and developing countries' populations are engaged in does not give them access to disposable income from their modest earnings. These kinds of marginal jobs include car loaders, store front venders, sugar cane grinders, cash crop farmers, wheelbarrow riders, motorcyclists, street peddlers, wood cutters, rock crushers, charcoal producers and many more workers that "do not participate in the formal economy" (Gobewole, 2016b). This lack of available consumer expenditure (aggregate demand) from vulnerable workers (most of Africa's population) makes it challenging to achieve effective demand in their economies. These countries have difficulty reaching a healthy point of equilibrium between aggregate demand and supply. Gobewole (2022) discussed the effect of vulnerable employment on a country's economy in his book *Constitutional Neopatrimonialism in Liberia.*

The problem is that reducing poverty with vulnerable jobs is a temporary solution to sustain a higher standard of living. These kinds of jobs, the main employment for most Liberians [Africans], do not provide a permanent salary, pension plan, health coverage, skills development, or job security and do not allow entrepreneurs to diversify into new businesses, critical factors needed in transforming a nation's economy (Gobewole, 2022, p.172).

Therefore, African governments need to enact legislation and/or institute economic policies, specifically agriculture industrialization, that will improve their citizens' technical skills and give them permanent employment, including high-tech jobs.

II.   METHODOLOGY

This study took an average measurement of Property Rights, Judicial Effectiveness, and Government Integrity (which are components of Rule of Law) to acquire a figure for Rule of Law (The Heritage Foundation: Index of Economic Freedom, 2019). The scores and ratings for Rule of Law and Governance were acquired from The Heritage Foundation: Index of Economic Freedom, 2019 and BTI Transformation Index Report, 2019.

For example, Table 1 revealed that Mauritius has scores for property rights, judicial effectiveness, and government integrity of 69.5, 62.1, and 40.3 respectively, on a 100-point scale. The average of these scores gives Mauritius a Rule of Law score of 57.3. The same approach was applied in determining the Rule of Law score for the study's nine other countries. The Governance ratings of the ten countries were measured on a scale of one to ten (1-failed to 10-good) (BTI Transformation Index Report, 2019). The original Governance scores were multiplied by ten (10) for all countries, to make the figures for Rule of Law and Governance Quality correspond. This allowed the chart for Rule of Law, Governance, and Corruption to effectively reveal correlations among the figures. For example, Mauritius had a Governance score of 6.76, which was multiplied by 10 to equal 67.6. This made it efficient to correlate Mauritius' Rule of Law score of 57.3, its Governance Quality score of 67.6, its Corruption score of 52 (acquired from Corruption Perception Index, 2019), and its State Stability score of 38.9 (acquired from Fragile States Index Annual Report 2019) to identify trends across Africa. As indicated on Table 1, the same method was applied to the ten countries in the study. However, Chad and Central Africa Republic have State Stability scores of 108.5 and 108.9 respectively, which is above this study's 100-point scale.

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This anomaly is a result of both countries being listed as "High Alert" on the Fragile States Index, from where the figures were adopted (Fund for Peace, 2019).

Table 1

Country	Property Rights/Judicial Effectiveness/Government Integrity	Rule of Law Average Score 2019	BTI Transformation Index Score 2019	Governance Quality (Good, Moderate, Weak, and Failed)	Corruption Perception Index Score 2019	Fragile States Index 2019
Mauritius	69.5 + 62.1 + 40.3 = 171.9/3 =	57.3	6.76 x 10 =	67.6	52	38.9
Botswana	58.1 + 45.7 + 52.4 = 156.2/3 =	52.1	6.81 x 10 =	68.1	61	59.5
South Africa	58.8 + 39.3 + 39.7 = 137.8/3 =	45.9	6.10 x 10 =	61	44	71.1
Ghana	49.1 + 44.2 + 35.5 = 128.8/3 =	42.9	6.23 x 10 =	62.3	41	65.9
Gambia	39.9 + 42.5 + 41.2 = 123.6/3 =	41.2	5.73 x 10 =	57.3	37	83.9
Djibouti	29.7 + 18.1 + 28.1 = 75.9/3 =	25.3	5.17 x 10 =	51.7	30	85.1
Central African Republic	19.6 + 29.6 + 23.2 = 72.4/3 =	24.1	3.81 x 10 =	38.1	25	108.9
Burundi	20.6 + 31.0 + 26.2 = 77.8/3 =	25.9	3.25 x 10 =	32.5	19	98.2
Chad	26.7 + 24.6 + 23.2 = 74.5/3 =	24.8	2.63 x 10 =	26.3	20	108.5
Zimbabwe	29.7 + 24.8 + 15.8 = 70.3/3 =	23.4	2.72 x 10 =	27.2	24	99.5

The Heritage Foundation [Terry Miller, Anthony B. Kim, and James M. Roberts]. (2022). 2022 index of economic freedom. Retrieved from https://www.heritage.org/index.

BTI Transformation Index Report. (2022). Country Dashboard for political transformation, economic transformation, and governance index. Retrieved from https://www.bti-project.org.

Transparency International. (2019). Corruption perception index 2019: The global coalition against corruption. Retrieved from https://www.transparency.org.

Fund for Peace. (2019). Fragile states index annual report 2019. Retrieved from https://fragilestatesindex.org.

The institution of Rule of Law is pertinent because of its correlation with public governance. In other words, the quality (weak, average, and strong) or non-existence of a country's Rule of Law is associated with its degree of Governance (failed, moderate, and good). As a result, the codification of the components of Rule of Law (property rights, judicial effectiveness, and government integrity) and their level of enforcement is critical to a functional government.

III.   LITERATURE REVIEW

The level of poverty among Africa's 1.216 billion people (2016 population figures) went from 418 million in 2019 to 490 million people (36% of the total population) in 2021. This increase of

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approximately 9 million people is a change in trend, because a decade earlier poverty in Africa had decreased from 54% in 1990 to 41% in 2015 (Beegle & Christiaensen, 2019). The issue of poverty in Africa has been studied by academics in the 2000s who identified its causes and provided methods for its solution. These scholars have indicated that Africa's protracted poverty is due to slavery, colonialism, post-colonial economic exploitation, short life expectancy, and more developed countries' struggle for domination during the Cold War. This has caused Africa to be trapped in poverty (Sachs, 2005). Jeffrey D. Sachs discussed the phenomena of the poverty trap in his book *The End of Poverty: Economic Possibilities for our Time*:

The key problem for the poorest countries is that poverty itself can be a trap. When poverty is very extreme, the poor do not have the ability—by themselves—to get out of the mess. Here is why: Consider the kind of poverty caused by a lack of capital [disposable income] per person. Poor rural villages lack trucks, paved roads, power generators, irrigation channels. Human capital is very low, with hungry, disease-ridden, and illiterate villagers struggling for survival (Sachs, 2005, p. 54).

Lack of social and economic capital leads to even less social and economic capital in a vicious cycle.

In addition, one economist proposed that Africans are consistently made ill by tropical diseases which limit their ability to exhibit their full-potential and make their life span short, contributing to the private and public sectors' incapacity (Sachs, 2005), exacerbating poverty in Africa. David S. Landes (1999) stated that Sub-Saharan Africa threatens all who live or go there... We now know for example that many people harbor not one parasite but several; hence are too sick to work and are steadily deteriorating... The effect on organs may be imagined: they waste the liver, cause intestinal bleeding, produce carcinogenic lesions, interfere with digestion and elimination. The victim comes down with chills and fever, suffers all manner of aches, is unable to work, and is so vulnerable to other illnesses and parasites that it is often hard to say what is killing him.... We know this scourge as snail fever, liver fluke, or, in more scientific jargon, as *schistosomiasis or bilharzia*, after the physician who first linked the worm to the disease in 1852. It is particularly widespread in tropical Africa, but afflicts the whole of that continent (Landes, 1999, p.8).

Africa's very geographical position and climate may be contributing to the poverty trap. However, technology and public policy could offer an escape from this trap if good governance and smart economic policy, along with outside aid, were applied.

Much of the continent is trapped in a situation that African governments are unable to eradicate, so that they need assistance from the international community. The problem of poverty is also attributed to public corruption and bad governance, which is recognized by the international community. Jeffrey D. Sachs (2005) stated that "Everything comes back, again and again, to corruption and misrule. Western officials, including the countless 'missions' of the IMF and the World Bank to African countries, argue that Africa simply needs to behave itself better, to allow market forces to operate without interference by corrupt rulers" (pp. 188-189). This is corroborated, and extended into the colonial past, by Gobewole's (2018a) assertion that "The overarching strategy of natural resource extraction by advanced nations, former colonists, and now China, and the African leaders' implementation of neopatrimonialism (to enrich themselves) have impoverished a large percent of Africans" (p. 8). To escape this trap, "The rich countries do not have to invest enough in the poorest countries to make them rich; they need to invest enough so that these countries can get their foot on the ladder" (Sachs, 2005).

Despite the reason for Africa's impoverishment, some economists have discouraged giving development assistance to poor countries, claiming that such action creates a population of dependent

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people. Abhijit V. Banerjee and Esther Duflo explained the argument against aid to developing countries in their book *Poor Economics: A Radical Rethinking of The Way To Fight Global Poverty*.

> [A]id does more bad than good: It prevents people from searching for their own solutions, while corrupting and undermining local institutions and creating a self-perpetuating lobby of aid agencies. The best bet for poor countries is to rely on one simple idea: When markets are free and the incentives are right, people can find ways to solve their problems. They do not need handouts, from foreigners or from their own government (Banerjee & Duflo, 2011, p. 3-4).

Banerjee and Duflo argue that there will be incentives for individuals (actors, entrepreneurs, citizens, etc.) to pull themselves out of poverty. Some experts even provide empirical evidence that shows that poor countries can experience economic growth if their markets are free. William Easterly provided statistical evidence rejecting the theory that poor countries need aid to escape poverty in his book *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good*.

> Did the poorest countries [most in Africa] in 1950 remain stuck in poverty over the next half century? Well, no. The poorest fifth of countries in 1950 increased their income over the next five decades by a factor of 2.25. The other four fifths increased their income by a factor of 2.47... We can statistically reject that the growth rate of the poorest countries as a group was zero (Easterly, 2006, p. 38).

In other words, Easterly contended that a "poverty trap" does not exist in the poorest countries of Africa, because there is no empirical (statistical) evidence to support that claim. However, the statistics provided earlier show a period of strong economic advancement in Africa from 1990 to 2015 (Beegle & Christiaensen, 2019). While outside aid will likely be wasted with corrupt governance, in combination with thoughtful policies it can spur higher incomes and growth in Africa.

However, policy throughout Africa has not often been thoughtful. The problem is that Africa's markets are dysfunctional due to unfair economic and trade policies imposed by the international community, notably the World Bank, International Monetary Fund, and World Trade Organization., a strategy implemented partly for advanced countries and their multinational corporations' financial benefit. Gobewole (2018a) discussed this market distortion in his book *Continental Impoverishment*.

> European Union trade policy requires certain size, weight, and chemical residues for African fruits which compels small farmers to purchase fertilizers and conduct lab-tests they cannot afford (The Trade Trap, 2012). In other words, the subsidies provided by their governments to European corn, Asian rice, and U.S. cotton farmers, the chemical residue requirement, and the smoke level on dry fish requirements allows multinational corporations to dump their grains, concentrated fruit products, and canned fish on Africa's markets (which lowers prices and bankrupted small farmers), while disqualifying African fruits from trading in advanced nation markets (Gobewole, 2018a, p. 62-63).

These trade barriers include a restriction for African farmers to establish commodity contracts (futures, options, etc.) with multinational corporations. Such an unfair product qualification standard, and minimum access to most developed country markets, undermine the theory that incentives in competitive markets will lead to growth in poor countries. Gobewole (2018a) stated that "the IMF, World Bank, and World Trade Organization, require developing nations to liberalize their capital and consumer product markets without implementing equitable policies like 'spending requirement for advanced nations to purchase Africa's agriculture commodities' in developed nations (Stiglitz, 2002). This phenomenon has allowed multinational corporations, usually owned by advanced nations, to cheaply acquire essential raw materials from developing [poor] nations without paying a fair price"

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(Stiglitz, 2002, p. 64), a system that is preventing Africa from igniting economic growth that could minimize poverty on the continent. This is critical to poverty reduction in Africa where approximately sixty percent of the population earned their living from the agriculture sector.

Another issue contributing to poverty in African countries is their public institutions' quality, encompassing the rule of law, democratic accountability, state authority, and an independent press. These are the entities that enable society to function and allow the government to administer effective governance, the primary responsibility of every government. As a result, a country's public institution level of quality is critical to the implementation of public policy and national security while in pursuit of economic objectives. However, these institutions are weak in most African countries as reflected in Chart 3 below. This author (2016b) further discussed the relevance of public institutional quality in government in his book *Liberia's Political Economy: An Examination of Public Institutional Quality*.

> A strong rule of law, an effective democratic accountability, and a strong state authority are responsible for economic development in advanced nations. In other words, realistically, Liberia [Africa] should not be a poor nation [continent] because of its wealth in natural resources, its raw agricultural commodities, and its available workers. Instead, the nation's [continent's] moderately weak, failed, or nonexistent institutions have created an environment for public officials, foreign investors, and concessionaires to extract valuable natural resources for high profits; make property registration difficult; and make it impossible to develop productive capability (Gobewole, 2016b, p. 168).

In response to continued economic underperformance, in the 1960s the international community began instituting economic programs to eradicate poverty in African countries. Jeffrey D. Sachs discussed international organizations' approach to poverty resolution in Africa.

> The IMF and World Bank virtually ran the economic policies of the debt-ridden continent, recommending regimens of budgetary belt tightening known technically as structural adjustment programs. These programs had little scientific merit and produced even fewer results. By the start of the twenty-first century Africa was poorer than during the late 1960s, when the IMF and World Bank had first arrived on the African scene, with disease, population growth, and environmental degradation spiraling out of control (Sachs, 2005, p. 189).

Under this program, some countries experienced extreme economic decline that led to political instability and civil war in the 1990s, a visible indication that International Monetary Fund and World Bank initiatives, such as structural adjustment programs, were a failure. Clearly, pursuing a different economic strategy would have been the best way forward, particularly, an approach that would assist African countries to industrialize their economies, specifically the agriculture sector. It would likely have been more effective to institute an economic strategy like "Import Substitution Industrialization," a technical name for a program that allows developing or poor countries to transform their industrial structure and subsidize their new or infant companies. While Africa remained under colonialist policies by another name, the developed countries hypocritically instituted very different policies with their own borders. Gobewole (2018a) stated that "England, Germany, France, Italy, and North America [were] raised to empire [and a modern state] status because of slave labor, resources extracted from colonies, infant industry policies, and industrialization of their production structure, which transformed their economies. These activities enhanced inventiveness, innovation, and productivity in the creation of essential technologies" (p. 75). Such a strategy would assist African governments to improve their population's technical skills (productive capability), give them permanent employment (high-tech jobs), and provide steady incomes with benefits (health coverage, retirement program, pension plan, etc.). This would mean the kind of jobs that give a country's population access to

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permanent and disposable income that can enable developing or poor countries to achieve effective demand, growing and developing their economies, the overall goal for African countries.

IV. ESSENTIAL ECONOMIC STRATEGY

The policy to achieve effective demand in Africa will need to be collaborative among nation states as well as regionally focused. This means the participating countries must implement a single economic policy. A recommended approach is to simultaneously industrialize their agriculture sectors, a strategy which will improve their populations' productive capability and their consumption expenditure (spending). For example, in an advanced economy like the United States, consumer spending in the late twentieth century accounted for approximately sixty six percent (66%) of its gross national product (Baumol and Blinder, 1988). In addition, the United States has the authority to manipulate those expenditures through taxation to control (decrease or increase) the levels of consumers' disposable income, which means the purchasing power (dollar amount) they can keep or spend. And to manipulate consumer spending power through monetary policy. This capacity is critical for developing and emerging economies around the world. However, African governments lacked, and continue to lack, that flexibility because most of their population (consumers) does not have a permanent income from employment, which is essential to ignite economic expansion. Basically, this is Africa's primary economic problem that requires solutions to minimize or eliminate poverty.

This makes the public policies African countries implement essential to economic growth and development. Industrialization and trade policies are a strategy that Sub-Saharan African countries can institute through collaboration and agreement. Even before a new policy can be created, these nations can reinstitute a familiar policy "Import Substitution Industrialization" that has been implemented in the past with positive results. A trade and economic policy that advocates the replacement of foreign imports with domestic production. This author (2016b) previously discussed the effects of such a government economic strategy:

> The implementation of an economic strategy like "import substitution industrialization" will allow Liberia's [Africa's] government to enact policies that protect its infant industries, subsidize them effectively, and give them time to develop their productive capabilities before engaging in competition with advanced nations' industries (Chang, 2014)...In other words, a constant IQ [Institutional Quality] plus GI [Government Intervention] policies like tariffs and subsidies will increase PC [Productive Capability] by creating new managerial skills, technical knowledge, and industrial practices, which will equal ED [Economic Development] that produces a higher standard of living for Liberian citizens.

$$IQ + GI + PC = ED$$

> Stated differently, Liberia's [Africa's] government can develop its workforce's capability, create high-tech jobs, enhance entrepreneurship, and develop its economy by reforming its property rights policy (land ownership), renegotiating some of its concession agreements, levying tariffs on some agriculture commodities export, banning the exportation of some raw agriculture produce, and levying tariffs on the importation of some consumer goods, while subsidizing local producers and domestic firms in the agriculture industry (Gobewole, 2016b, p. 101-102).

The process of taking advantage of effective demand begins with the citizens of a country or region having sufficient purchasing power (disposable income) to pay entities for their products. In addition, a population with access to high levels of disposable income from permanent earnings gives investors and entrepreneurs an ability to invest in domestic firms (new and existing) whose products can compete with foreign companies, specifically multinational corporations. To accomplish objectives

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such as permanent earnings and disposable income, Africa has to enhance its population's productive capability (technical skills) and transform its industrial structure, including the agriculture sector. This author (2018a) further discussed essential economic strategy for African governments:

> African nations will need to make necessary sacrifices to give their populations, entities, and industries opportunity to enhance their technical skills, productive capability, and innovative knowledge. These are critical prerequisites for transforming a nation's industrial structure (Chang, 2003; Stiglitz et. al., 2015)... In other words, successful and sustained economic growth demands the creation of a learning society based on college education, technical skills, manufacturing knowledge, managerial concepts, and productive capabilities (Gobewole, 2018a, p. 67).

The issue is African countries' inability to institute trade policies and economic strategies that allow them to enhance effective demand. This would maximize the available natural and human resources that can be leveraged to accomplish that objective. One method of creating demand for African commodities is by developing an industrial economy and improving the labor force to function in that environment. This means transforming citizens' work skills (as indicated above) from performing manual tasks to performing technical skills, specifically, in the agriculture sector, which is critical throughout sub-Saharan Africa. Gobewole (2018a) stated that "The acquisition and diffusion of such knowledge among citizens and firms is the underpinning for creating and igniting entrepreneurial initiatives, fostering economic growth, and sustaining development in Africa. Such a manufacturing or production process can begin with African governments building factories that use iron ore to manufacture steel, latex to produce plastic goods and fruits to produce juices" (p. 68).

This is a strategy that can transform developing economies into advanced economies through industrialization and creation of a workforce with technical skills, while enhancing the nation's overall productive capability (Gobewole 2016b). A population with effective technical skills and productive capability maintains citizens with permanent (not vulnerable) jobs, such as engineers, designers, technicians, and operations, that allows them to develop effective demand for goods or services of domestic firms. This employment opportunity will help to minimize and eventually eliminate poverty in a country. In other words, the existence of enduring employment and government provision of social programs, sometimes referred to as the "safety net", is critical to poverty reduction and advancement of a nation's economy. When not undermined by corruption, this situation can result in increased revenue and tax generation that leads to better public services such as healthcare, educational programs, and public utilities, essential services that are needed in African and all developing countries.

V. DATA ANALYSIS AND FINDING

A large-scale growth and processing of agriculture commodities into consumer and commercial products is Africa's best strategy to begin the minimization of poverty. This has a high poverty reduction potential because a large percentage of Africa's population is engaged in farming, hunting, and transporting this produce to market. In addition, transforming the agricultural sector will free workers for other job sectors, such as manufacturing and services, that should be advanced simultaneously with the modernization of agriculture.

However, the continent's labor force statistics reported by nongovernmental organizations like The World Bank, The International Labor Organization, and Afrobarometer do not reflect the actual workforce. In most cases, these entities lack the ability to gather data from subsistence farmers, child workers, informal laborers, and vulnerable workers that make up a large percent of Africa's labor force. For example, "Seventy-four percent of all female workers in Liberia are informal laborers, and 41 percent of university-educated women work informally, compared to 24 percent of university-educated

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men" (Council on Foreign Relations, 2022), a statistic that demonstrates the flaw in the current labor force reporting system.

Chart 1 provides an example of such inaccurate information. The Chart reflects figures of Total Labor Force, National Populations, and Employment in Agriculture for this study's ten sample countries in 2019. As reported by The World Bank Data, it misleadingly reveals that a small percentage of the population of Sub-Saharan Africa earned their living from the agriculture sector. The Total Labor Force figure (acquired from The World Bank Data, 2019) is approximately 74 million of a Total Population of 190.2 million people in the study's ten sample countries. Of the 74 million employed people, approximately 32 million (approximately 31,605,409) are officially described as agriculture sector employees. These numbers do not account for the labor participation of the remaining approximately 116 million people in the sample countries' population. While some are children, or not working for other reasons, many of these individuals are engaged in vulnerable and substance labor mostly associated with the traditional agriculture encompassing a pre-industrial style of food production reflecting traditional cultural beliefs and using traditional tools, existing natural resources, and organic fertilizer (Gobewole, 2016). In 2010 Liberia had a vulnerable employment rate of 77.9 percent and an informal employment rate of 68 percent of its population (Gobewole, 2022). Those figures include subsistence farmers, vulnerable laborers, and child workers who are not accounted for by the international organizations' statistical data, a population with the highest potential of being lifted from poverty if African nations industrialized their agriculture sector (and developed other sectors). For example, child laborers (not allowed in advanced economies) are a large percentage of the individuals engaged in vulnerable employment and subsistence farming associated with the agriculture sector in the sample countries. This author (2022) stated that, regarding child labor:

> This standard is not adequately applicable to Liberia (and most developing countries) for a few reasons. First, this definition of age requirement would render half of Liberia's population ineligible to work (or considered child labor). However, developing countries like Liberia (and other African countries) have no alternative but to allow younger children to participate in vulnerable employment, that is low-skill employment, to sustain their families and communities. Therefore, such misleading statistical information about unemployment, from the Afrobarometer Round 6 Survey, partly distorts the real effect of permanent employment and public corruption (Gobewole, 2022).

In other words, African countries simply cannot afford to institute the full child labor protections of more advanced countries. However, limiting hours of child work and providing education are critical to Africa's future.

Statistics show that an over-reliance on rudimentary agriculture methods is a poor growth strategy. Chart 1 shows the total labor force participation, as well as the employment in agriculture, for ten African countries in 2022.
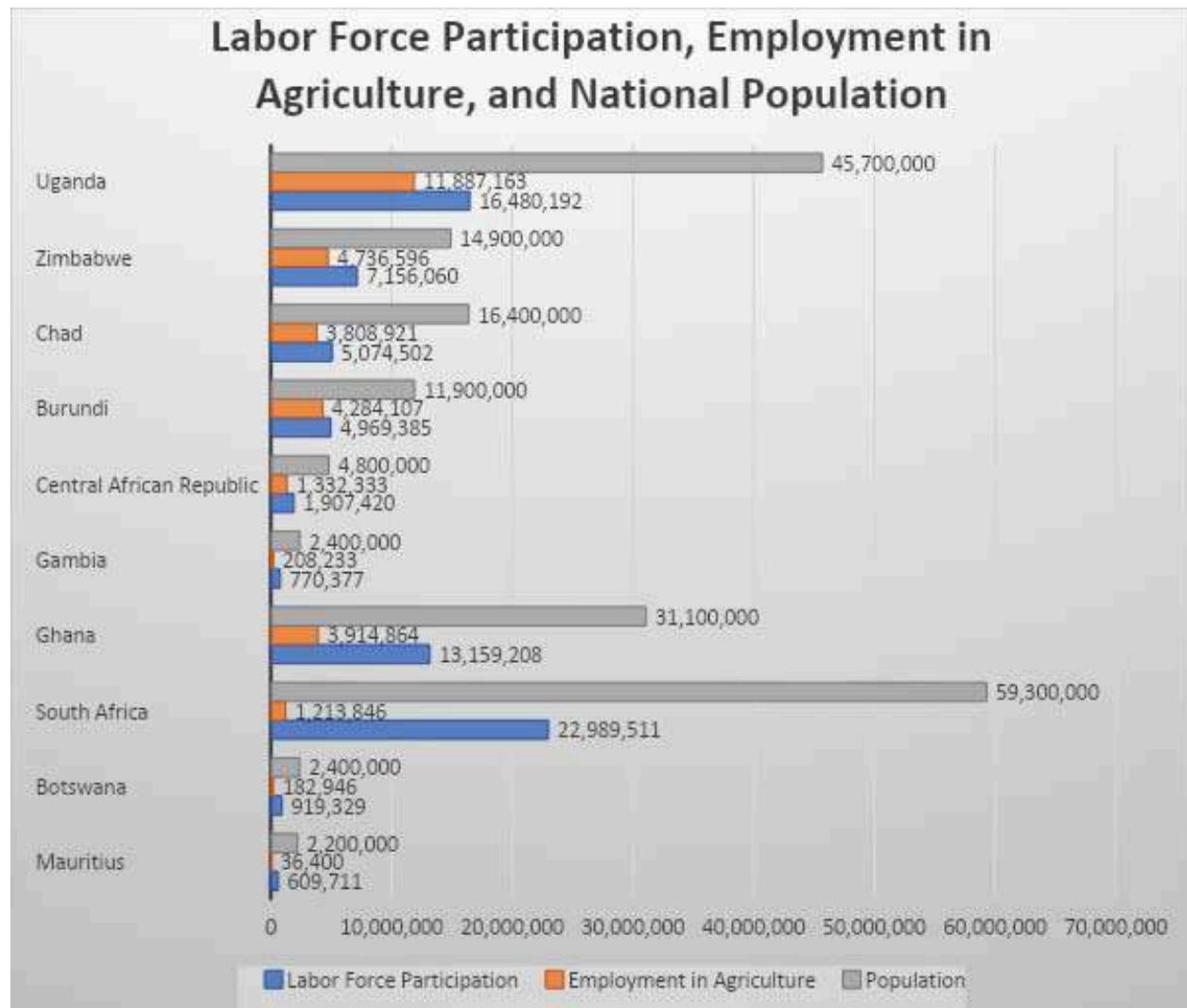
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Chart 1

Labor Force Participation, Employment in Agriculture, and National Population

BTI Transformation Index Report. (2022). Country Dashboard for political transformation, economic transformation, and governance index. Retrieved from https://www.bti-project.org.

The World Bank Data. (2022). Labor force total. Retrieved from https://data.worldbank.org/indicator/sl.tlf.totl.in?locations

Chart 2 reveals that, among ten African countries, those with a higher percentage of their recorded labor force in agriculture have higher poverty rates, while the countries with a lower percentage of their recorded labor force in agriculture have lower poverty rates.
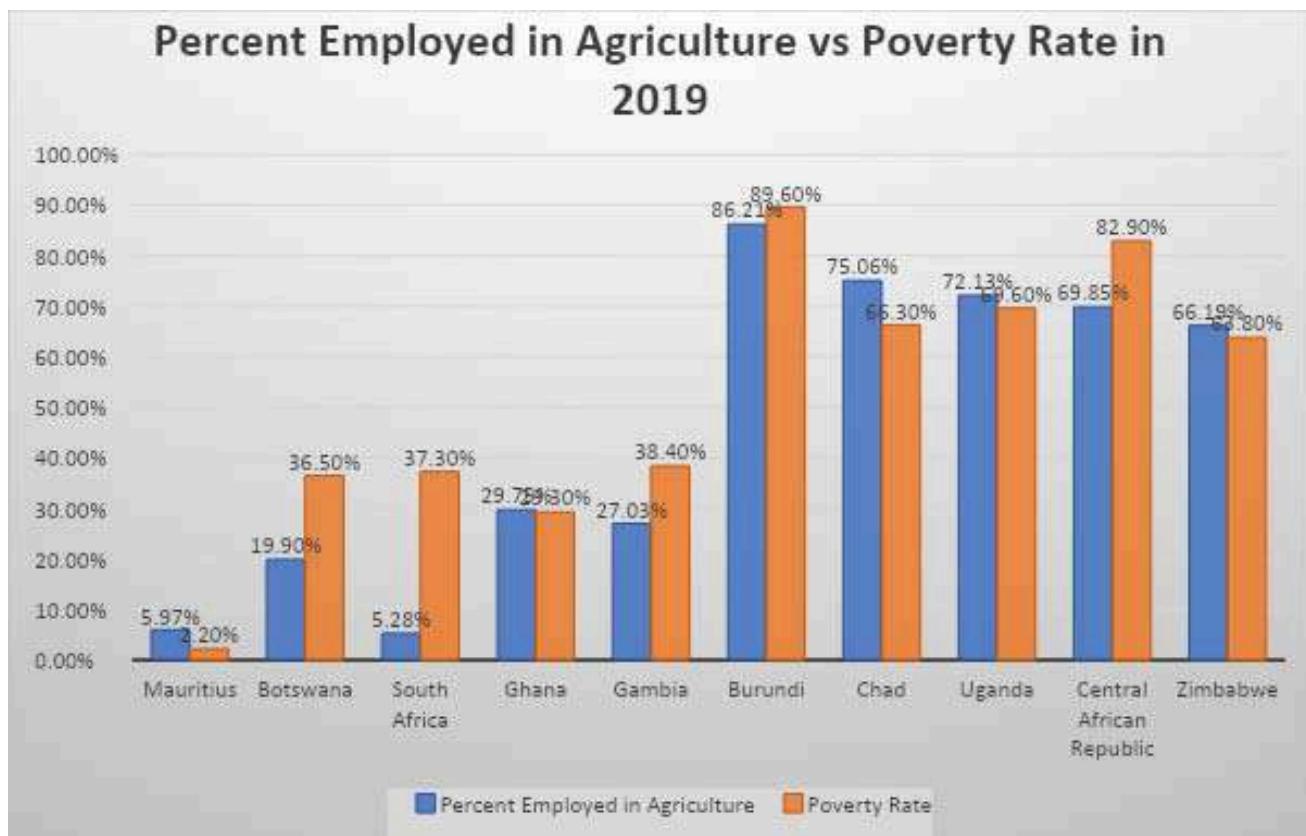
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Chart 2.

Percent Employed in Agriculture vs Poverty Rate in 2019

BTI Transformation Index Report. (2022). Country Dashboard for political transformation, economic transformation, and governance index. Retrieved from https://www.bti-project.org.

Even though these labor statistics are distorted because, as indicated above, the official labor participation does not capture subsistence farmers, child workers, informal workers, and vulnerable workers of the agriculture sector, the point is underscored that opportunity for Sub-Saharan African nations to ignite economic growth and reduce poverty among their citizens can be accomplish through agricultural industrialization. This approach will allow workers to improve their technical skills by performing advanced agricultural functions like processing raw commodities in consumer goods, enhancing productivity, and maintaining permanent employment.

Therefore, a good starting point to ignite economic growth and development is by industrializing the agriculture sector. Currently, the commercial, concession, and subsistence (small holder) farmers are producing a variety of agricultural commodities (cocoa, coffee, corn, rice, palm oil, cassava, etc.) without significant advanced technological (mechanization, irrigation, storage, modern equipment, all-weather road, etc.) capability available to them. Moreover, the majority of these products are sent to advanced countries and multinational corporations for raw materials. This means that other countries capture most of the value of, and profits from, these products.

This lack of high-tech capability leads to diminished product yield, crop dysfunction, and low annual agricultural productivity. In addition, this deficiency is enhanced by unfair trade policies imposed on Africa's agriculture sector by the World Trade Organization. Such as fruits and fishery goods being prohibited from advanced countries' markets. In addition, the quality of rule of law in the study's sample countries shows a relationship to their poverty and fragility levels. Simply put, a country with a strong rule of law is likely to have good governance, lesser public corruption, and a lower poverty rate.

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Chart 3 reveals a strong correlation between a high Rule of Law score and problems with corruption and stability in 2019 in ten African countries: Mauritius, Botswana, Ghana, South Africa, Gambia, Djibouti, Burundi, Zimbabwe, Chad, and the Central African Republic.

Chart 3.
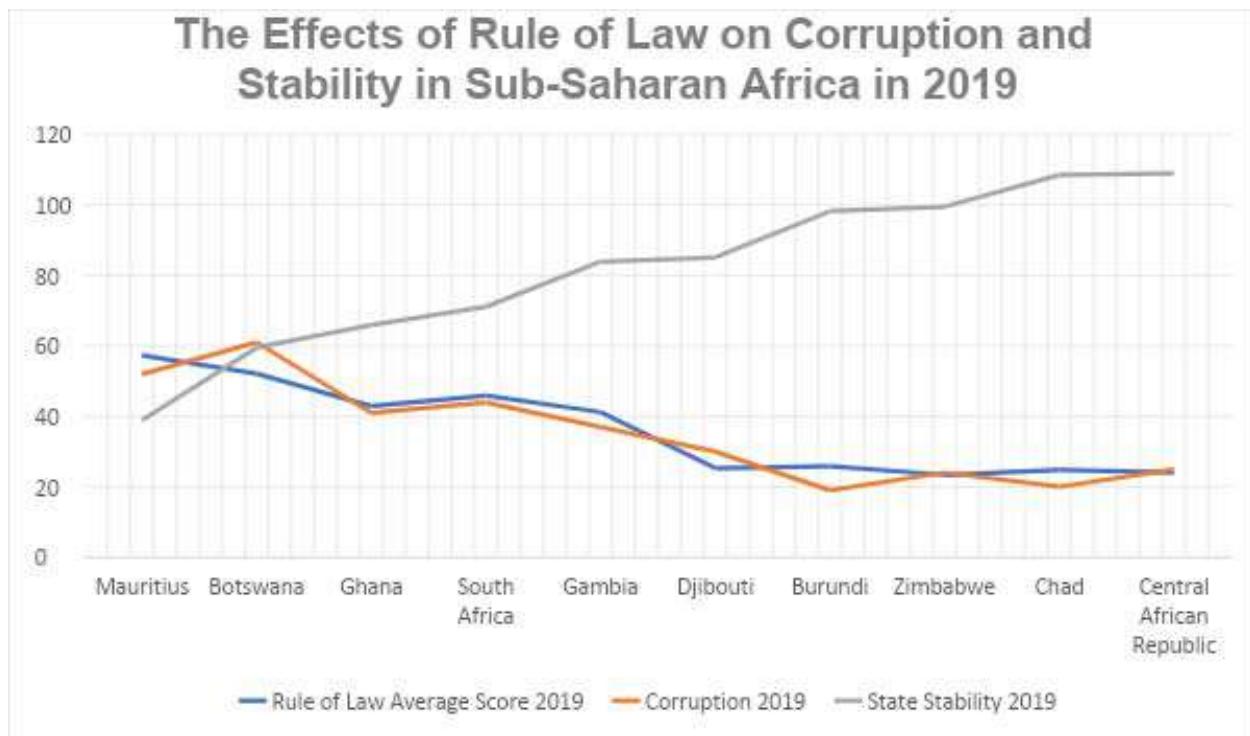
The Effects of Rule of Law on Corruption and Stability in Sub-Saharan Africa in 2019

Transparency International. (2019). Corruption perception index 2019: The global coalition against corruption. Retrieved from https://www.transparency.org.

Fund for Peace. (2019). Fragile states index annual report 2019. Retrieved from https://fragilestatesindex.org.

The Heritage Foundation [Terry Miller, Anthony B. Kim, and James M. Roberts]. (2022). 2022 index of economic freedom. Retrieved from https://www.heritage.org/index.

These figures indicate that a strong rule of law leads to lower corruption and more stability in the study's sample countries. In addition, this analysis shows that a country's public institution quality has an effect on its political economy by enhancing the provision of public goods.

VI. CONCLUSION

Rising and persistent poverty in Africa is due to public institutional dysfunction that affects market activities. Most countries in Africa have weak rule of law, democratic accountability, and state authority, along with scant or no independent press that is critical to exposing corruption in their economic and political systems. Public institutions' effective performance is the reason for market stabilization, competition among private firms, creation of high-tech jobs, and enhancement of high productivity that sustain advanced countries' economies. Altering Africa's public institutions, its trade policies, and its industrial structure to more resemble those in advanced countries will improve productive capability. This, in turn, will create the permanent employment that fosters effective demand, the appropriate approach for ensuring disposable income and increased purchasing power for a large percentage of Africa's population. This is the only way to reduce poverty on the continent. In other words, Africans do not need to be too constrained, too sick, or prevented by international

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organizations' programs, such as structural adjustment, to extract themselves from multidimensional poverty. Instead, the implementation of effective public institutions will allow Africa to achieve its poverty reduction goals. For Sub-Saharan Africa, the agriculture sector is the best place to begin simply because a large percent of the region's work activities is in that sector, including subsistence farmers, vulnerable workers, child workers, and informal laborers. Unfortunately, statistical data that quantify these workers is not available in most Sub-Saharan African countries. Therefore, this study has used the best data available to show that only an industrial policy beginning with agriculture will ignite effective demand and economic development across sub-Saharan Africa.

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Spatial Polarization in the System of International Tourism

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ABSTRACT

In tourism, the region has come to be seen as an important driving force, linking disparate segments of the industry and enabling the formation of destination networks (Milne 1998). This dependence is deepened by the fact that complex ecosystems, models of culture and economic identity, on which the development of tourism depends, are also regional in nature. Currently, community-oriented approaches occupy a prominent place in tourism development plans of various taximetric calibers around the world. Also, stakeholders are aware that local cooperation, trust and networking are important components of successful tourism development. Tourism is often seen as a key element that allows local communities that have suffered the devastating effects of economic restructuring to rebuild and strengthen their economic position in the regional and national economy. That is, it becomes expedient to talk about the transformation of the essence of city-forming factors that lead to the life sustainability of the settlement.

Keywords: cruise tourism; global tourist destinations; international tourism; asymmetric smoothing of spatial polarization; tourism system; stakeholders.

Classification: JEL Code: L83, R58, O18

Language: English

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In tourism, the region has come to be seen as an important driving force, linking disparate segments of the industry and enabling the formation of destination networks (Milne 1998). This dependence is deepened by the fact that complex ecosystems, models of culture and economic identity, on which the development of tourism depends, are also regional in nature. Currently, community-oriented approaches occupy a prominent place in tourism development plans of various taximetric calibers around the world. Also, stakeholders are aware that local cooperation, trust and networking are important components of successful tourism development. Tourism is often seen as a key element that allows local communities that have suffered the devastating effects of economic restructuring to rebuild and strengthen their economic position in the regional and national economy. That is, it becomes expedient to talk about the transformation of the essence of city-forming factors that lead to the life sustainability of the settlement.

Keywords: cruise tourism; global tourist destinations; international tourism; asymmetric smoothing of spatial polarization; tourism system; stakeholders.

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I.   BACKGROUND

R. Inglegart (1977) formulated the theory of post-materialism, the idea of which was that people have two types of values: material and so-called post-material - these are the values of freedom, free cooperation with other people, etc. However, in the 70s of the XX century in his research, he recorded the predominance of post-material values only in two countries of Northern Europe.

Ye. Holovakha, researching the values of the citizens of the USSR in the 1980s, came to the conclusion that they corresponded to those that R. Inglegart considered material. That is, common material values dominated the population of the USSR and the countries of Western Europe even fifty years ago. However, in half a century, the population of Europe moved to post-material values. Instead, in Ukraine, as in the countries of Eastern Europe, material values still prevail. However, it should be noted that the situation with values in Eastern European countries is much better (Te, shcho Zelenskyi lider viiskovoho chasu – bezsumnivno. Chy bude vin spromozhnyi staty liderom myrnykh chasiv?). Nowadays, in European countries, the defining value is benevolence, that is, openness to people, to the world. Such a mental feature probably contributed to the fact that EU countries are now world leaders in the number of international arrivals. The population of developed countries is primarily interested in the possibility of self-realization and a friendly attitude towards others .

A. Maslow, who used H. Murray's theory of personality to build a pyramid of needs, came to similar conclusions in his time. American psychologist H. Murray (1938) proposed to the scientific community

a theory of personality, which is formed by motives and needs. So he actually considered a need to be "the ability or willingness to react in a certain way to certain specific circumstances." Theories of personality that are based on needs and motives suggest that our personality is a reflection of behavior that is determined by needs. H. Murray divided the needs into two groups:

1) primary/viscerogenic needs – physiological needs;
2) secondary/psychogenic needs – which are of great importance for the psychological comfort and well-being of a person.

A. Maslow (1943), for his part, correctly indicated the criterion by which needs are lined up in a hierarchy. This is the dominance of unsatisfied needs over satisfied ones.

On the one hand, the consumption of a recreational and tourist product satisfies the primary need for rest and restoration of the body's vital forces. But the way in which this satisfaction takes place already concerns psychogenic needs, and as society develops, secondary needs begin to dominate when consuming a tourist product.

It is believed that the era of mass tourism fell on the 1950s. and lasted until the beginning of the 21st century. that is, it was a period when the population of Western European countries overestimated life priorities. And although tourism researchers do not directly connect this with the mass craze for travel, J. Holloway notes that after World War II, tourists wanted to see the places of famous battles with their own eyes. This became an impetus for the development of friendly relations and gave rise to interest in the culture of other peoples. In essence, he said, in other words, that spiritual values began to dominate the mentality of citizens of developed countries.

II.   THE RESEARCH PROBLEM AND AIM

The purpose of writing the article is to solve the problems of spatial reflection of the tourist system through the prism of cognitive psychology and human behavior, which is manifested as a reaction to incentives for recreation.

III.   LITERATURE REVIEW

T. Chang, S. Milne and D. Fallon (1996) propose to interpret tourism as a transactional process that includes exogenous and endogenous efforts of local residents and entrepreneurs. S. Milne (1998) also points to the need to achieve a balance between structure and agency, and not try to interpret one at the expense of the other. That is, cultural and ecological dimensions must be more effectively involved in clarifying development processes and determining the results of tourism-related activities.

The difficulties associated with the demarcation of economic, cultural and social geography led to the need for the formation of "new" fields of knowledge that recognize the dialectic of "structure and agency". The term "new" in this case did not mean the creation of new disciplines, but rather was used as a designation to facilitate the classification of a wide range and variety of works that cross interdisciplinary boundaries to improve the system of knowledge construction. Thus, A. Sawyer (2000) noted that the traditional questions of the study of production, circulation and exchange in economic geography were not rejected, but were rather rethought to cover its cultural and social structure.

Such a combination of approaches allowed researchers to interpret space in a new way, its role in the formation of tourism and its ability to change under the influence of tourism. As noted by D. Massey (1993: 155), space is "constructed of relationships, as the simultaneous coexistence of social relationships and interactions at all spatial scales, from the most local level to the most global." The

results of studies by Ringer (1998) and Rojek and Urry (1997) emphasize the active role of tourism in the social construction of space through the destination.

A destination is thus not simply identified as historically constructed in space, it is actively mediated and operates in conjunction with 'external' and 'internal' factors throughout the 'life cycle'. S. Squire, P. Crang and others (1998) adopt a consensus that the geography of tourism must take equally seriously both the economic and cultural dimensions

P. Crang and B. Malbon (1996: 704–711) suggest two ways of smoothing the differentiation between culture and economy:

1) "cultural regulation of the economy";
2) "cultural materialization of the economic."

The first is related to the discursive construction of organizational identities and work spaces (social relations of production), while the second is related to social relations of consumption, "in which culturally significant goods and experiences become objects and subjects that are offered and consumed" (Crang & Malbon 1996: 709).

As 'consumer culture' develops in terms of 'you are what you buy' and 'where you go' (Featherstone 1987, 1995), this inevitably affects the tourism industry. These trends are widely associated with the emergence of a "new middle class" that (Bourdieu 1984; Knox 1991; Zukin 1991) calls cultural producers. Thus, P. Bourdieu (1984) claims that suppliers of symbolic goods and services shape consumption as an arena of social differentiation, as they strive to more closely link certain consumer preferences and lifestyle practices with class segments. However, according to P. Jackson (1993), the problem of consumption and identity becomes even more problematic when advertising begins to recognize "several identities in one person".

P. Glennie and N. Thrift (1992: 423–43) argue that individuals are becoming "increasingly fragmented, following certain styles of life, which may or may not resonate with each other, but which require specific people to be taken as a model in order to imitate them. Similarly, P. Jackson and N. Thrift (1995: 227) seek to "rethink traditional approaches to 'identity', emphasizing its changing and dynamic nature, rather than seeing identities as something fixed or unitary'.

IV. METHODOLOGY

This paper employs a qualitative approach in examining the processes and challenges of the spatial component of the international tourism system. The research is based on open sources of information from official institutions. In the process of writing the article, such methods of scientific knowledge as the descent from the abstract to the concrete, system-structural, analysis, synthesis, induction and deduction were used. The authors' research is based on several economic theories and approaches. In particular, theories of post-materialism, theory of personality; theory of human motivation; theoretical concepts of local initiative, models of the tourism system, etc.

V. DISCUSSION

The most difficult task in the process of researching the phenomenon of tourism is the characterization of the features of the tourist route. The destination (place of rest) is one of the factors that attract tourists, but it is not always decisive. Sometimes the main factor can be the vehicle that the tourist is traveling on, that is, a cruise ship or a regular passenger jet plane, according to J.C. Holloway and N. Taylor (2006), can be tourist destinations. However, according to a number of researchers, the destination has a clear geolocation. Since it is important for our research to conduct a broadband

diagnosis of the spatial polarization of appropriate activities in tourism, we will consider them from the aspect of combining functional and geographical principles.

J.C. Holloway and N. Taylor (2006) suggests grouping all destinations into five groups:
The first includes a traditional vacation, during which the tourist spends most of the vacation in a certain recreational area, if possible going on excursions to see the sights that are located on the outskirts.

The second group consists of territories that are basic points for getting to know the surrounding areas.

The third group includes routes consisting of two or more points that are equally attractive to tourists.

The fourth group is tours with long itineraries, which involve a short stay in certain points (cruise with calls to port cities).

And finally, places in which travelers stop only for the night make up the fifth group. Such stops can be both planned and spontaneous and are convenient transit points, in which motor tourists have a special need. In some cases, these places are attractive to tourists in themselves, but their main function is to provide temporary accommodation for weary travelers.

Thus, the requirements of the spatial polarization of appropriate tourist activity are fully covered by the first group and partly by the second. However, it should be noted here that the author equates the destination with a tourist route, which at the same time has the characteristics of a system, as it contains a number of components and destinations in particular. A system is a collection or interconnected combination of things, elements or components that form a single whole (Hall 2008).

Tourism has a number of reasons for being considered a system, as it is surrounded by the socio-political and eco-technological environment with which it interacts. Actually, within the framework of tourist activities, transport, attractions, settlements, catering establishments interact with each other, etc. In the 1970s, general systems theory was applied to the concept of tourism, leading to the emergence of a number of theories.

Thus, C. Gunn (1979) proposed a "holistic system of tourism", which consists of five components, namely: tourist, transport, attractions, services, facilities and information. N. Leiper (1979) developed a model of the tourism system based on the theory of systems and identified five main components: tourists, generating regions, transit routes, destination regions and the tourism industry operating in physical, cultural, social, economic, political and technological environments This enabled him to conceptualize tourism as an open system.

N. Leiper identified four components of the model.

I. Human component: Tourist
II. Geographical component: Generating region, transit route region - Destination region
III. Industrial component
IV. Eco component

All these aspects structurally constitute a general tourist system.
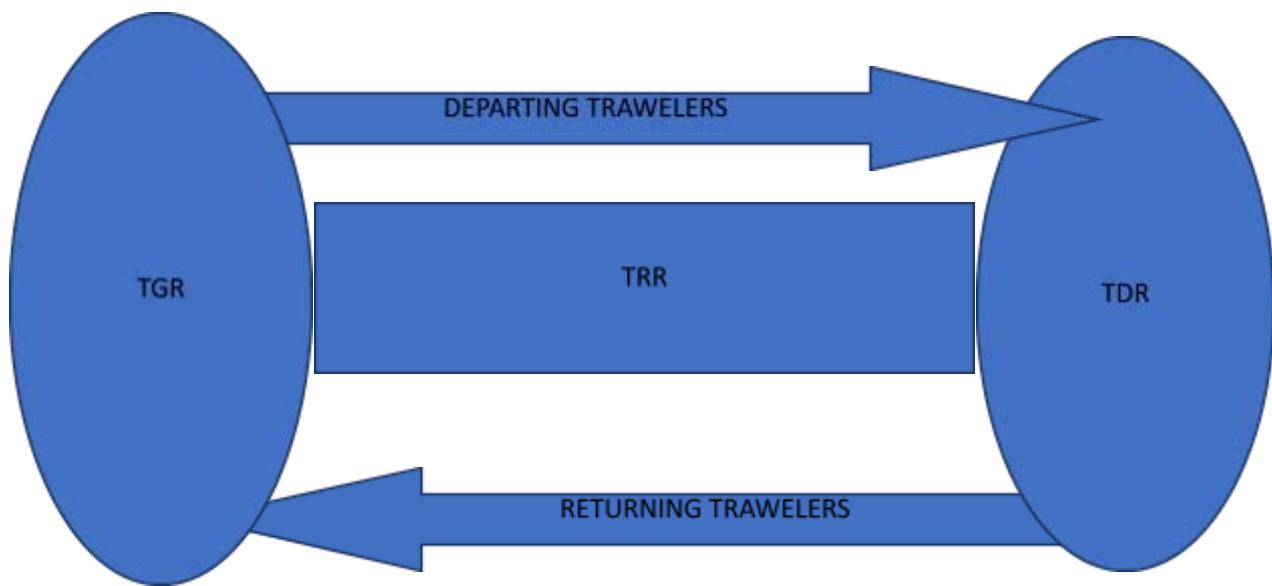
Fig. 1: Leiper's model of tourism system components.

The human component consists of tourists who make tourist trips to a destination that satisfies their interests. At the heart of this is a motivational impulse that prompts a tourist to travel to a certain destination. According to the UN Tourism definition, "Travel / traveller: Travel refers to the activity of travellers. A traveller is someone who moves between different geographic locations, for any purpose and any duration (IRTS 2008, 2.4). The visitor is a particular type of traveller and consequently tourism is a subset of travel." (https://www.unwto.org/glossary-tourism-terms#T). In other words, tourists are temporary residents of a destination who, after consuming a tourist product, return to their place of permanent residence. That is, this definition interprets tourism from the side of demand, describing exactly what tourism is for a tourist namely the system.

The geographical component is the territories involved in the tourism process that generate tourists, regions of transit routes and destinations. Thus, we have at least three geographical zones that are the environment of the tourism system.

1. A tourist-generating region (TGR) Is a place of permanent residence of a tourist from which he sets out on a trip and where he returns after its completion. It is also considered the starting point of a trip or a geographical area of demand. In other words, the territory where enterprises are located, the work of which provides households with such a level of personal income that satisfies the consumption of the tourist product. We should note that the amount of personal income used depends on the amount and quality of the capital involved in the production function, the concentration of which corresponds to the essence of the industrial, and now mostly post-industrial agglomeration.

According to G.M.S. Dann (1977), it is the geographical environment associated with the motivational and behavioral model that is the factor that "pushes" tourists to travel. "Pushing" factors are desires or aspirations that arise in the mind of a person under the influence of social, psychological and economic factors.

Psychological factors such as everyday environment, curiosity, self-esteem, relaxation, prestige, family relationships and social interaction swarm in the mind and motivate the population of the tourist generating region to travel. Instead, the influence of family, reference groups, social classes, culture, and subcultures are social factors. Demographic characteristics such as age, gender, education, marital

status are also influencing factors. Economic factors are the personal income used in combination with the available leisure time which play a vital role in the tourist generating region. It is quite obvious that in industrial or IT agglomerations, high household incomes and an increase in free time of their members are recorded. Indirect proof of this is the fact that in a number of EU countries, an experiment was successfully carried out with the transition to a 4-day working week (Zavershivsya naybilshiy u sviti eksperiment z perehodu na 4 denniy robochiy tizhden)

Also, such factors as ticket sales, the presence of tour operators, travel agents, as well as marketing and advertising activities in the region of departure, play an important motivating role to start a tourist trip.

2. Transit route region (TRR). A transit route is the territory through which a tourist travels to get from the place of permanent residence to the destination. It provides stops that can be used for the convenience of tourists (gas stations, food services, rest, overnight stay, etc.), the presence of various attractions on the travel route that can be visited by tourists. At the same time, it should be noted that RTM under certain conditions can be interpreted as a destination (5th group of destinations according to J. Holloway).

Thus, in the case of a sea, river, railway, etc. cruise, the destination for the tourist is the vehicle on which he spends the main time (living, eating, resting), which is periodically interrupted by stops (excursions, shopping, etc.) in the port cities of the ship or other transport tool In fact, port cities are mostly interpreted by the tourism business as destinations, which they are for tourists vacationing there. Thus, A. Casado-Diaz (2021) notes that cruise tourism is an important and growing source of visitors to destinations. However, the growth of cruise tourism for some global tourist destinations is becoming a challenge for local communities due to the overload of a large number of "cruise" tourists.

At the same time, we believe that its value lies precisely in the fact that it "takes" cruise tourists outside the geographical boundaries of the destination for a period of time, as it were, "staying in a hotel" (sleep, food, relaxation, etc.), thus reducing the anthropogenic load. Hrvoje Caric and Peter Mackelworth (2014) believe that cruise tourism, due to its mobility, is often one of the first forms of tourism to move to a new economic environment, and is encouraged by countries with economies in transition that seek to increase the inflow of foreign currency into the country's balance of payments.

That is, in the case of cruise tourism, we have reason to consider the route of the vehicle as the destination, and the vehicle itself as the region of the transit route. Since the port of departure (arrival) also needs to be reached, here we are also dealing with the region of the transit route behind Leiper, which, however, does not have a clear spatial identification. Tourists who intend to stay in a vehicle for a long time usually do not spend vacation time getting there, using airplanes whenever possible. Thus, in the case of cruise tourism, the region of the transit route and tourist destination is maximally overlap (see fig.1). The transit route can be covered by various types of transport or their combination according to the needs of the tourist. Thus, the region of the transit route is a mandatory component of the tourist system.

P. Potier (1963) believed that development is transmitted along the main transport highways that connect the most important industrial centers. As a result, the territory of this transport route, due to the increase in cargo flows, the spread of innovations, and the development of infrastructure, receives additional development impulses. Thus, they become development corridors that, in combination with growth poles, form the spatial framework of the economic growth of the country and its large regions.

3. Tourist Destination Region (TDR). The region of the tourist destination is the main element of tourism, as it is chosen by the tourist to visit, and in which the offer of tourist products is formed. The scope of providing tourist services by a destination depends on two factors, namely, the tourist resources on its territory and its ability to transform these resources into goods and services. A

tourist cruise vehicle meets the specified characteristics, but it is difficult to call it a region and even more so a spatial pole, since it itself is constantly moving in space. At the same time, there are reasons to consider it a tool of asymmetric smoothing in relation to the destination, as it "pulls" a certain number of its visitors and establishments that provide them with tourist services.

Tourists of the younger generation mostly need modern tourism products that match their interests and are available at the destination. Quality recreational and tourism resources that are absent or lacking in the tourist-generating region and that are available in the destination region form the main attractions that attract tourists to the tourist destination region.

The industrial component consists of businesses and organizations that provide and promote tourism-related products through attractions, accommodation, accessibility and amenities. Enterprises and institutions of the tourism industry function as the basis of the tourism system, since tourism cannot function without at least one aspect of the industrial component. The tourism industry combines the activities of enterprises of many branches, namely:

- Manufacturers of tourist services;
- Temporary accommodation facilities;
- Vehicles;
- Organization of entertainment;
- Maintenance of tourist attractions;
- Retail.

The mentioned entities of economic activity are located in different geographical components, some in the region that generates tourists, some in the destination region, others on the transit route. Travel agents of tourism product manufacturers are usually located in the region that generates tourists. They carry out marketing activities, motivating tourists to visit specific destination regions, developing individual tourism products. On the other hand, tour operators usually form a tourism industry in the destination region, which can partially begin to function already at the transit stage. The tourist industry is a combination of the results of the activities of the following subcomponents.

Lodging establishments, a subcomponent consisting of hotels, motels, sanatoriums, boarding houses, home hotels, etc., that provide temporary accommodation for tourists.

The transport sector consists of four types of transport: air, rail, sea and road. In the transportation industry, there are a number of carriers that transport tourists from the tourist-generating region to the destination region through the transit route region. This is one of the most important components, since tourism cannot take place without the movement of people and only the transport industry provides it.

The entertainment industry is the products provided in the destination region by service providers that aim to bring pleasure, enjoyment, fun, excitement, entertainment and recreation to make tourists' leisure time fruitful and lively.

The attractions industry (natural and cultural heritage, attractions, climate, beaches, events, sun, snow, etc.) consists of tourist experiences based on which tourists ultimately receive a high level of satisfaction. Attractions are unique to destinations because they are not present in the region that generates the tourists.

The shopping industry is a sub-component unique to the destination region as tourists wish to purchase goods (souvenirs) that are associated with and traditional to a particular destination.

The last component in Leiper's tourism system model is the environment in which it functions. Since tourism is an open system, it must interact with the external environment, the circumstances of which affect the quality of the functioning of the tourism system and vice versa. These circumstances have both a positive and a negative impact on the system of international tourism.

The components of the external environment that affect the system of international tourism are as follows:

1. Political factors
2. Economic factors
3. Socio-cultural factors
4. Technological factors
5. Eco-factors
6. Legal factors

The tourism system will function effectively under the condition of a stable political situation. If the countries of the tourist-generating region and the tourist-receiving region develop partnerships, international tourism will flourish.

Economic factors are directly related to GDP per person in the country of the tourist region, personal disposable income and standard of living of the tourist. Balanced income and expenses of tourists feed the international tourist flow and are directly proportional to the global financial situation.

Social or cultural factors have a significant impact on the international tourism system. Depending on the attitude of the local population in the destination region to tourists from the generating region, and how receptive cultural values are in the destination region, the international tourist flow fluctuates.

Technology is also an important factor influencing the international tourism system. It should be noted that IT significantly transforms the system of international tourism, removing unnecessary transactions from it. So in (https://smartcity cluster.org/en/blog/cluster-news/smart-tourist-destinations/) it is noted that the journey nowadays does not begin at the airport, but with inspiration and ends with the pleasure of shared memories. Smart travel destinations should accompany the visitor through the three stages of the journey, making it a quality recreational experience from start to finish.

- The inspiration phase (before the trip) should be filled with texts, photos, videos, audio, infographics, maps. For this, it is advisable to use a large amount of data in various formats, which should be perfectly structured in terms of destinations, products and services in order to participate as actively as possible in the tourist's choice. Thas, the ESRI Story Map developed informs the tourist about this or that destination in an innovative and inspiring format.
- Smart solutions (while traveling): Hyper-connectivity thanks to new technologies, applications and platforms makes the travel experience much easier and more flexible. The traveler constantly interacts with suppliers, travel services and other networked tourists, helping them make the right decisions on the ground. In addition, new virtual reality technologies allow destinations to offer innovative and unique experiences. So Holavr provides access to a shared virtual reality experience for groups of friends or families.
- Satisfaction from shared memories after a tourist trip is a chat that provides companies and destinations with knowledge of the degree of satisfaction of tourists, in order to apply a system of continuous improvement and develop new loyalty mechanisms. Thus, ITELLIGENT's NetOpinion is an opinion analysis system that not only evaluates tourist reviews, but also connects them to tourist resources (hotels, restaurants, museums, etc.) based on user comments using sophisticated AI-based analysis systems.

- Eco Factors are associated with significantly greater biodiversity in the region of the tourist destination than in the region of generating tourists. However, anthropogenic pressure is exerted on the ecosystem of the destination region by tourists from the generating region and subjects of the tourism industry.
- Legal factors belong to the system of ensuring law and order in the region that generates tourist flows, the region of the transit route, and the region of the tourist destination. These laws protect tourists and organizations of the tourism industry, promote the proper development and management of tourism and components of the international tourism system (https://www.tourismbeast.com/ tourism-system/).

The status of a tourist pole is ensured by the following indicators:

- RTR of a global level;
- Economic sustainability;
- Stability;
- Scientific and technical potential;
- Demographic potential;
- Management quality.

The multipolar system of international tourism is noted

- The presence of many tourist poles;
- Relatively long-term achievement of indicators that allow territories to maintain the status of a tourist pole;
- The comparative level of indicators of the functioning of tourist poles;
- Rof the status of a tourist pole by other tourist poles and the international tourist community;
- The presence of multilateral institutional tools and mechanisms for coordinating interests between tourist poles in the form of international organizations (UN Tourism etc.) and informal associations (lockal tourist assosiation etc.);
- Availability of tools and means of influence of tourist poles on stakeholders.

Multipolarity prevents the establishment of a monopoly of a global tourist pole, facilitates the conclusion of strategic alliances and the distribution of spheres of influence between global tourist poles. Thus, it tends to form a balance based on the distribution of spheres of interest. Multipolarity also fosters competition between global tourism destinations for influence at the regional level.

The rethinking of traditional views on tourism has led to the emergence of a new cultural geography that uses the tools of sociological and cultural studies to study the multiplicity of behavior patterns, meanings, consumption trends and identities formed in and through the spheres of leisure and tourism. S. Milne (2010) notes that the cultural analysis of economic relations provides us with a new theoretical approach, thanks to which it is possible to reveal the "glocal" nature of tourist activity.

At the same time, Feldman (1994) and Clark (2000: 8) established a clear connection between the growth of regions and industries and active network activity, which became the basis for the assumption that successful regional economies in the world economic system must be either "smart", or by the learning regions. Thus, according to Hansen (1992) and Castells (2000) networks are part of the dynamics of organizational creativity aimed at building and maintaining competitive links with the global economy.

M. Howlett, M. Ramesh, R. Rhodes, N. Scott, R. Baggio and others (2008) note that inter-organizational networks, as the most effective form of cooperation, are characterized by participants who go beyond organizations and structures and involve their perception of common

values. Such a combination creates opportunities for the transfer and exchange of knowledge, which is the driving force behind the introduction of innovations and increased competitiveness. Knowledge and ideas circulate through business systems through relationships and networks connecting economic actors, and as a result, they enable and constrain what individual actors can and do, know and think. Networks also constrain and facilitate how stakeholders can apply their knowledge and ideas: "they are the means by which the knowledge, skills and resources needed to develop, exploit and commercialize new ideas are distributed and coordinated" (Wilkinson 2008: 25). Thus, the efficiency of an individual firm depends on the behavior of others with which it is directly or indirectly connected.

As noted by R. Freeman (1984: 46), "to be an effective strategist, you must deal with those groups that can influence you, and to be responsive (and effective in the long run), you must deal with those groups that you can influence". This becomes even more evident when the area of interest is a destination where the experience and satisfaction of tourists, as well as the overall economic success of the region, is directly linked to many types of firms and other organizations. Thus, certain firms are located in the tourist destination, others in the tourist accumulation region or on the transit route, playing an important role in their effective spatial combination. The effectiveness of a destination depends to a large extent on the connections between these different actors, not just on their individual characteristics (March and Wilkinson, 2009).

As the context of the international tourism system becomes increasingly fragmented and unstable, its stakeholders are forced to adapt the principles of cooperation to everyday practice, especially in the areas of planning and marketing. Bramwell and Sharman (1999) identify three potential benefits of consensus-based collaboration:

1. It can prevent the costs of resolving conflicts between interested parties;
2. It can legitimize collective action if stakeholders are involved in decision-making processes that affect their activities;
3. Willingness to cooperate can improve the coordination of policies and related activities.

Pforr (2006) noted that the costs associated with the planning of tourist destinations involve the involvement of public and private agents to reach consensus and converge the strategies of firms and institutions to achieve common goals. Cooperation, as a dynamic process-oriented strategy, can be an effective means of managing the complex planning process at local, regional, national and international levels (Lemmetyinen and Go, 2009). The interdependence between economic agents, terms of sales, supply, information, development and access to other companies from the surrounding network (Ford et al., 2003), gives lockal tourism enterprises to become important components of tourist hubs. That is, the consequences of the process of industrial disintegration of industrial agglomerations are being ascertained in the tourist market.

Communities and destination administrations are also trying to form alliances between network firms, between the private and public sectors to develop competitive tourism products. At the same time, networks are primarily based not on spatial proximity or common interests, but on trust and reciprocity. In this case, the competitiveness of destinations and indicators of tourism development will depend not only on the base of natural and cultural resources of the destination, but also on the ability of stakeholders to use new technologies and their own human capital to create unique tourism products.

In order to better understand the role of the local in the global, it is necessary to measure the impact of ICT on the evolution of the concept of the local community and the mental attraction of the destination. It is necessary to find out how profoundly fundamental technological shifts will affect the perception and construction of tourist spaces, as well as the results of their territorial development.

This complexity and uncertainty is compounded by the fact that e-business can transform consumer behaviour, value chains, business organisation, community perceptions and, as a result, development outcomes. A new configuration of articulated economic spaces and management scales is being formed in the tourism industry (Milne & Ateljevic 2001)

VI. CONCLUSION

In some places, tourist economic spaces reach such a scale that further consolidation leads to excessive tension both between the host community and tourists, and between all stakeholders of the tourism pole and the environment. In this case, it is advisable to talk about the application of the mechanism of asymmetric smoothing of excessive spatial concentration of tourist activity. Spatial polarization in the system of international tourism consists in the identification of the territory on which tourist activity subordinates all other types of appropriate activity, and is sufficiently attractive for such a number of foreign tourists, whose arrival can be served by international airports, seaports, etc.

Asymmetric smoothing (negative) of spatial polarization in the system of international tourism, in our opinion, consists in transferring a number of industries from the region of generating tourists (industrial agglomeration) to the periphery, revitalizing its industrial heritage and, if possible, bringing it into the tourist circulation, which will allow certain measure to relieve tourist flows to the region of the tourist destination. This will also be facilitated by the trend of shortening the working week in the leading countries of the world to 4 days, since the rest of the week can be spent in a properly equipped recreational area within the limits of the place of permanent residence. This way of spending leisure time should be considered a budget alternative to a "weekend trip."

Since it is difficult to move recreational and tourist resources from the destination to the periphery or to the region of generating tourists, the loss of the share of tourist demand can be partially compensated by increasing its attractiveness for freelancers. On the basis of the formation of an inter-organizational network, the regional destination has the opportunity to attract business structures from outside the tourist region, thus raising its own competitiveness. Since in this case the economic landscape of the destination is geographically limited and it can be complicated only by attracting an additional component from the outside, such a phenomenon can be considered an asymmetric smoothing of spatial polarization.

There are also reasons to interpret cruise tourism as a tool for asymmetric smoothing of spatial polarization in international tourism, and from this point of view, it is advisable to involve the land transit region more closely in the tourist circulation. Thus summarizing the above, we have reason to interpret tourism as a system of interaction of stakeholders of different taxonomic levels for the realization of human recreational needs.

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Assessing the Impact of Legal Risk on Performance in Nigerian Deposit Money Banks: A SEM Analysis

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ABSTRACT

The research examined the influence of legal risk on the performance of selected deposit money banks in Nigeria using (primary) data sourced from bank employees through a well-structured questionnaire. The study used Structural Equation Modelling (SEM), and the hypotheses of the study were tested using Partial Least Square (PLS) technique. The model consisted of four latent variables which are legal risk, environmental risk, institutional risk, and performance. Performance served as the explained variable, legal risk, environment risk, and institutional risk served as the explanatory variables; legal risk is the main explanatory variable, while environmental and institutional risks are the control variables. It was observed that legal risk negatively and significantly influences performance. Similarly, the control variables have a significant effect on performance. Therefore, it is recommended that banks take a precautionary approach in managing legal risk by striving to anticipate and prevent it.

Keywords: Legal Risk, Performance, Deposit Money Banks, Nigeria, , Structural Equation Modelling, Banking Sector.

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The research examined the influence of legal risk on the performance of selected deposit money banks in Nigeria using (primary) data sourced from bank employees through a well-structured questionnaire. The study used Structural Equation Modelling (SEM), and the hypotheses of the study were tested using Partial Least Square (PLS) technique. The model consisted of four latent variables which are legal risk, environmental risk, institutional risk, and performance. Performance served as the explained variable, legal risk, environment risk, and institutional risk served as the explanatory variables; legal risk is the main explanatory variable, while environmental and institutional risks are the control variables. It was observed that legal risk negatively and significantly influences performance. Similarly, the control variables have a significant effect on performance. Therefore, it is recommended that banks take a precautionary approach in managing legal risk by striving to anticipate and prevent it.

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I. INTRODUCTION

According to Malm, Soyeh, and Kanuri (2023), litigation risk can adversely influence firm-level operating performance for some reasons. The reputation of the sued companies with their clients, investors, and other stakeholders can first be tarnished by legal proceedings. Furthermore, some significant legal disputes may drag on for years in court before ultimately forcing businesses into bankruptcy after the lingered legal proceedings must have significantly impaired its earnings capacity. Litigation may influence managerial judgment and, as a result, interfere with the ability to sustain future earnings, which is a crucial component of business performance. The management of litigated companies may anticipate an increase in the observed risk of scheduled budget shortfalls as well as a probable rise in the price of external financing. For instance, in order to ensure the sustainability of performance, financial institutions tend to hedge by imposing greater interest rate spreads on loans given to companies that are being sued, according to Yuan and Zhang (2015) and Arena (2018). A study conducted by Hadani (2020) revealed that a damaged reputation brought on by lawsuits conveys an incorrect signal to stakeholders like investors and external auditors, which has a negative impact on business operations. In addition, businesses that are sued may lose their current suppliers, clients and indeed other value-adding stakeholders, which may impact the quality of their products or services and their future cash flow (Chakraborty, Gao and Musa, 2022).

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Over the years, a common perspective on legal risk has developed; the activities of financial institutions sometimes result in litigation which has a financial implication on the performance of the firm. On the relationship between legal risk and financial performance of banks, there is nevertheless, little empirical research. Due to this, it's crucial that businesses need to pay closer attention to this problem and standardize their risk management practices, thus lowering the financial implications of legal risk. Therefore, investigating how lawsuit risk affects firm performance can aid management in comprehending the economics of litigation risk. The researchers are thus motivated to analyse how legal risk affects the performance of some selected banks in Nigeria.

Litigation risk is becoming a hot subject of academic research in different parts of the world today. For instance, Zhu and Huang (2023) examined how litigation risk spreads throughout the supply chain. These researchers uncover compelling evidence that suppliers' cash holdings are negatively impacted by customers' litigation risk. They also discovered that the litigation risk of consumers decreases trade credit for customers, raises both financing costs and operating risk. Arena and Julio (2023) equally analyzed litigation risk management through corporate payout policy and stated that firms facing legal risk tend to pay lower dividends or omit payments but distribute cash through share repurchases. The findings of these scholars are however limited to litigation processes and scantily account for statutory and regulatory omissions and (or) infractions, which according to Malm, Soyeh and Kanuri (2023) influence corporate performance. Sadly, these literature are equally remote and cannot expressly be adapted to fix Nigerian local inefficiencies.

Consequently, it was observed that there are significantly few empirical studies on the relationship between legal risk and Nigerian bank's performance. Likewise, most reviewed literature are prone to using financial measures such as profitability, revenue base and earnings per share (EPS) to measure banks' performance, leaving scanty studies (most of which are already outdated) to explore the originality of primary data and qualitative yardsticks, especially from the employees' perspective. Thus, this study is set to investigate the effect of legal risk on the performance of deposit money banks in Nigeria by uniquely using Structural Equation Modelling (SEM) and Partial Least Square (PLS) technique to analyze the collated primary data.

The broad objective of the study is to investigate the links between legal risk and performance of deposit money banks in Nigeria. In this context, the specific objectives and hypotheses of the study are stated as follows:

1. To examine whether legal risk influences performance positively.
2. To investigate if legal risk and performance are significantly related.

Hypothesis of the Study

1. Legal risk does not influence performance positively.
2. Legal risk and performance are not significantly related.

Significance of the Study

To sensitize the relevant bank stakeholders of the intrinsic danger inherent in the hitherto infamous or relatively unknown legal risk in Nigeria, with a view to jointly and proactively prevent the crystallization of such risk.

II.   LITERATURE REVIEW

According to Mas-Colell, Whinston, and Green (2019), legal risk is the possibility of suffering financial or reputational loss because of operating with reckless disregard for the law and how it pertains to the company. The Basel II agreement from 2003 classified legal risk as a component of operational risk. It

includes the possibility of suffering monetary or reputational harm because of a legal problem of any kind. This could involve a failure to grasp or an incorrect understanding of how laws and regulations relate to a firm. However, businesses can take steps to lower this risk.

Thus, this category of economic risk is triggered by legal restrictions, such as litigation. As soon as a business incurs huge financial losses due to legal procedures, it faces a legal risk. Other components of legal risk are regulatory, compliance, contract, dispute, and reputational risks. Both regulatory and compliance risks are the most common in relation to the financial sector, as all financial institutions all over the world are usually regulated by laws, statutes, and other government ordinances. So, failure to adhere to any or some of the laid down rules constitute risk for the financial institutions because non-compliance can invite grave consequences such as revocation of license, suspension from certain activities, fines, penalties etc.

Over the years, organizational performance has been the most pressing issue for every firm either financial performance or non-financial performance. The management teams of various organizations are concerned about knowing the elements that will stimulate the performance of their organizations positively. Therefore, they seek to adopt or take the appropriate steps to achieve a perpetual positive result. However, the term organizational performance has been defined by various authors; Singh and Misra, (2021) opined that organizational performance is difficult to define as corporate goals change quite frequently with multi-faceted approaches, hence concluded that both financial and non-financial indices are elements of organizational performance. Contu (2020), see performance as the degree to which an organization, with some informational, financial, and human resources, positions itself effectively on the business market.

Also, Mwangi, Muathe and Kosimbei (2014) defined performance as gauges that are used to determine how effectively a company utilizes its resources to create investment returns for its stockholders. Performance is equal to the well-known 3Es which are economy, efficiency, and effectiveness of a particular activity, Javier (2002). In the study of Richardo and Wade (2010), they assert that organizational performance is the capability of a firm realizing its stated goals and objectives. Hefferman and Flood (2006) refer to performance as an indicator that incorporates productivity in addition to quality, reliability, and more elements.

For the purpose of this study and in line with the literature gap earlier identified, the performance indicators are employee output, shareholders' satisfaction, customers' satisfaction, and social contribution.

Using a Logit Binary Regression model, Ogunlami and Maroof (2021) examined the effect of environmental risk, reputational risk, and legal risk on the performance of Nigerian manufacturing companies. The researchers found out that the performance of manufacturing companies is negatively and significantly impacted by environmental, reputational, and legal risks. In order to ensure that these risks are properly managed with the help of enterprise risk management tools and by providing actionable insights into their entire organizations, the researchers advised that management of manufacturing companies should pay greater attention to these risk factors.

To investigate the effect of litigation risk on company performance in China, Hui He, and Wei Shi (2023) choose data spanning the years 2011 to 2020. Through the amount of debt financing, they explored the effect of litigation risk on business performance. Their findings show that litigation risk has a negative impact on corporate performance and that this impact is transmitted through a company's capacity for debt financing. The effect of litigation risk on corporate performance is also found to decrease with increasing levels of internal controlling and analyst monitoring.

Virglerova, Conte, Amoah and Massaro (2020) examined the perception of legal risk and how it impacts SMEs businesses. The authors used primary data that were collected through questionnaires from a total number of one thousand, nine hundred and thirty-five SMEs in different countries. The countries are the Czech Republic, Poland, Hungary, Slovakia, and Ukraine. The hypotheses of the study were analysed using z-score and chi-square tests. According to the researchers' findings, 60% of SMEs believe that managing legal risk is appropriate while 39% believe that business regulations are excessively burdensome. Statistics however show a significant difference in the assessment of legal risk between SMEs from the Czech Republic and those from other countries (Slovakia, Poland, Hungary, and Ukraine).

Munjal and Malarvizhi (2021) conducted a study on the effect of environmental performance on financial performance of Indian banks. The period of this study was grouped into two, the first period was from 2013 to 2014 and the second period was from 2017 to 2018. Data from eighty-three banks were collected for these periods. The banks were grouped into five, twenty (20) are foreign banks, twenty-three (23) of them were banks owned by the private sector, three (3) are co-operative banks, sixteen (16) are regional rural banks and twenty-one (21) owned by the public sector. The study used content analysis to extract the necessary information about environmental performance and this was used to construct the environmental disclosure score index. In analysing the effect of environmental performance on financial performance, the authors used a hierarchical multiple regression method. The findings of this work showed that environmental performance has no significant effect on financial performance of these banks.

2.1 Theoretical Review

This paper is anchored on the theories of risk management and value at risk (VAR).

Risk Management Theory: Pyle (1999) developed the risk management theory and the theory focused on the banking environment; thereby sermonizing all measures that a bank can put in place to eradicate and (or) reduce risks and uncertainties to the barest minimum. This theory thus suitably justifies the basis for which legal risk is being measured in association with corporate performance.

Value at risk (VAR) considers the estimate of possible losses associated with a particular investment. Value at risk is an integrated framework with strong economic preposition that includes market structure (Bromiley, McShane, Nair, & Rustambekov 2014). Saunders, Cornett, and McGraw (2006) posited that managers should make decisions that will be favourable to the shareholders when selecting an investment. Since they have many investment options, there is need for them to consider the trade-off between risks and returns associated to the investment being chosen. Therefore, this concept is viable in determining the influence of legal risks and controls on the financial performance of banks.

III. METHOD

Primary data was used for this study and it was sourced with the use of a well-structured questionnaire. The population of the study is all the quoted Nigerian banks with a current total figure of fourteen (14), the sampling technique was purposive and 10 (ten) banks were chosen as the sample size, while the scope included legal risk indicators of different effects on banks' performance. To achieve a survey that is representative, manageable, and reflective of the desired level of precision (Shukla, S. 2020), three hundred (300) questionnaires were randomly distributed among mid-level management staff from the 10 (ten) sampled banks in their Lagos State branches. The questionnaire was distributed to a minimum of 30 respondents per chosen bank and each respondent was expected to have atleast 10 (ten) years' banking experience, so as to ascertain that the required data were obtained from veterans. The results of the instrument were adopted to examine the influence of legal risk on the constructs using Structural

Equation Model, (SEM) and the estimation technique for the research is Partial Least Square. The Structural Equation Model was adopted because of its strength in the assessment of measurement error and its explicit capacity in offering more insightful and better valid results when compared with other alternative methods of analyses. Content validity was used to validate the research instrument, as same was given to experts in the area of this discipline for a thorough review and impartial contribution. The instrument reliability was established using Cronbach Alpha and coefficient to give a measure of the construct validity and gauge the consistency of the instrument based on the average internal correlation of a set of inquiries that evaluate the idea. The validity of the internal consistency is greater if Cronbach Alpha is closer to 1. The questionnaire's reliability however had a Cronbach Alpha of 0.7 and it is thus considered valid.

The descriptive statistics like tables, charts, diagrams, and graphs are used for data presentation and analysis as applicable. For inferential statistics, the parametric statistical method of structural equation modeling analysis was used in testing the relevant research hypotheses. SMARTPLS, a statistical software for social sciences, was used to analyse the data.

Model Specification

In the notion of Hamid, Sanaz, and Hadi (2013), and Isiaka (2018), the following model specifications are introduced with little modifications to address the objectives of this study using structural equation modelling (SEM) as stated below:

The Construct Equation:

$$pf_i = \alpha_0 + \alpha_1 lr_i + \alpha_2 er_i + \alpha_3 ir_i + w_{i1}$$

Measurement Equations

$$pf_1 = \beta_1 pf_i + e_{i1}, \quad pf_2 = \beta_2 pf_i + e_{i2}, \quad pf_3 = \beta_3 pf_i + e_{i3}, \quad pf_4 = \beta_4 pf_i + e_{i4}, \quad pf_5 = \beta_5 pf_i + e_{i5} \text{ and}$$

$$pf_6 = \beta_6 pf_i + e_{i6}$$

$$lr_1 = a_7 lr_i + e_{i7}, \quad lr_2 = a_8 lr_i + e_{i8}, \quad lr_3 = a_9 lr_i + e_{i9}$$

$$er_1 = b_{10} er_i + e_{i10}, \quad er_2 = b_{11} er_i + e_{i11}, \quad er_3 = b_{12} er_i + e_{i12}$$

$$ir_1 = c_{13} ir_i + e_{i13}, \quad ir_2 = c_{14} ir_i + e_{i14}, \quad ir_3 = c_{15} ir_i + e_{i15}$$

Graphical Representation of the Model
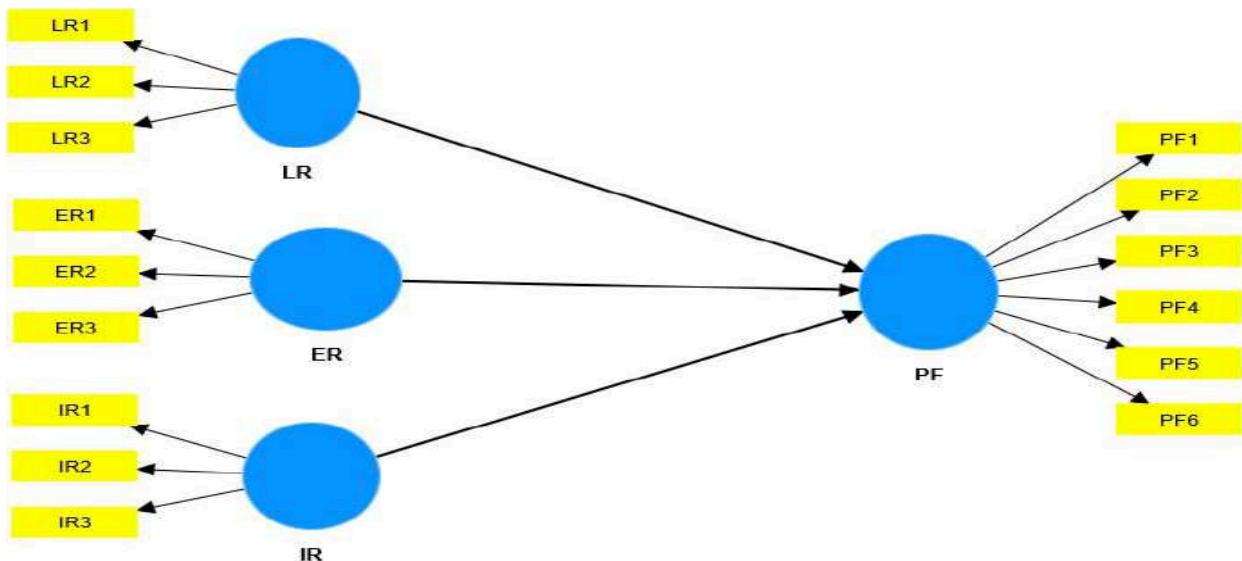
Definition of Variables

pf is the construct variable representing bank's performance, lr-legal risk, is the independent construct variable. er-environmental risk and ir-institutional risk are also the independent variables for risk; however, environmental risk and institutional risk serve as control variables in this study.

IV.   RESULTS AND DISCUSSIONS

The result of this study is presented below. Prior to the presentation of the main findings, the descriptive statistics on the construct variables and the demographic results are presented. Also, the descriptive statistics result shows the means, median, standard deviations, skewness, and excess kurtosis values. The following results (demographic result, descriptive statistics results, reliability, validity test, path result, and model fitness results) are reported under this section.

The demographic profile of respondents is recorded. These records cover the sex, age, educational level, and organizational position of the respondents. These records are presented by the use of pie chart, bar chart, and area chart. These are shown in the figures below.
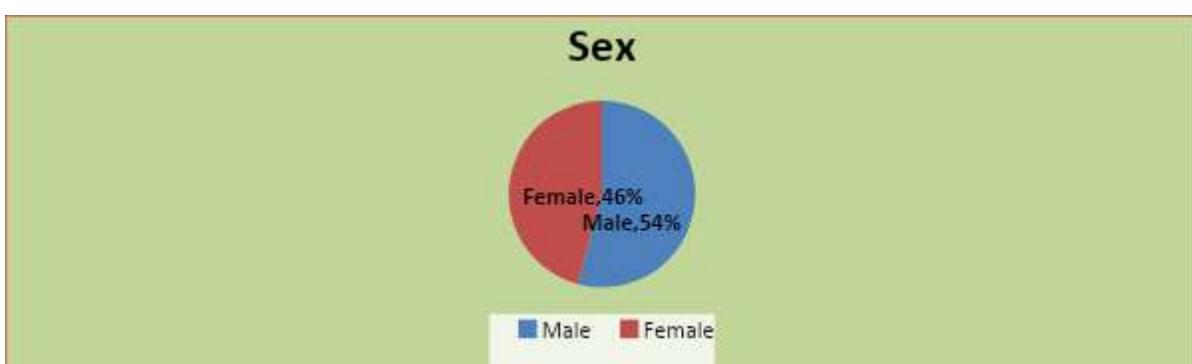
Figure 4.1: Sex of Respondents

Figure 4.1: Shows the demographic profile of respondents with respect to sex. From the information gathered 148(54%) are male while 125(46%) are female. This figure shows that there is little gap between the male respondents and the female respondents. Thus, this reveals that there is gender diversity.
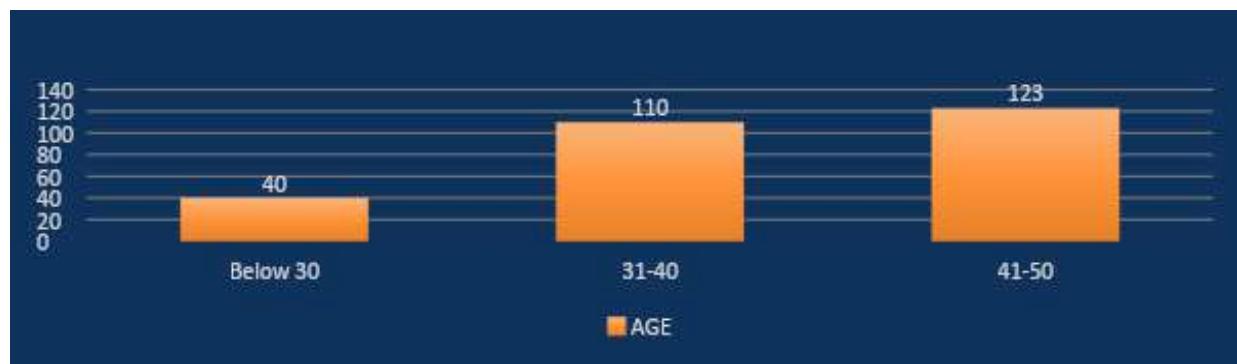
Figure 4.2: Age of Respondents

Looking at the ages of the respondents of this study, it is noted that about 40(14.7%) are below the age of 30. Respondents between ages of 31-40 are about 110(40.3%); participants between 41-50 years old are 123(45.1%). This value is a bit different from the value of respondents between 31-40 years. In addition, there are no responses from age 50 and above, this suggests that none of the respondent is above age 50.
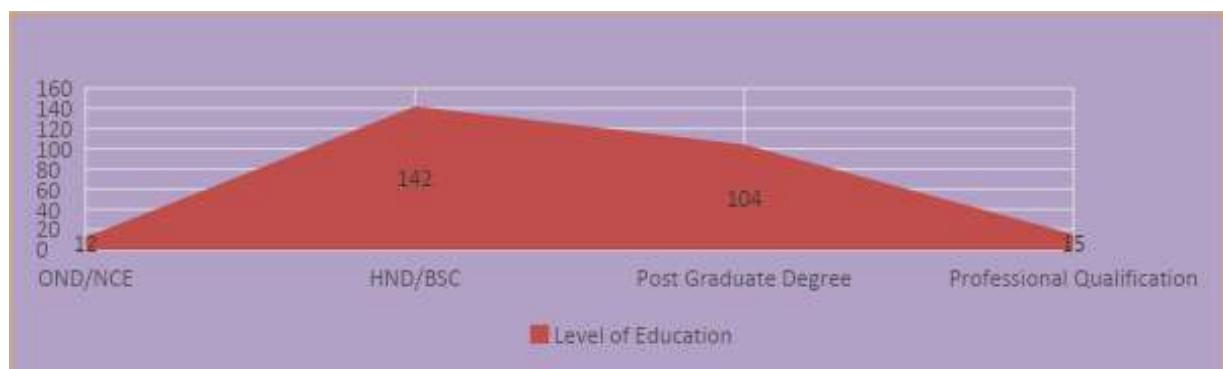
Figure 4.3: Level of Education

The above shows that 12(4.4%) have OND/NCE certificate as the time of conducting this investigation. It was also gathered that about 142(52%) respondents have a first degree. Respondents with postgraduate degrees are about 104(38.1%). Lastly, 15(5.5%) respondents have professional qualifications. Thus, the structured questions with regards to the context of this study were well answered by the respondents.
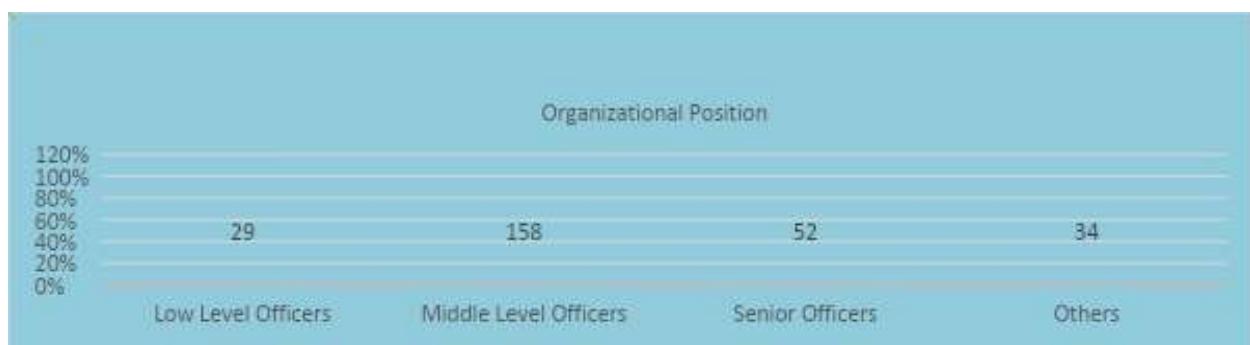
Figure 4.4: Organizational Position

Figure 4.4 shows the demographic profile of respondents with respect to organizational position. From the information collected only 29(10.6%) are low-level officers/staff, while middle-level officers/staff

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are about 158(57.9%). Respondents that are senior officers/staff are about 52(19%) and those that were not in the earlier mentioned categories are about 34(12.5%).

Table 4.1: Descriptive Statistics of the Constructs

	Mean	Median	Observed min	Observed max	Standard deviation	Excess kurtosis	Skewness	Number of observations used
ER	0	-0.42	-4.04	1.885	1	2.627	0.109	273
IR	0	-0.422	-4.029	1.381	1	0.159	0.044	273
LR	0	-0.119	-4.087	1.573	1	1.385	-0.253	273
PF	0	-0.241	-4.18	1.728	1	1.273	-0.065	273

Source: Author 2023

As shown in table 4.1 the characteristics of the construct variables employed in this study. All the latent variables' mean, median, maximum value observed, minimum value observed, standard deviation, excess kurtosis, skewness, and number of observations, are reported in the above table. The latent variables are ER-environmental risk, IR-institutional risk, LR-legal risk, and PF-performance. All the latent variables have zero mean values, one for standard deviation, and their skewness values are close to zero. This is an indication of normal distribution. Also, all the construct variables have excess kurtosis value less than 3, this shows that the distribution has a fatter tail than that of a normal distribution.

4.1 Factor Loading Result

A simple correlation between the variables and the factors is called factor loading. The factor loading indicates how accurately the items reflect the underlying factor. A loading value of 0.7 and above is considered appropriate. The loading values of the items of this study are reported in the table below.

Table 4.2: Outer loadings

	ER	IR	LR	PF
ER1	0.934			
ER3	0.9			
IR1		0.966		
IR3		0.942		
LR1			0.952	
LR3			0.484	
PF3				0.892
PF4				0.803
PF5				0.914
PF6				0.181

Source: Author 2023

In the above table, the loading factors of the items used for analyzing the hypotheses of this study are reported. Items that have negative loading values have been deleted. It is seen that ER1, ER3, IR1, IR3, LR1, PF3 PF4, and PF5 have strong loading factors. Item LR 3 has a loading value of approximately 0.5 or 50 percent. This implies that its loading value is not too strong but can still be used. Nevertheless, only item PF6 has a weak loading factor.

4.2 F-Square Statistics

The f-square statistics measure the strength of each predictor variable used in explaining the dependent/endogenous variable and the result is displayed below.

Table 4.7: F-Square Statistics

	f-square	Conclusion
ER -> PF	0.891	Large
IR -> PF	0.379	Large
LR -> PF	0.254	medium

Source: Author 2023

In the table above the f-square statistics result is presented. The f-square effect size by the rule of thumb (>=0.02 is small; >= 0.15 is medium;>= 0.35 is large) (Cohen, 1988). The effect of ER and IR on PF is large while the effect of LR on PF is medium.

4.3 Evaluation of the Inner Model

Figure 4.8 below illustrates the outcomes of the analysis of this measurement model using Partial Least Square (PLS), which explains the R square value and t-statistics results.
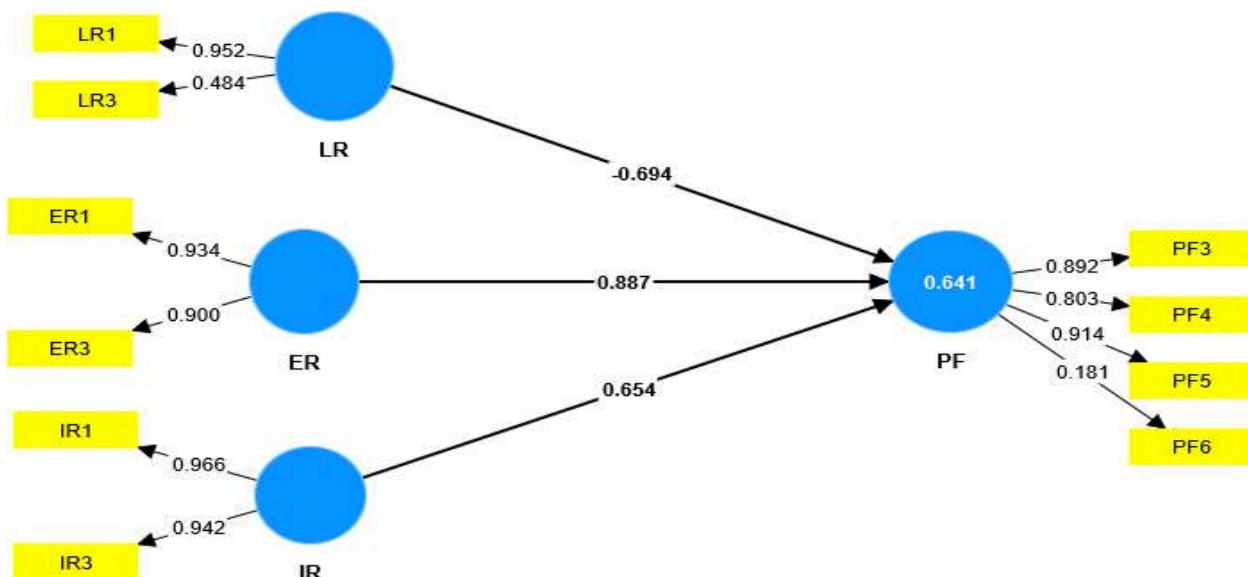
Fig 4.8: Standard Measurement Model

	R-square	R-square adjusted
PF	0.641	0.637

From the above figure and table, the R-square and R-square adjusted are 0.641 and 0.637 respectively. Therefore, the joint influence of the independent variables on the dependent variable is approximately 64 percent.

4.4 Test of Hypotheses

The hypotheses are stated in the null form, and they are stated thus: Legal risk does not affect performance and Legal risk and performance are not significantly related. The analysis is done using Partial Least Square (PLS).

Table 4.8: Test of Hypothesis One and Two

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
ER -> PF	0.887	0.902	0.105	8.461	0.000
IR -> PF	0.654	0.676	0.175	3.737	0.000
LR -> PF	-0.694	-0.722	0.226	3.071	0.002

Source: Author 2023

From the above table, the result of the test of hypothesis is reported. The path coefficient value linking ER to PF is 0.89 with a probability value of 0.00. Also, the path coefficient figure connecting IR and PF is 0.65 with a 0.00 probability value. This is an indication that the two control variables have a positive and significant influence on performance. Nevertheless, the path coefficient associating LR and PF is -0.69 with an associated probability value of approximately 0.00. This suggests that the link between LR and PF is negative and significant. Thus, legal risk affects performance significantly. This result is further explained graphically as seen below.
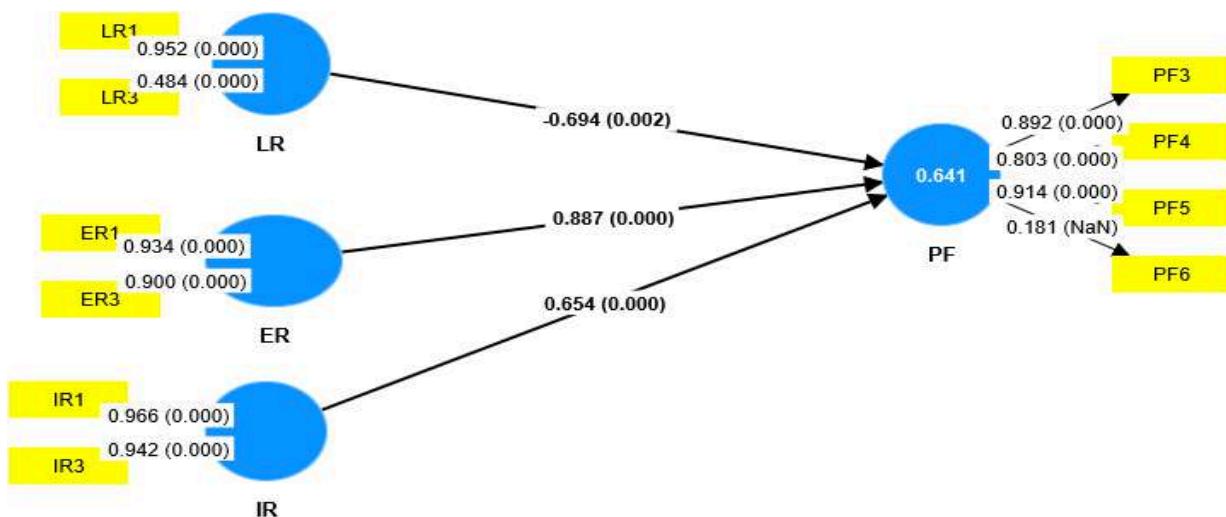
Figure 4.4.8: Graphical representation of result with P-value

From the above figure, the probability values of all the exogenous items and the items of the endogenous are zeros excluding item PF6.
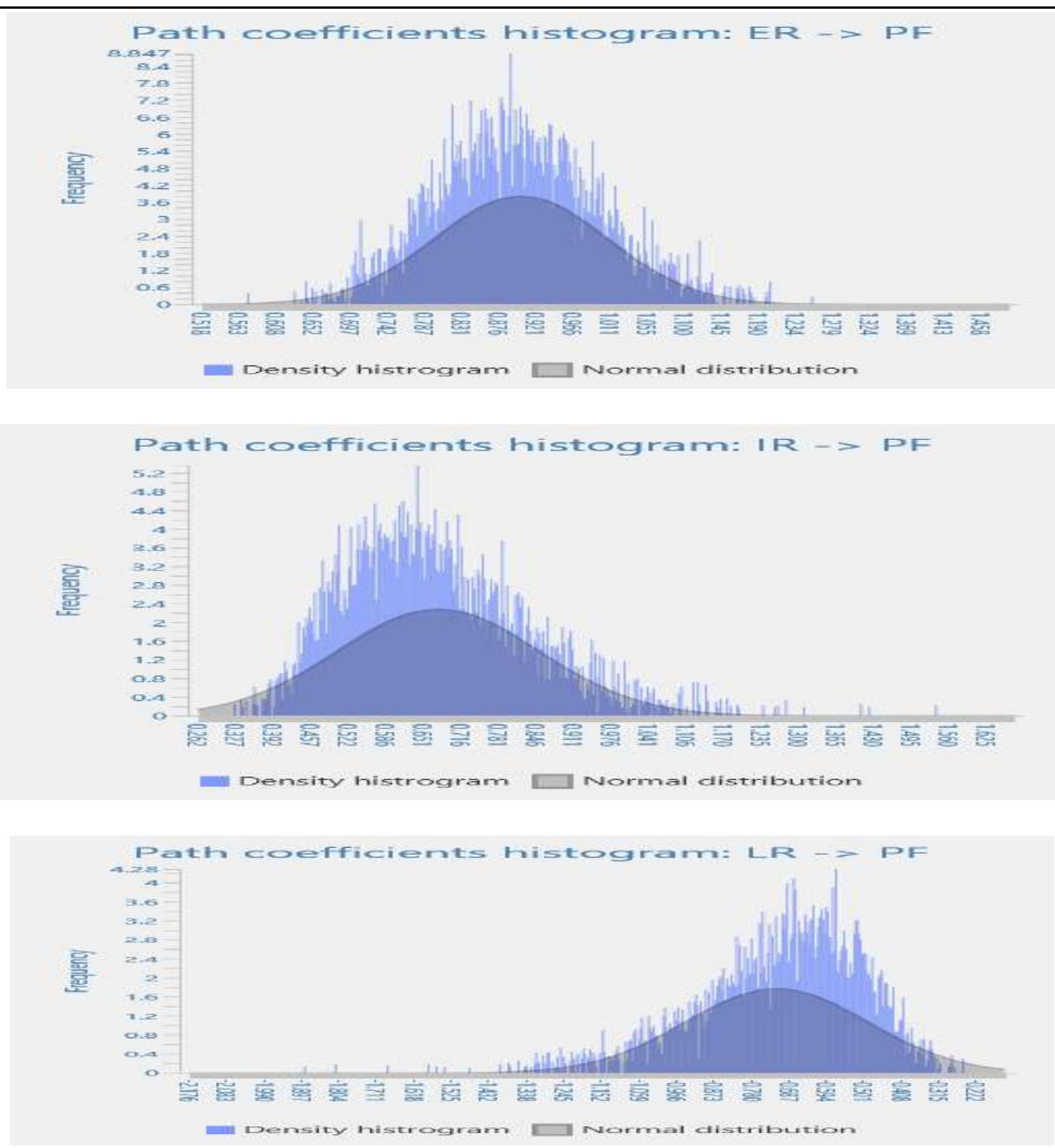
Figure 4.9: Path Coefficients Histogram

Figure 4.9 shows the path coefficient histogram of ER-PF, IR-PF, and LR-PF respectively. From the graph, it is noticed that the path coefficients of ER-PF follow a normal distribution while that of IR-PF, and LR-PF does not.

V. CONCLUSION AND POLICY RECOMMENDATIONS

This study has evidently contributed to the scantily discussed but empirically complex relationship between legal risk and banks' performance, especially by measuring performance with non-financial metrics. The research carefully singled out legal risk from other banks' risk sources, clearly explaining that litigation exposure is merely a subset of legal risk, and subsequently establishing significant negative relationship between legal risk and performance to the extent that a shabbily managed

statutory, compliance and regulatory vulnerabilities may gradually or instantly erode values to culminate in liquidation.

The relationship between legal risk and performance was examined using SEM and it was recorded that legal risk and performance are significantly and inversely related. Judging from the result of the test of hypotheses, legal risk does not only affect organizational performance, but legal risk and performance are also significantly related. This aligns exactly with the study of Ogunlami and Maroof (2021) whose research was although indigenous to Nigeria but was rather centered on the manufacturing sector.

Therefore, and in relation to the Nigerian banking sector, this study concludes that a significant decrease in legal risk will make performance increase significantly. Also, the control variables; environmental and institutional risks have significant impact on organizational performance.

It is therefore recommended that financial institutions should take a precautionary approach to managing risks, while specifically striving to anticipate and prevent legal risk and its associated uncertainties. The banks should also endeavor to identify and quantify the implications of legal risk early enough, so that they can holistically factor it into their risk management processes.

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Jordan-Centric Cross-Border Tourism Projects with Egypt and Saudi Arabia: An Innovative Regional Tourism Vision

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ABSTRACT

This paper focuses on the possibility of cross-border tourism projects between Jordan, Egypt and Saudi Arabia, with a focus on cooperative tourism tactics. The study presents a cross border tourism project model which describes the structure for analyzing and developing cross border tourism strategies. Cultural, historical, natural, and economic conditions are suggested to outline several project options: cultural and historical interactions based on common history, new opportunities in natural and health tourism, and the enhancement of economic cooperation. Thus, it is possible to state that these projects can positively affect the development of the tourism industry, preserve cultural and natural heritage, and contribute to the regional economic development. Thus, the study suggests that Jordan should include the cross-border tourism into its national plans and strategies, engage in diplomacy, create task forces, and obtain international funding and technical cooperation

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I.   INTRODUCTION

At the regional and international level, changes are taking place in various sectors and domains of the Jordanian society and life which have been further magnified by the COVID-19 pandemic. New situations like the current effects of COVID-19 and the critical matter of climate change have called for new adaptation and planning. The present generation's technologies (LaBerge et al. 2020) and the available economics (World Bank, 2022) require organizations to adapt strategically. Furthermore, United Nation confirmed that the Earth is currently in the phase of thermal boiling which is a major environmental crisis (Bisset, 2023). Sustainable development is an essential component of future society and the global environment (Freyling et al., 2015). Due to the fact that Jordan is a poor country with scarce resources, there is a need for it to formulate strategies that can help it in avoiding dangers that may arise and also grab chances.

The growth of tourism in the Middle East has been recovering post-pandemic; however, the region's tourism continued to be threatened in 2024 by the war in Gaza (Figure 1) (UNWTO, 2023). Jordan has been greatly affected as evidenced in (Figure 3). The conflict has significantly affected the hotel industry where the occupancy rates are still unable to rise above 10-15% in most of the regions with some regions having no new bookings at all>>>>>. In addition, some of the international airlines have halted their operations to Jordan and this has worsened the decrease in tourist traffic (Frontier View, 2024). As a result, the Jordanian government has outlined measures to promote the local and regional tourism through focusing on the Asian and African markets as a way of reducing the adverse impacts of

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the conflict. This shift is to revamp the tourism industry by expanding the sources of visitors and decrease reliance on Western tourists who have been severely affected by the war.

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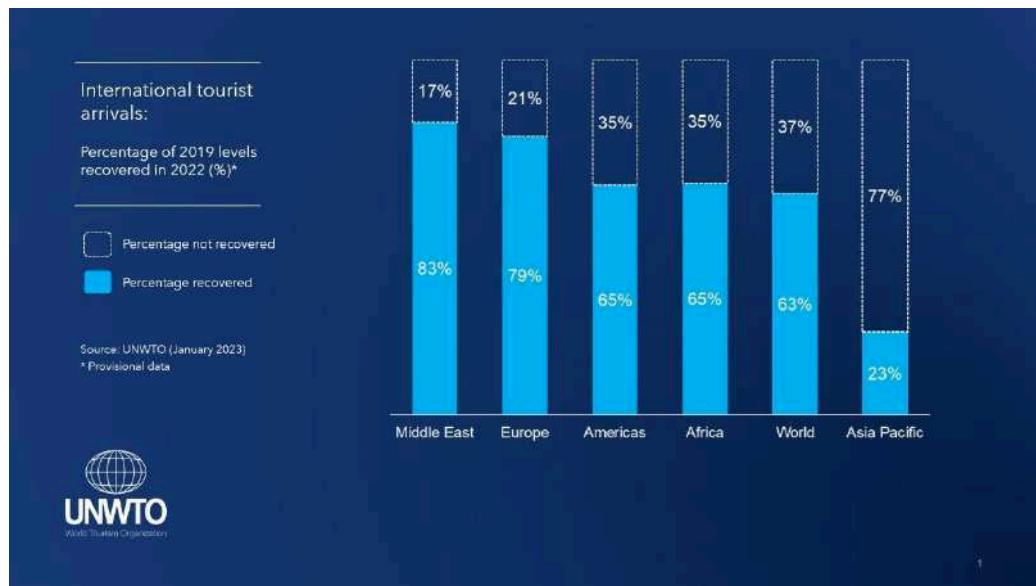
Global trends revolve around the economic consequences of the pandemic that hits the tourism industry badly. The tourism industry, accounting for 14. The tourism sector which is estimated to contribute 14.6 % to Jordan's GDP in 2023 (www.invest.jo) is one of the biggest sources of income because of the country's history and culture. This is due to the fact that there are strategic challenges present in this sector which is important for Jordan's economic plan as pointed out by international organizations (Patrier, 2020).

Figure 2: Tourism Related Figures from Jordanian Ministry of Investment portal invest.jo
www.invest.jo
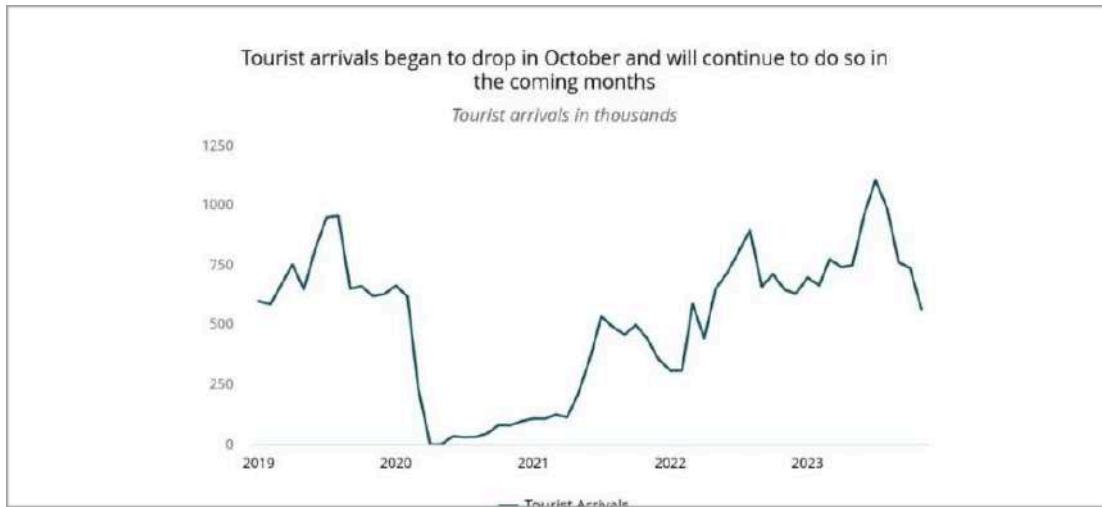
Figure 3: Post- Gaza War Effect on Jordan Tourism Sector https://frontierview.com

This paper aims at focusing on the problems of Jordan's tourism sector and underlining the importance of its strategic management as a response to the global and regional changes. Some of the factors that affect tourism in Jordan are the sustainable development goals, changes in the trends of the global tourism, post-COVID-19 tourism trends and changes in tourists' desires (Figure 4), The figure illustrates tourists' changing preferences for vacation activities before and after the COVID-19 pandemic. It compares preferences across three years: 2015, 2017, and 2020. Notably, the data for 2020, derived from a recent survey, highlights a significant shift towards outdoor activities such as beaches, waterfalls/valleys, and campsites. In contrast, preferences for indoor activities like swimming pools, museums, and exhibitions/concerts have declined (Kim & Han, 2021).
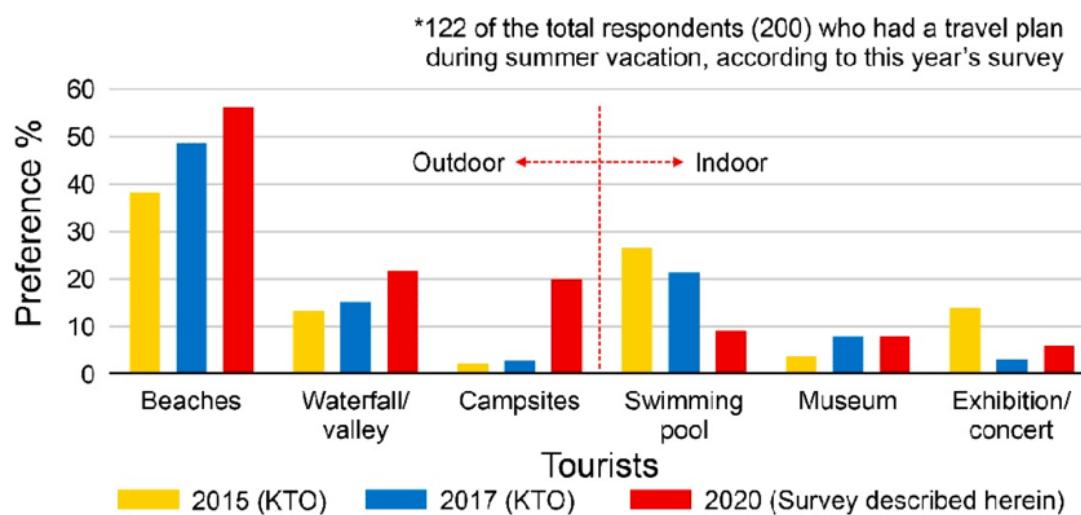
Figure 4: Comparison of vacation activity preferences before and after the COVID-19 pandemic.

(Sohn et al., 2021)

The Arab regional level, there are apparent changes in the tourism industry. According to the Vision 2030 of Saudi Arabia, the country aims at developing itself as a main tourist reception country (Shaban, 2023). Egypt has recently opened the National Museum of Egyptian Civilization and The King's Festivities Road while focusing on cultural tourism (Wahby, 2022). It has also brought a change in the perception of tourism in Arab countries specifically for the Qatar 2022 World Cup (Proctor, 2023). Although these are helpful, they increase regional rivalry and, thus, require Jordan to employ superior marketing and development approaches for its tourism industry.

There are several opportunities and threats that affect the development of the tourism industry in Jordan. It has to have clear strategic choices to address regional tourism development stimuli and aggressive rivalry. To effectively market and advertise it, its historical and cultural relations with the neighboring countries should be promoted. This study aims to answer the following research questions: What measures can Jordanian diplomacy take to use the cooperation in tourism sphere with Egypt and Saudi Arabia to overcome these problems? In what ways and which specific bilateral tourism cooperation cases will positively affect and improve Jordan's tourism sector and its outcomes?

The shifts in the tourism at the Arab regional level are evident with the example of Saudi Arabia's Vision 2030 that focuses on the tourism sector and branding the country as a key tourist destination (Shaban, 2023). Some new promotional strategies have been put into place especially in the Arab region, for instance Egypt launched the National Museum of Egyptian Civilization and The King's Festivities Road and this was accompanied by aggressive advertisement to promote. The significance of this study can be seen in the possibility of contributing to the further development of the existing literature by outlining a new area in tourism and tourism diplomacy for the case of Jordan. This is a new research work that adds value to scientific advancement and improvement of knowledge. In practice, it seeks to enhance the cooperation in tourism at the regional and international levels for sustainable tourism development in the border areas of Jordan, Egypt, and Saudi Arabia.

The research objectives encompass evaluating the impacts of regional and global tourism changes on Jordan, Egypt, and Saudi Arabia's tourism activities. It also aims at defining the possible cooperation and enhancing the effectiveness of activities to raise overall tourism revenues, including for Jordan.

II.   LITERATURE REVIEW

Cross-border tourism means joint cooperation between neighboring countries or regions with common historical, cultural, and natural attractions to enrich and potentiate the tourism offer, solve certain problems of the tourism development, and promote and brand the united product (Livandovschi,2017), these projects are dedicated to the development of cultural intercommunication, the activation of economic development, and the improvement of the cooperation of the region (Kropinova, 2013). The main feature of cross-border tourism is in the possibility of its implementation across the borders and connection of several countries for the creation of one tourist product based on the specificities of each country (Tables 1&2). (Kropinova, 2021),

Table 1: Examples of Cross-Border Tourism Corporations

Project	Description	Key Outcomes
HU-SK-RO-UA Cultural Tourism	Development of cultural tourism through innovative and integrated tourism products leveraging the cultural heritage of Hungary, Slovakia, Romania, and Ukraine.	Enhanced cooperation among tourism stakeholders, improved social cohesion, increased economic growth (Rădulescu & Pop, 2017).
Trans-Cult-Tour Project	Cultural heritage-based tourism project in Hungary, Slovakia, Romania, and Croatia. Focuses on promoting cultural and natural heritage through complex tourism packages.	Developed a multilingual digital platform, network of cultural and tourism stakeholders, innovative tourism products like Creative Museum Program and Heritage Trails App (Rădulescu & Pop, 2017).
Serbia-Bulgaria-Romania Cultural	Developed cross-border cultural tourism projects to enhance intercultural dialogue and promote	Promoted the cultural sector, encouraged entrepreneurship, created job opportunities,

Project	Description	Key Outcomes
Tourism Cooperation	cultural tourism as a generator of development.	enhanced cooperation among ministries and sectors (Винћентијевић, 2017).
Poland-Ukraine Cross-Border Cooperation	Included specific tourism-related activities such as developing tourism services and products, protecting cultural heritage, and coordinated tourism infrastructure development.	Recognized environmental values and cultural heritage as strengths, fostering regional tourism development (Miszczuk, 2015).

Source: by researchers

Table 2: Success Factors and Challenges of Cross-Border Tourism Corporations

Success Factor	Source	Challenge	Source
Transport Connectivity	Kozak & Buhalis, 2019	Functional Integration	Stoffelen & Vanneste, 2017
Coordination among Stakeholders	Kozak & Buhalis, 2019	Regulatory Differences	Stoffelen & Vanneste, 2017
Organizational Cooperation	Kozak & Buhalis, 2019	Infrastructure Deficiencies	Xie & Aprelkova, 2017
Ease of Visa Procedures	Kozak & Buhalis, 2019	Environmental Challenges	Shcherba, 2010
Sustainability	Sergeyeva et al., 2022	Language and Cultural Barriers	Cerić, 2023
		Financial Constraints	Gautrin, 2014

Source: by researchers

Jordan has a favorable geographical location, historical background, and the variety of tourism resources that enable it to become one of the key players in the cross-border tourism in the region (Hussein & Aqel, 2015), yet Jordan is experiencing instabilities on Northern, partial part of east borders and west borders (Figure5). The types of tourism in Jordan are historical, religious, medical, adventure, and cultural tourism among others (Al-Makhadmeh, 2020). Some of the main tourism sites that have been identified in the country include Petra, Jerash, and Amman which all depict the historical and cultural aspect of the country (Hussein & Aqel, 2015). Also, locations of religious tourism, for example the Baptism Site of Jesus Christ and Mount Nebo, are visited by Christians and Muslims thus generating income for the country and promoting it as a diverse tourism desk (Al-Makhadmeh, 2020).
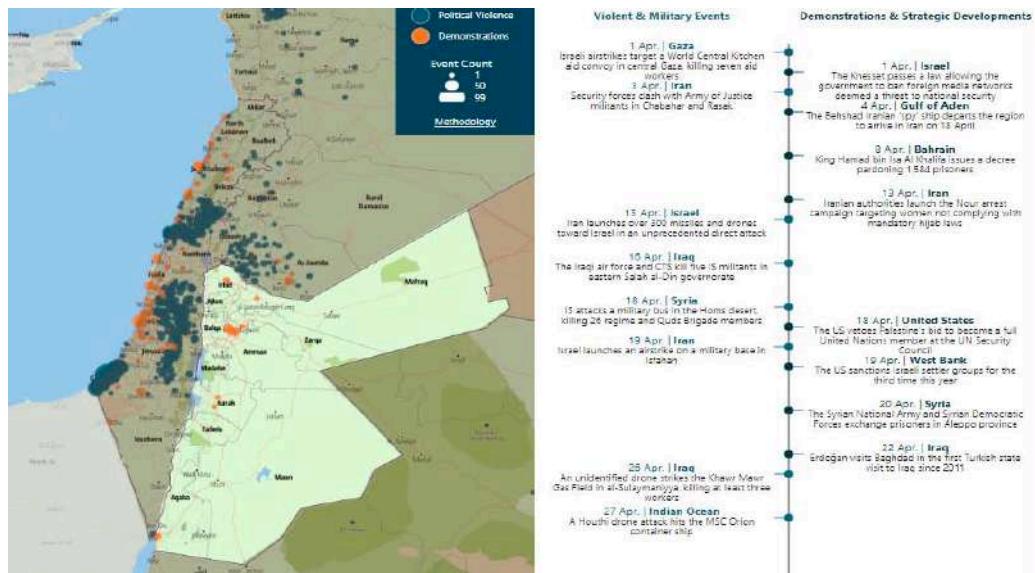
Figure 5: Instable Jordanian Borders, May 2024 acleddata.com

Tourism is one of the vital sectors that positively impact the economy of Jordan, including GDP, employment, and services such as hoteling, transportation, etc. (Khasawneh, 2020). Thus, the management and further development of the tourism infrastructure are vital for maintaining and increasing this economic effect (Khasawneh, 2020). In addition, educational tourism which is associated with international students also supports the economic significance of the sector by injecting money through tuition fees, lodging, and other expenses incurred in the day to day life (Khasawneh, 2020).

Nevertheless, there are some hurdles that have limited the growth of Jordan's tourism in spite of the fact that the industry is rather strong. Political instability and economic conditions in the region are rather unstable and create many risks (Hussein & Aqel, 2015). Solving these challenges calls for the involvement of the Jordanian government and other stakeholders (Khasawneh, 2020). Strategies that have been implemented include; The development of tourism facilities and structures, boost on security features and measures lastly the carrying out of marketing campaigns on the international scene in a bid to market Jordan as a safe and beautiful country to visit (Hussein & Aqel, 2015).

The location of Jordan, Egypt and Saudi Arabia, together with the approximate cultures, and shared relatively safe joint borders, offers a good platform for the cross border tourism investment. In this regard, the countries have many historical as well as religious sites which can be exploited for creating integrated tourism products (Al-Makhadmeh, 2020). For example, cruise projects that connect main ports of Saudi Arabia, Egypt and Jordan are an example of cooperation in the sphere of tourism (www.aljazeera.net).

Jordan has a long land frontier with Saudi Arabia of about 744 km from Gulf of Aqaba in the southwest to the tripoint with Iraq in the northeastern part of Jordan as seen in Figure. This border runs through mostly the desert areas and some of the important points of entry and exits for the two countries for business and movement. In regards to the sea, both Jordan and Egypt are neighbors with a sea border that is made up of the Gulf of Aqaba. The area of Jordan's coastline on the Gulf of Aqaba is about 26 km, that is the important maritime communication between Jordan and Egypt. This maritime boundary is important to encourage the economic activities of the two countries especially in the areas of maritime business and tourism such as through the port of Aqaba which is in Jordan and the Sinai Peninsula which is in Egypt (https://staging.jordan.gov.jo/) (https://www.mfa.gov.jo/)].

The success of cross-border tourism projects depends on several critical factors: Ferry and flight services are rather crucial as they provide the needed transport connectivity for efficient border crossing (Kozak & Buhalis, 2019). This means that there is a need to ensure that there is proper coordination between the tourism boards, regional governments and the private sector to ensure that there is proper delivery of tourism services (Kozak & Buhalis, 2019). Efficiency of visa procedures and changes in the border policies improve the experience of the visitors and promote tourism (Kozak & Buhalis, 2019). The integration of sustainable principles in the development of tourism guarantees the achievement of positive impacts for the local population and the conservation of natural and cultural assets (Sergeyeva et al., 2022).

Thus, the problem of challenges and the potential for further development of cross-border tourism can only be solved with innovative solutions. The application of information and communication technologies and artificial intelligence can also improve the quality of tourist services through provision of information and individual approaches (Kropinova, 2013). Marketing promotions and improved transportation systems and facilities can also improve the popularity of cross-border locations (Khasawneh, 2020).

The opportunities for the cross-border tourism projects among Jordan, Egypt, and Saudi Arabia also present important theoretical implications for the region's tourism development. Such projects prove that regional cooperation is vital in the establishment of tourism products as well as the economic progress. According to the theoretical concepts, cross-border cooperation may result in the diversification of the tourism product and enhance the value proposition for tourists and the region's economy (Rădulescu & Pop, 2017). Furthermore, the incorporation of sustainability and technology in these projects is an indication of the projects' visionary approach to the current issues affecting the modern tourism sector (Sergeyeva et al., 2022).

III. METHODOLOGY

The research methodology used in this study was a secondary data analysis to determine and compare successful cross-border tourism projects. To collect the examples of best practices of cross-border collaboration, this review used academic literature, historical documents, government documents, and case studies. Every named project was analyzed to the maximum extent in order to define the basic concepts and conditions, which were used as the foundation for its success.

The choice of the case studies was informed by certain parameters to make sure that the cases chosen were current and representative. The projects were selected depending on the factors that are related to cross-border tourism collaboration of neighboring countries with comparable geographical, cultural or historical backgrounds. The most effective according to the academic literature or government reports were chosen. Also, examples of the projects from different regions were chosen to give a broader view of the different strategies for cross-border tourism. Availability of detailed data and documentation was also considered as another important factor in the choice of the case studies.

The sources of information for this research were chosen based on their reliability and relation to the research question. These comprised of peer reviewed articles and books that contained theoretical and empirical analysis of cross border tourism. The present study used secondary data sources such as records and archives on the history of the cooperation between the countries. Secondary sources were used to analyze the position and the strategies of the government through official documents like reports and strategic plans of the tourism boards and other government departments. The authors reviewed the literature on cases of actual cross-border tourism projects implemented in different parts of the world in order to identify practical recommendations and lessons learned.

The reason why the secondary data analysis was considered most appropriate to the objectives of the study was that it allowed for a rather detailed and contextualized review of the existing cross-border tourism projects. This approach enables the consideration of many projects, thus making it easier to identify useful practices that can be transferred to other situations.

Sampling and data collection was done through a systematic search of academicians' databases, government documents, and historical records. The analysis process was organized around the following activities. To assess the conditions and interests similar to those of Jordan, Egypt, and Saudi Arabia the comparison was made with other areas having successful cross-border projects. From these projects, the successful factors were then considered and aligned with the characteristics of the Jordanian circumstance. Therefore, project proposals were made which were specific to the cultural, historical, natural, economic, and social systems of Jordan and the neighboring countries. Also, previous cross border products on tourism were evaluated in order to come up with new tourism products for the proposed projects in Jordan.

Based on the analysis of the revealed projects, Cross-Border Tourism Project Model (CBTPM) was suggested. Thus, this model can serve as a theoretical tool for studying and implementing specialized tourism cooperation projects in Jordan, Egypt, and Saudi Arabia. The CBTPM contains elements that are cultural and historical heritage, the relations between regions, natural values, business opportunities, and social dynamics. Through this model, all the important aspects are captured in the formulation of cross-border tourism related strategies.

With the help of the CBTPM, the research identified successful elements and strategies and associated them with the regions' circumstances to design relevant scenarios. This process included comparing the conditions and interest that are comparable to Jordan, Egypt, and Saudi Arabia, introducing elements used in other regions that have been successful and applying these elements to the context of Jordan. Proposed projects were then created with regard to cultural, historical, natural, economic, and social aspects of Jordan and neighboring countries. The experiences from other cross-border projects in the context of the tourism products enriched the understanding how to develop new and suitable tourism products in Jordan.

IV.   RESULTS

The result of this paper focuses on the potential and suggested projects for cross-border tourism between Jordan and its neighboring countries Egypt and Saudi Arabia. Applying the framework and the Cross-Border Tourism Project Model (CBTPM) which have been developed during the research Figure 2, several viable and unique cross-border tourism strategies have been outlined in this study to promote tourism cooperation, economic development, and cultural interchange between the regions. In this section, the prospective projects are described based on the above-mentioned cultural, historical, natural, economic, and social scenarios, and the main features and strategic premises of each project are defined.
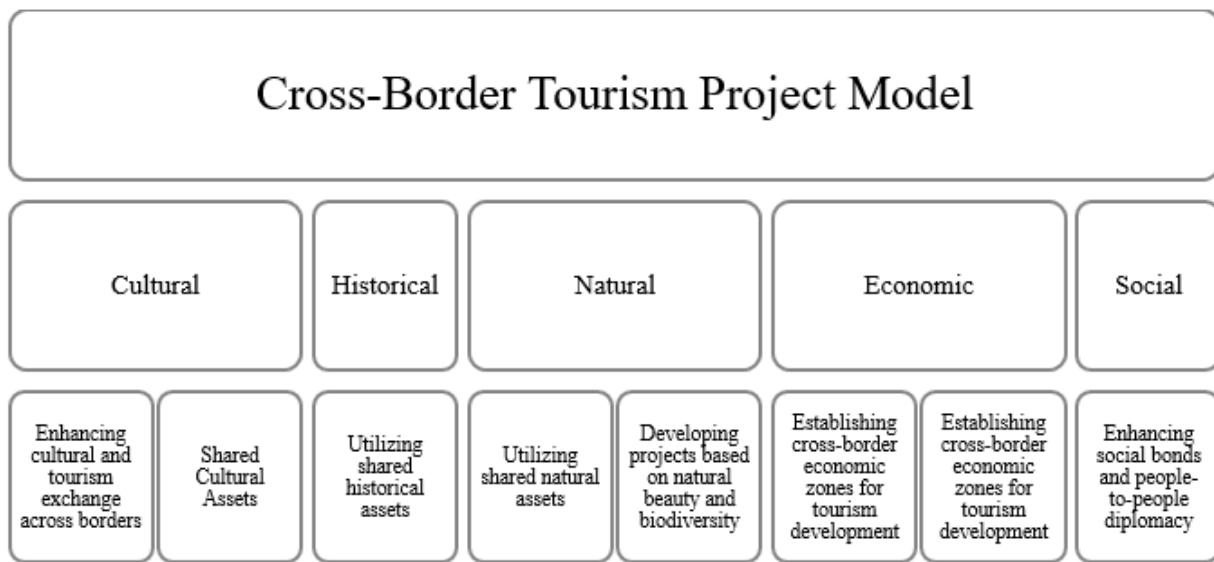
Source: by researchers

Figure 2: Cross-Border Tourism Project Model (CBTPM) which have been developed based on literature review

The research outcomes point to the positive effects of cross-border tourism as a tool for sustainable development and, thus, the potential for boosting the tourism sector's value for the regional economy while preserving and promoting cultural and natural heritage. The above projects have been chosen to best fit within the geographical, historical, cultural circumstances of the Jordan, Egypt, and Saudi Arabia to meet the intended goals.

The study lists and recommends several ideas of the cross-border tourism development between Jordan and its neighbors – Egypt and Saudi Arabia. These projects are aimed at the further development of cultural, historical, natural, economic, and social interrelations between the countries engaged. Based on the CBTPM derived from the literature review, the study has identified the following strategic moves that could help to promote tourism in the region.

As a note, names of the projects and the suggested products mentioned in this study are proposed by the researcher as the possible directions for the development of cross-border tourism. These examples are aimed at showing the various opportunities through which Jordan, Egypt and Saudi Arabia can work to boost their tourism industries. It should be pointed out that these are not the only categories; these are just some possibilities that can be considered. Further projects and products may be built according to the need, capacity, and strategic plan of the participating countries. This approach involves openness and creativity in coming up with new measures that can be used to enhance the tourism agenda thus promoting cooperation between regions and economic growth.

The following tables 3 to 10 present the breakdown of various proposed projects and scenarios. Table 3 provides best practices of cross-border tourism cooperation from various regions, which forms the foundation for future recommendations in the Middle East. These projects can show the possibility of the development of cultural interchange, the use of the common historical heritage, and the establishment of economic and social cooperation.

Table 3: Examples of Cross-Border Tourism Cooperation and Their Basis and Assigned Scenarios

Cross-Border Cooperation Example	Basis of Cross-Border Cooperation	Scenario	References
Hungary-Slovakia-Romania-Ukraine: Developing cultural tourism through innovative and integrated tourism products	Enhancing cultural and tourism exchange across borders	Cultural	Rădulescu & Pop, 2017
Ukraine-Poland: Improving tourism services and products, protecting and enhancing cultural heritage	Enhancing cultural and tourism exchange across borders	Cultural	Rădulescu & Pop, 2017
Kazakhstan-Uzbekistan: Long-term cooperation in cultural, historical, and health tourism	Utilizing shared historical assets	Historical	Sergeyeva et al., 2022
Danube Strategy (Bulgaria): Developing sustainable, cultural, and environmental tourism	Utilizing shared natural assets	Natural	Koleva & Kusheva, 2020
Saudi Arabia-Egypt-Jordan: Luxury Red Sea cruises	Developing projects based on natural beauty and biodiversity	Natural	Nagy et al., 2019
Altai-Sayan Region: Natural, ethnocultural, and economic structures to enhance cross-border relations	Enhancing economic and social relations across borders	Economic	Dunets et al., 2019
Malaysia-Indonesia (Growth Triangle): Enhancing economic cooperation through cross-border tourism	Establishing cross-border economic zones for tourism development	Economic	Hampton, 2010
Altai-Sayan Region: Natural, ethnocultural, and economic structures to enhance cross-border relations	Enhancing social bonds and people-to-people diplomacy	Social	Dunets et al., 2019
Ukraine-Poland: Improving tourism infrastructure to support historical and cultural projects	Utilizing shared historical assets	Historical	Miszczuk, 2015
Lithuania-Poland-Russia: Innovations such as information stations and new IT technologies to improve tourism infrastructure	Utilizing shared natural assets (digital platforms and technology enhance sustainability)	Natural	Kropinova, 2013
India-Myanmar: Improving bilateral cooperation and access to healthcare and other cross-border infrastructure	Enhancing social bonds and people-to-people diplomacy	Social	Wani, Dada, & Shah, 2023

Source: by researcher

Table 4 lists potential tourism products derived from past cross-border cooperation analyzed by researcher, offering general directions for developing new tourist sites, joint programs, infrastructure improvements, and innovative tourism products. These examples serve as a blueprint for the proposed projects between Jordan, Egypt, and Saudi Arabia.

References	Tourism Products	Examples
(Rădulescu & Pop, 2017)	Tourist Sites and Areas	New tourist sites, developing existing areas, exhibitions, museums
(Rădulescu & Pop, 2017), (Xie & Aprelkova, 2017)	Joint Programs	Cultural exchange programs, cultural and historical trails, joint marketing, cross-marketing
(Rădulescu & Pop, 2017), (Kropinova, 2013)	Infrastructure and Technology Products	Travel infrastructure improvements, digital tourism platforms, information station networks, mobile apps, VR, AR technologies
(Rădulescu & Pop, 2017)	Sustainability and Innovation Products	Innovative tourism products
(Badulescu & Badulescu, 2017), (Rădulescu & Pop, 2017, N/A)	Tourism Packages and Experiences	New accommodations and events, joint tourism packages, tourist experiences, festivals

Source: by researchers

Tables 5 and 7 focus specifically on proposed cross-border tourism projects between Jordan and Egypt, and Jordan and Saudi Arabia, respectively. Each project is described in terms of its objectives and underlying scenarios, such as cultural exchange, historical exploration, and natural asset utilization. These tables illustrate how shared cultural and historical assets can be leveraged to create unique tourism experiences.

Table 5: Proposed Cross-Border Tourism Projects between Jordan and Egypt

Code	Proposed Project Name	Description	Scenario	Basis of Projects
JEP1	Nubian-Nabataean Narrative	Enhancing cultural exchange between Petra in Jordan and Luxor in Egypt based on the twinning agreement.(https://beta.sis.gov.eg/)	Cultural	Enhancing cultural and tourism exchange
JEP2	Graeco-Ptolemaic Tomb	Highlighting Ptolemaic influence in Jordan with exhibitions and digital reconstructions of tombs found in Jerash. (https://jordantimes.com/)	Cultural	Utilizing shared cultural assets
JEP3	Bella Box	Showcasing a 3000-year-old box from Pella as evidence of historical cultural intermixing between Jordan and Egypt. (www.visitjordanfromhome.com)	Cultural	Utilizing shared cultural assets
JEP4	Ancient Trade Routes	Exploring historical trade relations and networks between Jordan and Egypt during the Early Bronze Age. (https://jordantimes.com/)	Historical	Utilizing shared historical assets
JEP5	Thutmose III's Campaigns	Developing itineraries and guided tours based on the routes of Thutmose III's military campaigns through Jordan.	Historical	Utilizing shared historical assets
JEP6	From Siwa to the Dead Sea	Promoting health and wellness tourism utilizing the mineral-rich	Natural	Utilizing shared natural assets

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Code	Proposed Project Name	Description	Scenario	Basis of Projects
		waters of Siwa Oasis and the Dead Sea. (Figure 6)		
JEP7	From Pharaoh's Baths to Ma'in Hot Springs	Connecting hot springs in Sinai and Jordan for a holistic health tourism experience. (Figure 7)	Natural	Utilizing shared natural assets
JEP8	From Jordan Trail to Sinai Trail	Creating a continuous hiking trail connecting Jordan and Sinai, highlighting natural and historical landscapes. (Figure 8)	Natural	Utilizing shared natural assets
JEP9	Civilizations Around the Rivers	Developing a joint tourism project exploring the significance of the Jordan and Nile rivers. (Figure 9)	Natural/Historical	Utilizing shared natural and historical assets

Source: by researchers

In our capacity as researchers, we have carefully designed a number of projects, which seek to enhance the cultural and historical links between Jordan and Egypt based on the two countries' natural resources. The "Nubian-Nabataean Narrative" project seeks to enhance cultural exchange between Petra and Luxor based on their twinning agreement, promoting mutual understanding and tourism (https: The official website of the Ministry of Trade and Industry of Ghana is www. trade. gov. gh and the beta version of the website is www. beta. trade. gov. gh. The "Graeco-Ptolemaic Tomb" project aims to highlight the Ptolemaic influence in Jordan through exhibitions and digital reconstructions of tombs in Jerash (https:(Accessed from http://www. jordantimes. com/). The "Bella Box" project presents a 3000-year-old artifact from Pella as a testimony of the cultural exchange between the two regions (www. visitjordanfromhome. com). Additionally, the "Ancient Trade Routes" project explores historical trade networks between Jordan and Egypt during the Early Bronze Age (https: While the "Thutmose III's Campaigns" project offers itineraries and guided tours along the routes of Thutmose III's military campaigns through Jordan (http://www. jordantimes. com/), the "Thutmose III's Campaigns" project focuses on identifying and proposing itineraries and guided tours along the military campaign routes of Thutmose III through Jordan. In the domain of natural resources, the "From Siwa to the Dead Sea" project focuses on health and medical tourism based on the therapeutic properties of the water in Siwa Oasis and the Dead Sea, while the "From Pharaoh's Baths to Ma'in Hot Springs" project links hot springs in Sinai and Jordan for a comprehensive health tourism destination. In addition, the project 'From Jordan Trail to Sinai Trail' seeks to establish a trail that passes through natural and historical sites and the project 'Civilizations Around the Rivers' seeks to market joint tourism focusing on the Jordan and Nile rivers. All the projects are aimed at leveraging on the cultural, historical and natural resources that are common between Jordan and Egypt with an emphasis on tourism and cultural interchange.

Figure 6: Salt Lake and Seas in Jordan and Egypt, Google Maps
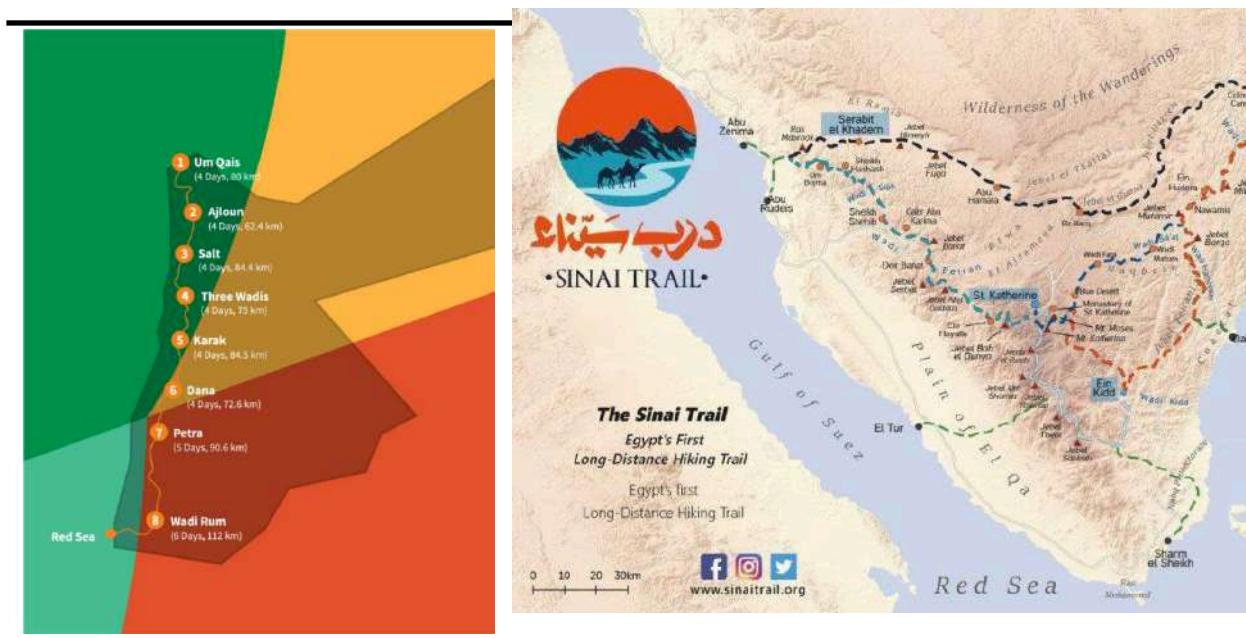
Figure 8: Maps of Jordan Trail and Sinai Trail

https://sinaitrail.net/, https://thetrek.co/jordan-trail-400-miles-foot-history/

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Figure 9: Rivers in Jordan and Egypt Google Maps

Tables 6 and 8 present matrices of cross-border tourism products based on the proposed projects. These matrices show the potential overlap and synergies between various projects, highlighting opportunities for joint marketing, cultural trails, and improved travel infrastructure.

Table 6: Matrix of Cross-Border Tourism Products Between Jordan and Egypt Based on Proposed Projects

	JEP	JEP2	JEP3	JEP4	JEP5	JEP6	JEP7	JEP8	JEP9
Shared Border Site									
Museum	X	X	X	X	X				X
Exhibition	X	X	X	X	X				X
Cultural Exchange Program	X	X	X	X	X				X
Cultural Trail	X	X		X				X	X
Historical Trail		X	X	X	X			X	X
Joint Marketing	X	X	X		X				X
Cross-Marketing	X								X
Travel Infrastructure Improvement									
Digital Tourism Platform									
Information Station Network									
Mobile App									
VR Experience									
Innovative Tourism Product				X				X	
New Accommodation						X	X		
Joint Tourism Package						X	X		
Tourist Experience						X	X		
Festival						X	X		
Digital Reconstruction		X							

Source: by researchers

Table 7 shows a list of potential projects that can foster the bilateral relations between Jordan and its neighboring areas especially the Saudi Arabia. The Cultural Coffee Tour [(accessed 3 February 2017). Available from: Jordan-travel. com/] attempts to leverage on coffee and cultural exchange for tourism. Thus, the "Nabataean Poetry Trail" and the "Jordanian-Saudi Culinary Tours" are focused on the development of cultural relations through poetry and meals. Such links are emphasized in the "Shared Tribal Heritage" and "Petra and Al-Ula" initiatives focusing on the tribal relations and the historical importance of the ancient towns and cities. The 'Desert Caravan Festival' is focused on strengthening the economic and social interactions through the appreciation of the common trade routes. Resources of natural environment are utilized in the "Healing Sands" and "Desert Stars" projects, which are based on desert's sands' therapeutic effects and astronomy tourism, correspondingly. The "Hiking and Biking Trails" project promotes cross border activities while the "Hijaz Routes" project is about the development of routes. All these projects in general seek to harness and develop closer relations between Jordan and the neighboring regions based on cultural, historical, economical and natural resources.

Table 7: Proposed Cross-Border Tourism Projects between Jordan and Saudi Arabia

Code	Project	Scenario	Basis of Projects
JSP1	Cultural Coffee Tour (jordan-travel.com/)	Cultural	Enhancing cultural and tourism exchange across borders
JSP2	Nabataean Poetry Trail (Figure14)	Cultural	Enhancing cultural and tourism exchange across borders
JSP3	Jordanian-Saudi Culinary Tours(Shared Borders)	Cultural	Enhancing cultural and tourism exchange across borders
JSP4	Shared Tribal Heritage (Figure 10)	Historical	Utilizing shared historical assets
JSP5	Petra and Al-Ula (Figure 14)	Historical	Utilizing shared historical assets
JSP6	Desert Caravan Festival (Shared Borders)	Economic	Enhancing economic and social relations across borders
JSP7	Healing Sands (Shared Borders)	Natural	Utilizing shared natural assets
JSP8	Desert Stars (Shared Borders)	Natural	Utilizing shared natural assets
JSP9	Hiking and Biking Trails (Shared Borders)	Natural	Utilizing shared natural assets
JSP10	Hijaz Routes (Figure 11)	Historical	Developing infrastructure and facilities

Source: by researchers

Figure 10: Tribal Map on Current Shared Border between Jordan and Saudi Arabia (Parkinson, 2022)

Figure 11: The Hizaj Railway Map (Atlas of Jordan, 2013)

Table 8: Matrix of Cross-Border Tourism Products Between Jordan and Saudi Arabia Based on Proposed Projects

	JSP1	JSP2	JSP3	JSP4	JSP5	JSP6	JSP7	JSP8	JSP9	JSP10
Shared Border Site				X	X				X	X
Museum					X					
Exhibition					X					
Cultural Exchange Program	X	X	X			X				
Cultural Trail	X	X	X	X		X			X	
Historical Trail			X	X	X	X			X	X
Joint Marketing	X	X	X	X	X					
Cross-Marketing	X	X	X		X					
Travel Infrastructure Improvement										
Digital Tourism Platform										
Information Station Network										
Mobile App										
VR Experience										
Innovative Tourism Product									X	
New Accommodation							X	X		
Joint Tourism Package							X	X		X
Tourist Experience							X	X		X
Festival						X				

Source: by researchers

Table 9: Proposed Cross-Border Tourism Projects between Jordan, Saudi Arabia and Egypt

Scenario	Basis of Projects	Project
Natural	Utilizing shared natural assets (Figure 12)	Red Sea Coral Guardians
Historical	Utilizing shared historical assets (Figure 13)	Route of Ancient Civilizations
Natural	Utilizing shared natural assets (Figure 14)	Environmental and Wildlife Conservation

Source: by researchers

Table 9 shows potential cross-border tourism projects for Jordan, Saudi Arabia, and Egypt based on their natural and historical similarities. The "Red Sea Coral Guardians" project aims at preserving and developing the coral reefs of the Red Sea and encourage the protection of the environment and responsible tourism (Figure 12). The "Route of Ancient Civilizations" project is to bring attention and link the historical legacy of the region, as well as trade routes and cultural sights. Likewise, the "Environmental and Wildlife Conservation" project aims at preserving and enhancing the natural resources and wildlife of both countries, encouraging tourism and increasing public awareness on conservation (Figure 14). These initiatives are designed to promote cooperation within the region, intercultural communication, and sustainable tourism.

Figure 12: Natural Rererves in Jordan Egypt and Saudi Arabia Google Maps
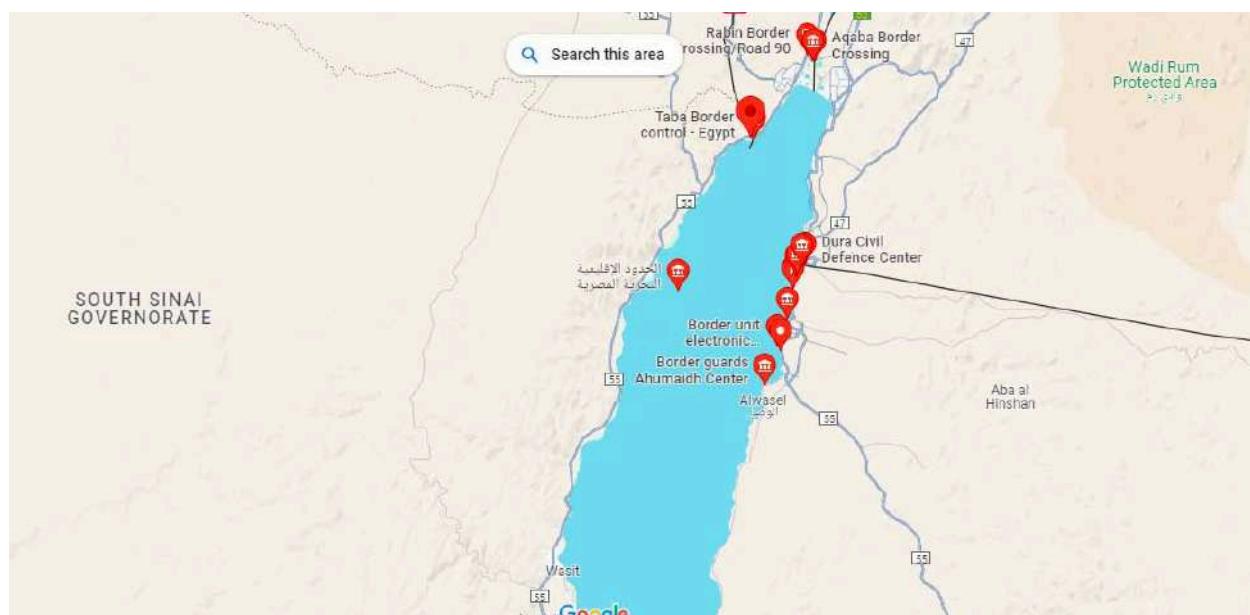
Figure 13: Sea Borders between Jordan, Egypt and Saudi Arabia Google Maps

Figure 14: Map of Nabataean Kingdom (Bouchaud, 2015)

Table 10: Proposed Cross-Border Tourism Projects between Jordan, Saudi Arabia and Egypt

	Red Sea Coral Guardians	Route of Ancient Civilizations	Environmental and Wildlife Conservation
Shared Border Site	X	X	X
Museum		X	
Exhibition	X	X	X
Cultural Exchange Program		X	X
Cultural Trail		X	
Historical Trail		X	
Joint Marketing		X	
Cross-Marketing		X	
Travel Infrastructure Improvement	X		X
Digital Tourism Platform	X		X
Information Station Network	X		X
Mobile App	X		X
VR Experience	X		X
Innovative Tourism Product	X	X	X
New Accommodation	X		X
Joint Tourism Package	X		X
Tourist Experience	X		X
Festival			

Source: by researchers

V. CONCLUSION AND RECOMMENDATIONS

This research has revealed the opportunities for cross-border tourism projects between Jordan and its neighbors; Egypt and Saudi Arabia and a tripartite cooperation between the three countries. Therefore, these projects are possible to contribute not only to the development of cooperation and economic well-being of the regions but also to the development of cultural interactions and mutual perception. Thus, the detailed analysis and the development of the Cross-Border Tourism Project Model (CBTPM) enabled the identification of potential tourism projects and their evaluation. Cultural, historical, natural, and economic scenarios can be distinguished within these projects, and they are designed for the specific geographic and cultural conditions of the countries involved, thus making them accurate and efficient.

To effectively implement these cross-border tourism projects, the following recommendations are directed towards the Jordanian government, focusing on strategic inclusion and fostering regional cooperation: To effectively implement these cross-border tourism projects, the following recommendations are directed towards the Jordanian government, focusing on strategic inclusion and fostering regional cooperation:

1. The Jordanian government should ensure that cross border tourism is well included in the national tourism plan. This can be done through defining goals, identification of necessary resources and elaboration of particular strategies for the creation of cross-border tourism products.
2. Negotiate with the Ambassadors of Egypt and Saudi Arabia to enhance the existing Bilateral Accords and develop Multilateral Accords that enhance for cross-border tourism. The following should be the focus of these agreements: relaxation of measures on borders, standardization of visa policies, development of transportation and infrastructure.
3. Create a special team of the officials from the tourism ministries, cultural heritage departments, and representatives of the companies. This task force should be charged with the responsibility of coordinating, supervising and evaluating cross border tourism projects in relation to the national and regional tourism policy.
4. Enhance marketing and branding activities that would promote the cultures, histories, and natural endowment of Jordan, Egypt, and Saudi Arabia. This means that digital platforms, social media, and international tourism fairs should be used to advertise these cross-border tourism experiences to a global market.
5. Try to get funding and technical assistance from such international organizations as World Tourism Organization (UNWTO), UNESCO and regional development banks. The following are possible resources that can help in developing infrastructure, building capacity, and putting in place sustainable tourism practices.
6. Engage Local Communities: In this way, local communities should be taken into consideration and included in the planning and development of cross-border tourism. This can be made possible through involving the local people, strengthening the institutions and ensuring that the locals get to benefit from the enhancing flows of tourists.
7. Facilitate Knowledge Exchange and Best Practices: Hold workshops, conferences and study tours whereby participants from Jordan, Egypt and Saudi Arabia can transfer knowledge and learn from other similar cross border tourism projects in other regions.
8. Monitor and Adapt to Market Trends: Regularly identify and analyze the tendencies in tourism on the global level and coordinate the projects of cross-border tourism with the changes in tourists' needs and values. This covers the use of information and communication technologies, improving the quality of tourist services, and the rational use of resources.

Thus, the Jordanian government can do much to work towards the inclusion of cross-border tourism into its strategic visions and enhance its cooperation with the neighboring countries and, thus, develop tourism as one of the most promising and powerful spheres of the economy. Thus, owing to the cooperation and the common goal, Jordan, Egypt, and Saudi Arabia can build a successful model of the cross-border tourism that will be beneficial for all the countries involved.

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Assessing and Addressing Risks to Crop Production Caused by Extreme Weather: A Case Study in Rural Kashkadarya, Uzbekistan

Oybek Sadullayev

ABSTRACT

This work evaluates the impact of climate-induced damage to wheat production in Kashkadarya (Uzbekistan), was conducted in April and June of 2023, and examines the effectiveness of various management strategies to mitigate these risks. Based on a survey of 120 wheat growers, this study applies parametric and non-parametric econometric techniques to assess the production risks associated with extreme weather events and the role of innovative management strategies in reducing crop damage. The findings highlight the significant adverse effects of severe weather events, such as thunderstorms, windstorms, and hailstorms, on wheat yield, and demonstrate that the adoption of strategies like those for watercourse availability, shelterbelt plantation, and adjustments to irrigation schedules can significantly reduce wheat losses. This study underscores the importance of financial and technical support for farmers to adopt such strategies and suggests further research to explore effective adaptation measures to protect crops from weather shocks. By integrating empirical data with sophisticated econometric models, this study offers a comprehensive view on the adaptation processes necessary for sustaining agricultural productivity in the face of climatic uncertainties.

Keywords: extreme weather events; crop production risk; econometric analysis; management strategies; adaptation measures; food security.

Classification: JEL Code: Q54, Q15, Q18

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I. INTRODUCTION

Natural disasters and extreme weather conditions have a direct impact on crop production and food security, posing a challenge for limited arable land to meet the growing food demand, especially under unpredictable weather conditions[1]. Uncertain factors like rainfall, wind, and pest attacks are expected to become more frequent in the future, potentially leading to significant crop yield losses and food shortages. Climate risks to agriculture encompass production, marketing, financial, environmental, and human factors, with drought in rivers and seas also affecting crop production[2]. The Aral Sea tragedy, impacting millions in Central Asia and causing environmental damage, poses a major global disaster. Uzbekistan, due to its geographical characteristics and limited adaptability, is highly vulnerable to these challenges, facing agricultural risks from heavy rains, floods, winds, cyclones, and droughts[3]. Recent events, including severe floods and unseasonal rainfall, have caused significant damage to agriculture in Uzbekistan, threatening its ability to meet the food demands of its growing population[4].

Wheat is the main cereal crop and food staple in Uzbekistan. In 2023, it was grown on nearly 8734 thousand hectares and it contributed 1.7% of the country's gross domestic production and 9.1% of the value-added in agriculture. Uzbekistan is one of the highest wheat-consuming countries in Central Asia. According to an estimate, the per capita wheat consumption in Uzbekistan is 166 kg per year and wheat flour contributes 72% of the daily caloric intake. A 4.4% decline in wheat production was reported over the period between 2018 and 2019. Particularly the decline was from 26.67 million tons in 2017 to 25.49 million tons in 2018. Recently, according to surveys from local farmers, during the first quarter of 2019, stormy weather such as heavy rains, windstorms, and hailstorms caused significant losses to the standing wheat crop (about 27 percent) in the Kashkadarya province of Uzbekistan. Reportedly climate change will aggravate the losses and the gap between actual and potential wheat yield will continue to increase unless Uzbekistan implements timely adaptations of innovative technology and management strategies to mitigate its vulnerability[5].

II.   LITERATURE REVIEW

Climate change is causing serious issues in global food production and security, particularly in resource-poor countries heavily reliant on agriculture. There is evidence of climate change's destructive impact on farming worldwide, including reduced cereal production in Russia [6], Kazakhstan[7], United States[6], Malaysia[8], and Australia[9] due to heatwaves and droughts, as well as crop damage in China from strong winds and heavy rain[10]. Resource-poor countries, especially in Africa, are suffering more from extreme weather events, such as crop lodging caused by fluctuating rainfalls and winds. This situation is expected to worsen, putting African health and livelihoods at risk [11],[12]. Additionally, it is predicted that unexpected crop yield losses will occur due to extreme weather events like heavy rain, high winds, and heatwaves. Uzbekistan, in Central Asia, is particularly vulnerable to climate change due to its history of severe climate-related events, including droughts, floods, and storms, which have had a devastating impact on agriculture. Recent extreme storms have also affected Uzbekistan's agriculture, and these weather shocks are expected to intensify in the future. However, no studies have focused on how crops are vulnerable to windstorms, thunderstorms, and hailstorms in Uzbekistan.

Organizations view climate change as a driving force for creating innovative technologies and management strategies to address vulnerability. Cleantech industries are encouraged to adapt efficient technology, such as renewable energy sources, to mitigate climate-induced risks. Studies emphasize the importance of environmental management strategies, like those proposed for the Alberta oil industry, to ensure long-term survival and sustainability[13]. Enhanced enforcement of environmental regulations is deemed crucial for industry competitiveness and sustainability. Despite advancements in cleantech, there is a recognized need for further application of technology and management strategies in agriculture to counteract the adverse effects of climate change[14].

Both the industrial and agricultural sectors are investing in innovative technologies to address climate change threats. Agricultural advancements include the integration of renewable energy sources like photovoltaic greenhouses and water pumps [15], alongside a focus on information technology[16] to reduce production risks. Uzbekistan's agriculture is highly vulnerable to weather shocks due to a lack of technological and financial resources. Adopting smart management strategies, including physical measures like irrigation and non-physical ones such as crop insurance, can effectively reduce crop vulnerability to weather anomalies with minimal financial investment[17], [18].

Implementation of innovative management strategies is important to reduce the adverse impacts of weather shocks on crop production. This issue requires increased attention in resource-poor countries such as Uzbekistan. Most of the previous literature focused on the impacts of droughts and rainfalls on

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crop damage and the adaptation of basic farm management practices. However, crop vulnerability due to windstorms, thunderstorms, and hailstorms and adaptation of physical and non-physical management strategies to mitigate the weather-induced crop damages have not been empirically studied in Uzbekistan. Given this literature gap, a dedicated effort has been made in this study to collect the existing information from farmers of Uzbekistan on extreme weather events and crop yield, in order to provide a better understanding of the climate-induced vulnerability of farms and the innovative management strategies to mitigate the risk. To develop a more comprehensive framework, the study focuses on seven key objectives: 1) to determine extreme weather events and wheat yields, 2) to estimate the spatial differences of wheat yield with the occurrence of storms, 3) impact estimation of storms on wheat yield, 4) to evaluate innovative management strategies to mitigate risk, 5) to evaluate causal impacts of storms on yield damages, 6) to estimate the causal impacts of innovative management strategies to mitigate vulnerability and 7) to analyze determinants of innovative management strategies. The findings of this study provide an outlet for policymakers to design effective adaptation measures to better protect crops from weather shocks. We end the article by suggesting a potential avenue for future study.

Managing risks for wheat crops under extreme weather conditions requires a blend of strategies to safeguard against adverse events. Key risk mitigation models specific to wheat cultivation include drought-resistant varieties, precision agriculture, early warning systems, crop insurance, water management, crop rotation, soil conservation, remote sensing technology, innovative irrigation, and capacity building. Growing wheat that can withstand water scarcity, using real-time weather data to optimize farming practices, forecasting adverse weather to take timely actions, insuring crops to cover losses from extreme weather events, employing practices like drip irrigation for efficient water usage, rotating crops to enhance overall farm resilience, implementing methods to prevent erosion and enhance soil health, using technology to monitor crop health in real-time, adopting efficient irrigation techniques, and educating farmers in climate-smart practices to build resilience are all crucial steps. Integrating these models offers a holistic approach to protecting wheat crops from extreme weather, fostering sustainable and resilient agriculture.

The study emphasizes the need for innovative management strategies to counter the impact of weather shocks on crop production, especially in resource-demanding countries like Uzbekistan. This study addresses the gap by examining the vulnerability of crops to windstorms, thunderstorms, hailstorms, as well as to drought conditions. Through information collected from Uzbekistan farmers, the study aims to understand climate-induced farm vulnerability and propose effective management strategies. The key objectives include assessing storm impacts on wheat yields, estimating spatial differences in wheat yield during storms, estimate storm impact on wheat yield, evaluate innovative risk mitigation, examine the cause-and-effect of storms on yield damages, gauge the impact of innovative strategies on vulnerability, and analyze factors influencing management strategies. The findings aim to guide policymakers in developing adaptation measures for crop protection, suggesting potential avenues for future research.

The study examines the impact of storms on wheat yield, proposing that both severe and mild storms, as well as dry weather negatively affect it. Innovative management strategies, like watercourse maintenance and adjusting irrigation, are suggested to mitigate damages. Non-physical measures such as crop insurance may have varied effects. Factors like farmers' education and access to weather forecasts influence the adoption of these strategies, while family size may hinder adoption.

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III.   METHODOLOGY

The Kashkadarya province of Uzbekistan was selected as the main study area (Fig.1.). It is geographically located at 38°50' N; 66°05'E. According to natural conditions, the Kashkadarya region is split into western plains and eastern mountains. The flatlands are mainly the Karshi, Guzar, Nishan and Kasbi steppes (300-400 m elevation), featuring ancient river terraces, residual mountains, and saline-filled depressions[17]. Kashkadarya is a fertile region having a 23.4% share in the agricultural GDP of the country and 18.9% share of Uzbekistan total wheat production. The rainfall pattern in Kashkadarya is wide-ranging and mostly associated with the spring winds. About 45%–65% of the total rainfall occurs during the winter-spring season.
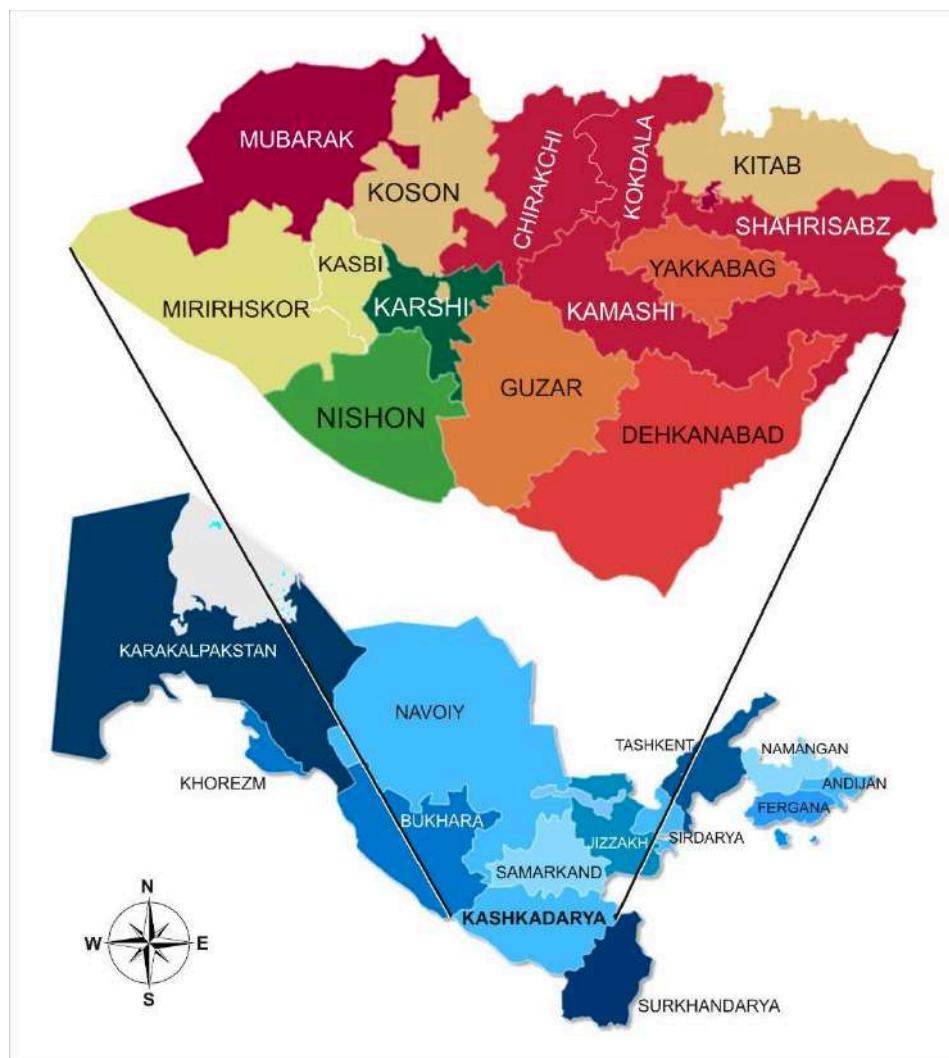
Figure 1: Selected study areas

After wheat harvesting, in April and May 2022, a survey of the study area was conducted using a multistage sampling technique to collect primary data. In stage-1, the Kashkadarya province was selected specifically. In stage-2, 14 districts (D) were chosen: Nishon, Mirishkor, Kasbi, Koson, Guzar, Karshi and Mubarak from cotton-wheat cropping zone and Kamashi, Yakkabag, Shahrisabz, Chirakchi, Kokdala, Dehkanabad and Kitab from mixed cropping zone. During the first quarter of 2022, these districts were found to be the most vulnerable due to windstorms, thunderstorms, and hailstorms. In stage-3, using a convenient sampling two villages were chosen from each district. In stage-4, five wheat growers (farmers) were interviewed from each village randomly using the prepared questionnaire.

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Focus group discussions were also conducted with participants to discuss details of damage caused by extreme weather events. In total, one province, 14 districts, 28 Villages, and 120 farmers were interviewed about the required information.

All participants verbally consented to interviews, assured of confidentiality for research purposes. Data collected covered wheat yield, institutional services, socioeconomic profiles, and strategies adopted to cope with extreme weather events.

3.1 Impact evaluation of extreme weather events on wheat yield

To assess the impact of extreme weather events on wheat yield, we employed both parametric and non-parametric econometric techniques. The primary data collected from 120 wheat growers in the Kashkadarya province provided a comprehensive dataset, allowing for a detailed analysis of the effects of different weather shocks on wheat production.

Following the protocols studied by Elahi et al., the Cobb-Douglas (CD) production function was employed to estimate the impact of storms and management strategies on wheat yield[18]. The CD production function was selected due to its ability to estimate the direct elasticities of the parameters. The general form of the CD production function is expressed as:

$$Y_i = \beta_0 \sum_{j=1}^{n} X_{ij}^{\beta_j} e^{\mu_i} \text{ for } i = 1, 2, \ldots, 1232$$

To linearize this non-linear production function, the logarithmisation was performed to both sides, resulting in:

$$\ln Y_i = \beta_0 + \beta_j \sum_{j=1}^{n} \ln(X_{ij}) + \mu_i \text{ for } i = 1, 2, \ldots, 1232$$

Where Y_i represents the wheat yield and/or yield damages in centres per hectare for the i-th farm; X_{ij} -denotes the j-th variable for the i-th farm; β is the intercept; β_j is the vector of parameters.

The information about wheat yield, institutional services, socio-economic profiles, and the use of physical and non-physical strategies to cope with extreme weather events was also collected.

IV. RESULTS AND DISCUSSIONS

Figure 2 presents the intensity of storms (categorized as less than moderate, moderate, and severe) and their impact on the wheat crop. There were no reports of storms during the sowing period, and there are not any hailstorms reported during sowing or between sowing and harvesting. More than two-thirds of farmers experienced less than moderate thunderstorms between sowing and harvesting, while a significant majority (74%) encountered severe thunderstorms at the time of wheat maturity, coinciding with the peak of harvesting. This severe weather damaged the standing crops. Fields exposed to severe thunderstorms yielded 0.23 and 0.1 times less wheat than those affected by less than moderate and moderate thunderstorms, respectively.

Similarly, more than 90% of farmers reported experiencing less than moderate windstorms between sowing and harvesting. In contrast, about 95% of the farmers faced severe windstorms precisely at the time of harvesting. Farms affected by severe windstorms during harvesting reported significantly lower wheat yields compared to those that experienced mild or less than mild windstorms.

4.1. Effectiveness of innovative management strategies

The study evaluated several innovative management strategies to mitigate the adverse effects of extreme weather events. The key findings include:

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Watercourse maintenance: Farms that maintained watercourses effectively managed excess water from heavy rains, reducing waterlogging and subsequent yield losses by 9-13%.

Shelterbelt plantation: Farms with shelterbelts experienced about 14% less crop loss compared to those without, demonstrating the effectiveness of windbreaks in protecting crops from windstorms.

Irrigation schedule adjustments: Adjusting irrigation schedules based on weather forecasts reduced yield losses by 3-9%, highlighting the importance of flexible water management practices.

Crop insurance: Although the adoption rate of crop insurance was low, insured farmers reported significantly lower financial stress and were better able to recover from yield losses.

Farmer education and weather forecast access: Farmers who received training and had access to reliable weather forecasts were better prepared to implement protective measures, resulting in lower yield losses.

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Thunderstorm Impact on Wheat

Windstorm Impact on Wheat

Hailstorm Impact on Wheat
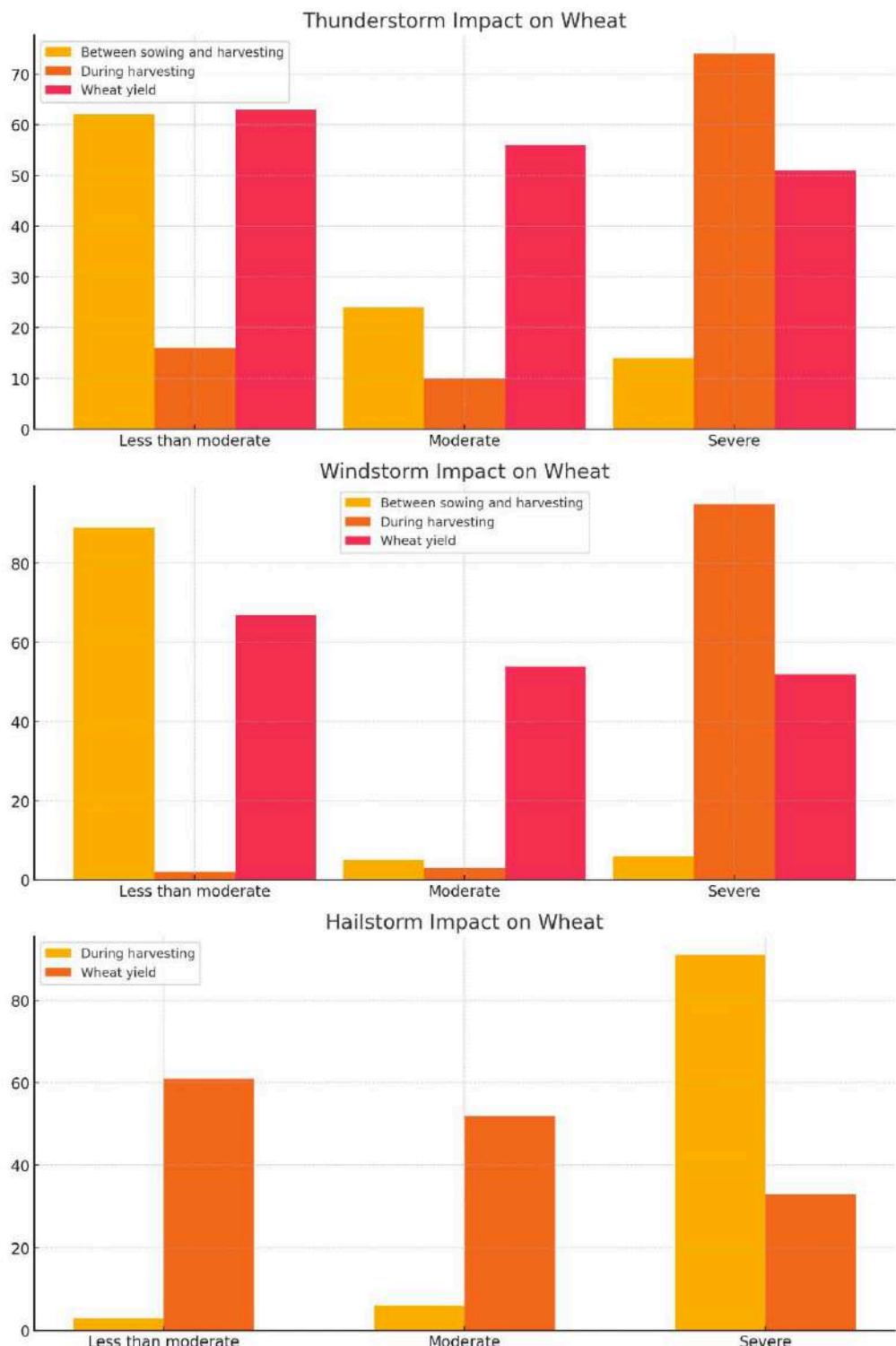
Figure 2: The intensity of storms.

V.   CONCLUSIONS

This study evaluates the impact of extreme weather events on wheat production in the Kashkadarya region of Uzbekistan and highlights the effectiveness of various management strategies to mitigate these risks. Data collected from 120 wheat growers demonstrated significant adverse effects of thunderstorms, windstorms, and hailstorms on wheat yield. Severe thunderstorms, windstorms, and hailstorms caused substantial yield reductions, with the most severe losses occurring during the

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harvesting period. Severe thunderstorms led to a yield reduction of 0.14 units per parameter, severe windstorms resulted in a yield reduction of 1.32 units per parameter, and severe hailstorms caused the highest yield reduction of 1.98 units per parameter. Innovative management strategies proved effective in mitigating these impacts. Effective watercourse maintenance reduced waterlogging and subsequent yield losses by 9-13%. Shelterbelt plantation reduced crop loss by approximately 14%, providing critical protection from windstorms. Adjusting irrigation schedules based on weather forecasts reduced yield losses by 3-9%. Although the adoption rate of crop insurance was low, insured farmers experienced significantly lower financial stress and were better able to recover from yield losses. Farmers who received training and had access to reliable weather forecasts were better prepared to implement protective measures, resulting in lower yield losses. The study highlights the necessity of financial and technical support for farmers to adopt innovative management strategies. Policymakers, researchers, and practitioners are urged to prioritize climate-smart agriculture practices to safeguard food security in rural Kashkadarya and similar agro-ecological zones globally. Further research is recommended to explore additional effective adaptation measures and refine existing strategies to better protect crops from weather shocks. This research calls for stakeholders to invest in and implement innovative agricultural practices to enhance the resilience of the agricultural sector against climate change and extreme weather events, ensuring sustainable food production for future generations.

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Impact of the COVID 19 Pandemic on Private Higher Education Institutions in Brazil

Aívinis Viana Rezende & Luis Francisco Brotóns Muró

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ABSTRACT

This research aimed to understand the transformations that occurred in private higher education institutions in Brazil during the pandemic period and the perceived impacts after this period. During the research, a bibliographic search on the subject in question was conducted, and an investigation instrument was applied to 114 educational managers from higher education institutions from all regions of Brazil. This instrument was developed with closed, multiple-choice, direct, and indirect questions and divided into two parts. The first part collected general data to understand the profile of the respondents, and the second part collected specific data on the topic relevant to this research. Descriptive and inferential statistical methods were applied to analyze the data. Qualitative variables were presented by absolute and relative frequency distributions. Quantitative variables were presented by measures of central tendency and variation. The results indicated that there were transformations in areas of the organization such as academic, financial, and planning and management, but the academic area was the one that underwent the most transformations overall. Another point highlighted was the type of academic organization, with University Centers being the most affected by strategic transformations. It was also noted that institutions were impacted in a similar way when compared by region. Finally, when comparing institutions based on the number of enrolled students, smaller institutions were the ones that underwent the most strategic transformations.

Keywords: college education, higher education institution, strategic management and covid-19.

Classification: JEL Code: I23

Language: English

Impact of the COVID 19 Pandemic on Private Higher Education Institutions in Brazil

Impacto de la pandemia COVID 19, en las Instituciones Privadas de Educación Superior en Brasil

Aívinis Viana Rezende[α] & Luis Francisco Brotóns Muró[σ]

RESUMEN

Esta investigación busca comprender las transformaciones estratégicas que tuvieron lugar en las instituciones privadas de educación superior en Brasil durante el período de la pandemia y los impactos percibidos posteriormente. Se realizó un relevamiento bibliográfico del tema en cuestión y se aplicó una encuesta a 114 gestores educacionales de instituciones de educación superior de todas las regiones de Brasil. Este instrumento fue elaborado con preguntas cerradas, de opción múltiple, directas e indirectas, y se dividía en dos partes: la primera tenía por objeto recoger datos generales para conocer el perfil del encuestado, y la segunda, datos específicos sobre el tema pertinente para esta investigación. Para analizar los datos se utilizaron métodos estadísticos descriptivos e inferenciales. Las variables cualitativas se presentaron mediante distribuciones de frecuencias absolutas y relativas. Las variables cuantitativas se presentaron mediante medidas de tendencia central y variación. Se han producido transformaciones en ámbitos de la organización como el académico, el financiero y el de planificación y gestión, pero el académico es el que más cambios ha experimentado en general. Otro punto destacado fue el tipo de organización académica, siendo los Centros Universitarios los que experimentaron más cambios estratégicos. También, se observó que las instituciones sufrían un impacto similar cuando se comparaban por regiones. Por último, al comparar las instituciones, teniendo en cuenta la base de estudiantes matriculados, las instituciones más pequeñas son las que han experimentado más transformaciones estratégicas. La motivación de este trabajo es contribuir a nuevas discusiones, análisis y estudios sobre la educación superior en Brasil, principalmente sobre la gestión de estas organizaciones, a través del análisis de datos e investigaciones actuales, para sumar y agregar más conocimientos a todos los involucrados en este sector, que necesita estudios profundos para mejorar la oferta de educación superior en todo el territorio nacional, mejorar la calidad y forma de acceso de la población en todo el territorio nacional.

Palabrasclaves: educación superior, instituciones de educación superior, gestión estratégica y covid-19.

ABSTRACT

This research aimed to understand the transformations that occurred in private higher education institutions in Brazil during the pandemic period and the perceived impacts after this period. During the research, a bibliographic search on the subject in question was conducted, and an investigation instrument was applied to 114 educational managers from higher education institutions from all regions of Brazil. This instrument was developed with closed, multiple-choice, direct, and indirect questions and divided into two parts. The first part collected general data to understand the profile of the respondents, and the second part collected specific data on the topic relevant to this research. Descriptive and inferential statistical methods were applied to analyze the data. Qualitative variables were presented by absolute and relative frequency distributions. Quantitative variables were presented by measures of central tendency and variation. The results indicated that there were

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transformations in areas of the organization such as academic, financial, and planning and management, but the academic area was the one that underwent the most transformations overall. Another point highlighted was the type of academic organization, with University Centers being the most affected by strategic transformations. It was also noted that institutions were impacted in a similar way when compared by region. Finally, when comparing institutions based on the number of enrolled students, smaller institutions were the ones that underwent the most strategic transformations.

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I. INTRODUCCIÓN

Las IES están insertas en un entorno en el que se producen continuos cambios y en este escenario es fundamental la gestión estratégica, lo que exige a sus gestores un conocimiento global de la institución. Y según Monteiro (2005), las instituciones educativas están en permanente intercambio con su entorno, en el que actúan un gran número de fuerzas diferentes, que se renuevan constantemente e interfieren en el estado final del sistema. Por ello, las IES deben adaptarse detectando los cambios del entorno.

La pandemia lo ha hecho más evidente ya que los cambios han sido bruscos y muchas instituciones de educación superior han sufrido dificultades y/o incluso han cerrado sus puertas.

Esta investigación pretende responder a la siguiente pregunta: ¿cómo se han producido las transformaciones estratégicas en las instituciones privadas de educación superior en Brasil durante la pandemia de COVID-19 hasta 2022?

El objetivo de esta investigación es analizar cómo se han producido las transformaciones estratégicas en las instituciones privadas de educación superior en Brasil durante la pandemia de COVID-19, que comenzó en marzo de 2019. El periodo mencionado anteriormente, de 2019 a 2022, sería el periodo en el que la pandemia se produjo de forma más crítica en términos de restricciones.

Para alcanzar el objetivo propuesto, los recursos metodológicos utilizados serán la investigación bibliográfica realizada mediante la consulta de libros y artículos científicos, así como los resultados de la aplicación de un cuestionario electrónico a directivos educativos de todas las regiones del país, utilizando una muestra estratificada proporcional.

II. MARCO TEÓRICO

Las instituciones de educación superior (IES) brasileñas pueden ser públicas o privadas. Las instituciones públicas son mantenidas por las autoridades públicas y no cobran tasas de matrícula ni cuota. Las IES privadas, por su parte, están dirigidas por personas físicas o jurídicas de derecho privado, con o sin ánimo de lucro (De Oliveira et al., 2022).

En las dos últimas décadas, la educación superior privada ha asumido el papel de principal motor del crecimiento de la educación superior en Brasil. Este escenario se creó en la búsqueda de la consecución de los objetivos nacionales para la educación superior, especialmente los contenidos en el Plan

Nacional de Educación (PNE), al tiempo que contó con el inmenso apoyo de la utilización de diversas políticas públicas para fomentar la expansión de la participación privada en el sector (Mira, 2021).

De acuerdo con el Decreto n.º 9.235 (2017), el sistema de educación superior en Brasil comprende: instituciones federales de educación superior (IFE); instituciones de educación superior (IES) creadas y mantenidas por el sector privado, que están sujetas al sistema federal de educación; y órganos federales de educación superior. El mismo decreto establece que el funcionamiento de las IES y la oferta de cursos de educación superior dependen de un acto de autorización del Ministerio de Educación (MEC).

El número de estudiantes en carreras de grado en Brasil ha aumentado considerablemente en las últimas décadas. En 2010, había 2,18 millones de ingresados y en 2020, 3,76 millones, lo que supone un aumento del 72,5% en solo una década. También se ha producido un cambio significativo en la forma de ofrecer las carreras. En 2010, el 62,6% de los ingresados lo hacían en carreras presenciales, mientras que a partir de 2015 estos cursos empezaron a perder ingresantes, hasta alcanzar el 33,9% del total. En cifras absolutas, se produjo un descenso del 15,6% en el número de matriculados en cursos presenciales privados, de 1,51 millones a 1,28 millones (Senkevics, et al 2022).

Por otra parte, el número de ingresantes en carreras privadas a distancia (EaD) ha aumentado significativamente. En 2010, estas carreras recibieron 340.000 nuevos estudiantes, el 16% del total. En 2014, esta cifra se duplicó hasta alcanzar los 384.000 ingresantes. En 2020, este segmento había alcanzado los 1,96 millones de nuevos estudiantes, lo que suponía el 52,1% de todos los estudiantes de nuevo ingreso, como puede verse en el Gráfico 1 (Senkevics, et al 2022).
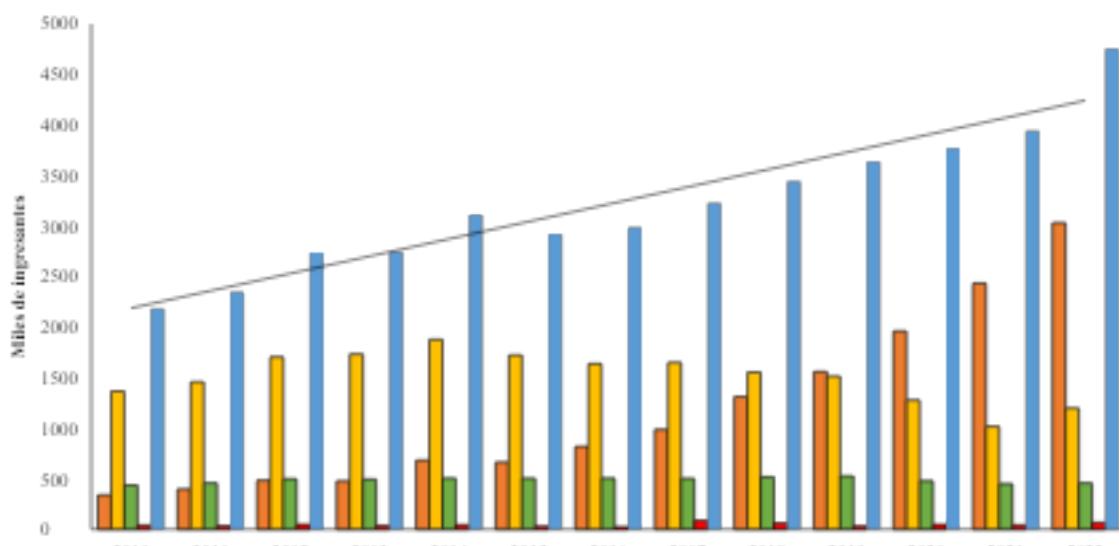
Fuente: elaboración propia

Gráfico 1: Número de ingresantes, por segmento y modalidad – BRASIL – 2010-2022

Las IES utilizan el Plan de Desarrollo Institucional (PDI) como herramienta para definir las directrices de las acciones institucionales, constituidas por objetivos, metas e indicadores, que conducirán el proceso de desarrollo de la institución para un período determinado (Espejo, et al., 2022).

Según Araújo (2018), la principal guía para la planificación estratégica en las instituciones de educación superior es el PDI, que hoy es una herramienta obligatoria para que la institución sea evaluada por el Ministerio de Educación y, aunque contribuye a la planificación estratégica, no debe confundirse con ella, ya que mientras el PDI se define por decreto y tiene directrices y un plazo fijo, la planificación es una de las etapas de un proceso más amplio llamado gestión estratégica.

Para estructurar la planificación institucional, las IES cuentan con una herramienta de gestión, el PDI, que orienta las prácticas y la evaluación institucionales, permitiendo comprender la posición de la institución en un entorno altamente competitivo (Francisco et al, 2012).

Castione (2020) cita que investigar cómo algunas Instituciones de Educación Superior actuaron para continuar cumpliendo sus misiones en un momento histórico como ese, desde una perspectiva comparada, puede ayudar a construir nuevas estrategias políticas para la educación superior.

Para hacer frente al problema global de la COVID-19, muchas instituciones de educación superior han reformulado sus procesos de enseñanza y su modus operandi. En algunas experiencias, quedó claro que el proceso era costoso y oneroso, ya que no estaba previsto un cambio drástico como el implementado (Moreira, 2020).

Estos cambios no se han producido de forma homogénea y lineal, variando significativamente según la naturaleza de las instituciones educativas, los tipos de instituciones y el perfil socioeconómico del profesorado y del alumnado (Pires, 2021).

III. OBJETIVOS

El objetivo general de la investigación es analizar cómo se han producido las transformaciones estratégicas en las instituciones privadas de educación superior en Brasil durante la pandemia de COVID-19, que comenzó en marzo de 2020 hasta 2022.

Para ello se han definido unos objetivos específicos:

- Identificar los sectores de la institución privada de educación superior que se han visto afectados por la pandemia según la opinión de los gestores;
- Identificar el área de la institución en la que se ha producido un cambio significativo relacionado con las estrategias;
- Identificar las dificultades de gestión que han experimentado las instituciones durante la pandemia;

IV. METODOLOGIA

Se utilizó una metodología mixta, cuantitativa y cualitativa. A través de un cuestionario estructurado en línea como herramienta de recopilación de datos, basado en la aglutinación de constructos relacionados con la gestión estratégica, el cambio y el rendimiento de las instituciones de educación superior durante la pandemia. Este cuestionario fue aplicado a gestores de Instituciones Privadas de educación superior entre el 5 de junio y el 16 de agosto de 2023, a una muestra de n=114 entrevistados, (CEOs (Chief Executive Officers) / presidentes, rectores, directores, gerentes, coordinadores, supervisores y otros cargos directivos), distribuidos proporcionalmente por las cinco regiones de Brasil.

Se formularon un total de 35 preguntas, de las cuales 9 se refieren a definir el perfil del encuestado y 26 tratan de identificar los factores que llevaron a las transformaciones estratégicas en el período en cuestión.

El universo de esta investigación era de 2261 instituciones privadas de educación superior en Brasil, cuya modalidad académica es presencial, y se tomó una muestra de 100 instituciones, que se distribuyeron proporcionalmente por todas las regiones del país.

<div align="center">*Tabla 1:* Muestra de la investigación</div>

Estratos	Población	%	Muestra
Sur	358	15,83%	16
Sureste	933	41,26%	41
Norte	174	7,70%	8
Noreste	534	23,62%	24
Centro-Oeste	262	11,59%	11
TOTAL	2.261	100%	100

<div align="right">*Fuente: Elaboración propia*</div>

V. RESULTADO

Para comprender mejor el análisis de los datos, las preguntas del instrumento de encuesta se segmentaron en grupos temáticos: Planificación y Gestión (P & G), Financiero y Académico. A continuación, se llevó a cabo un análisis factorial confirmatorio para identificar qué variables influyen en la formación del ITEC-19 (Impacto de las Transformaciones Estratégicas de COVID-19) y sus tres componentes (Académico, Financiero y de Planificación y Gestión). Las preguntas se dividieron según la Tabla 2.

<div align="center">*Tabla 2:* Segmentación de las preguntas del instrumento de investigación para el análisis factorial confirmatorio</div>

Académico	P2: En su opinión, el área de la institución privada de educación superior más afectada, con transformaciones significativas, fue la académica. P9: Considerando los cambios organizacionales que ocurren en las instituciones frente a los desafíos a lo largo del tiempo, en el período de la pandemia, ha habido un cambio significativo en las estrategias relacionadas con la gestión del área Académica de la institución. P22: En su opinión, las políticas educativas son los factores más influyentes en el mercado de la educación en Brasil, después del período de mayor complejidad de COVID-19, a partir del segundo semestre de 2021.
Financiero	P2: En su opinión, el área de la institución privada de educación superior más afectada, con transformaciones significativas, fue la financiera. P12: Desde la llegada de la pandemia, se ha producido un descenso en la matriculación en la institución privada de educación superior P14: Desde la llegada de la pandemia, se ha producido un aumento de los gastos de la institución de educación superior privada, en comparación con el periodo anterior a la pandemia P15: Desde la llegada de la pandemia, ¿se ha producido una disminución de los ingresos de la institución procedentes de educación superior privada, en comparación con antes de este periodo? P17: Desde la pandemia, el ticket medio de la institución privada de educación superior en la que trabajo ha cambiado negativamente.

	P21: En su opinión, la economía mundial y/o nacional es un factor de mayor influencia en el mercado de la educación en Brasil, después del período de mayor complejidad de la COVID-19, a partir del segundo semestre de 2021.
Planificación y gestión	P1: En su opinión, la llegada de la pandemia de COVID-19 ha hecho que las instituciones reformulen su planificación estratégica.
	P4: En su opinión, el área de la institución privada de educación superior más afectada, con transformaciones significativas, fue la de tecnología.
	P5: En su opinión, el área de la institución privada de educación superior más afectada, con transformaciones significativas, fue la de recursos humanos.
	P6: En su opinión, el área de la institución privada de educación superior más afectada, con transformaciones significativas, fue la institución en su conjunto
	P7: Con la llegada de la pandemia, fue necesario reestructurar las herramientas tecnológicas utilizadas en la institución privada de educación superior.
	P8: Teniendo en cuenta los cambios organizacionales que se producen en las instituciones ante los retos a lo largo del tiempo, durante el periodo de pandemia, se produjo un cambio significativo en las estrategias relacionadas con la gestión de las áreas Financiera, Recursos Humanos, Comercial y/o Marketing de la institución privada de educación superior.
	P10: Desde la pandemia, los directivos de la institución privada de educación superior han notado la necesidad de modificar las herramientas que se utilizaban anteriormente en la gestión
	P11: La institución privada de educación superior ha cumplido hasta ahora las metas y objetivos propuestos en el PDI.
	P13: Desde la llegada de la pandemia, se ha producido un aumento de la tasa de abandono escolar.
	P16: Desde la llegada de la pandemia, se ha producido un aumento de la tasa de rotación en comparación con antes de la pandemia.
	P18: En su opinión, las transformaciones que se produjeron en la gestión en la época de la pandemia de se mantendrán después de la pandemia de COVID-19.
	P19: En su opinión, las transformaciones estratégicas que han tenido lugar con la llegada de COVID-19 han sido positivas para el futuro de la institución de educación superior privada, aunque a un ritmo acelerado.
	P20: En su opinión, después de todos los cambios ocurridos en los primeros años de la pandemia (2019 a 2021), la gestión de la educación superior privada en Brasil sufrirá menos inestabilidad.
	P23: En su opinión, la tecnología es el factor más influyente en el mercado de la educación en Brasil, después del período de mayor complejidad de COVID-19, a partir del segundo semestre de 2021.

	P24: En su opinión, las transformaciones sociales son factores que tendrán mayor influencia en el mercado de la educación en Brasil, después del período de mayor complejidad de la COVID-19, a partir del segundo semestre de 2021.
	P25: En su opinión, con todos los cambios que se han producido en la IES desde COVID-19, la calidad del servicio prestado no ha variado.
	P26: En su opinión, con los cambios que se han producido en la IES desde COVID-19, se ha avanzado en la calidad del servicio prestado.

Fuente: Elaboración propia

A partir de esta segmentación, se calculó el análisis factorial confirmatorio y la puntuación ITEC-19 se muestra en la Tabla 3.

Tabla 3: Resultados del análisis factorial confirmatorio

	Coeficientes del análisis factorial				Intervalo de Confianza	
	C Factorial	E Estándar	Estat Z	p-valor	IC 95%	
ITEC-19 (Impacto de COVID-19)						
PLA_GE	1.000	0.000	3.900	0.000	.9999880	.9999988
FINAN	0.041	0.149	0.270	0.786	.2515456	.3326485
ACADEM	0.081	0.130	0.620	0.534	.1738277	.3352901
PLA_GE (Planificación y Gestión)						
P1	1.000	0.000	3.920	0.000	.9999980	.9999998
P5	0.369	0.184	2.000	0.045	.0080817	.7292839
P6	0.427	0.108	3.940	0.000	.2147336	.6395093
P10	0.449	0.122	3.670	0.000	.2094432	.6886938
P11	0.457	0.185	2.470	0.014	.0942169	.8206119
P16	0.468	0.189	2.480	0.013	.0980247	.8389183
P18	0.233	0.115	2.030	0.043	.0074992	.4578166
P19	0.470	0.165	2.840	0.004	.1459226	.7944201
P20	0.135	0.205	0.660	0.510	-.266298	.5363964
P24	0.197	0.140	1.410	0.160	.0775166	.4706295
P25	-0.114	0.217	0.530	0.599	.5391433	.3109969
P26	0.251	0.200	1.260	0.209	.1407029	.6432634
P4	0.140	0.172	0.810	0.416	.1969393	.4763691
P7	0.497	0.118	4.210	0.000	.2656376	.72921
P8	0.530	0.117	4.530	0.000	.3004275	.7586792
P23	0.371	0.174	2.130	0.033	.030252	.7125826
FINAN (Financiero)						
P3	1.000	0.000	3.910	0.000	.9999970	.9999978
P12	0.326	0.021	2.090	0.001	.3259320	-.3259330
P14	0.339	0.254	1.340	0.182	.1584309	.8356239
P15	0.143	0.127	1.130	0.257	.1048409	.3917376
P17	0.359	0.274	1.360	0.152	.1584309	.8356239
P21	0.270	0.189	1.430	0.154	.1009207	.6407741

ACADEM (Académico)						
P2	1.000	0.000	3.880	0.000	.9999970	.9999996
P9	0.230	0.180	1.340	0.203	.1507029	.6732634
P22	.5346	.1854	2.77	0.002	.1659226	.8844201

Para resumir e identificar las variables que influyen en la formación de ITEC-19 en los tres segmentos, se creó la Figura 1 a continuación con una representación gráfica.
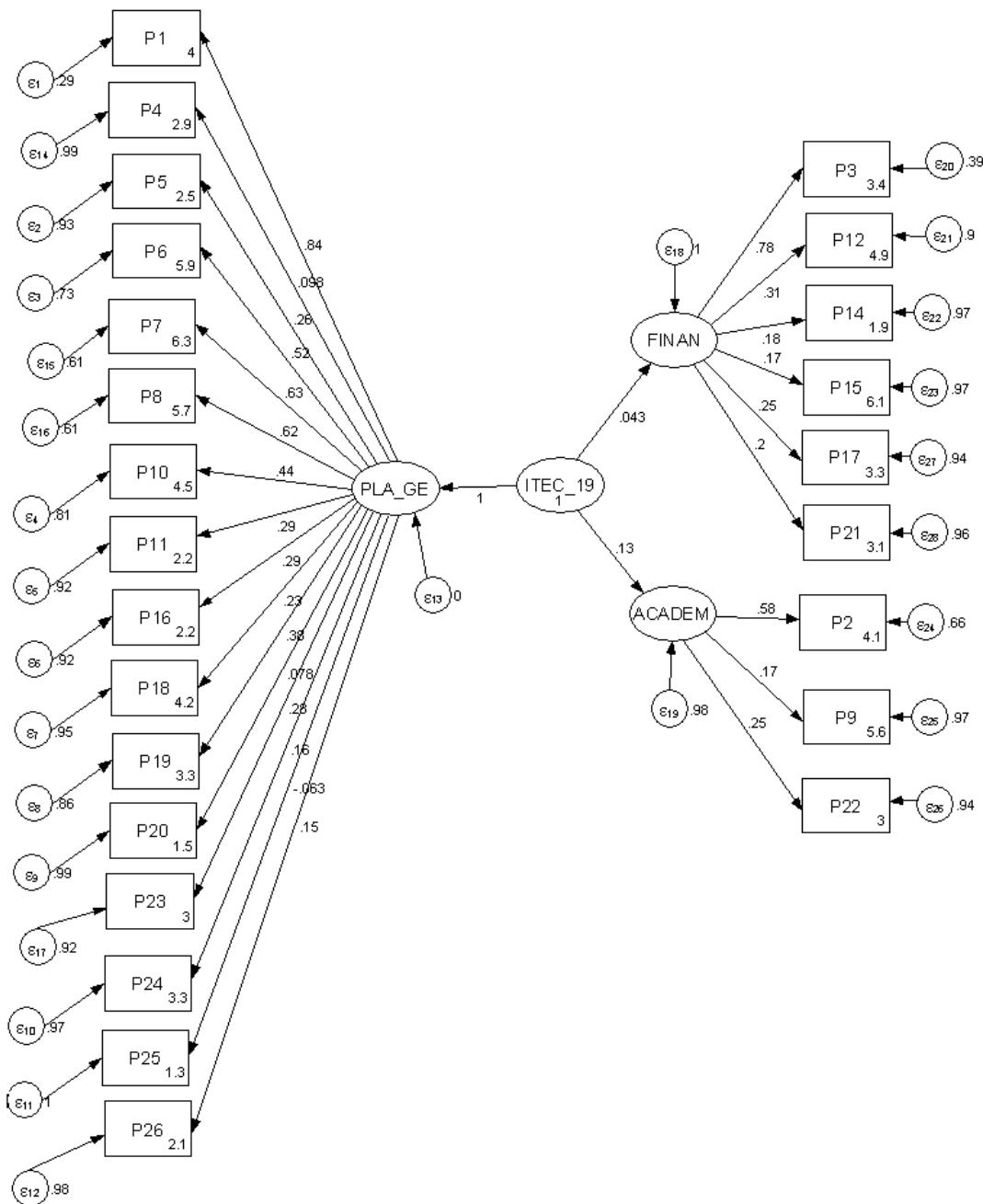
Figura 1: Puntuación del modelo de análisis factorial confirmatorio ITEC-19 (Impacto de las transformaciones estratégicas de COVID-19).

La puntuación global del ITEC-19, según las variables Planificación y Gestión, Académica y Financiera, dio como resultado un valor p <0,0001 (estadísticamente significativo), siendo la variable Planificación

y Gestión la menos afectada por el impacto global de la puntuación de ITEC-19 con una puntuación media de 69,5 puntos, el sector académico fue el más afectado durante la pandemia, con una puntuación media de 80,5 puntos, seguido del sector financiero, con 79,3 puntos, como muestra la Tabla 4.

Tabla 4: Puntuación global de ITEC-19 (Impacto de las transformaciones estratégicas de COVID-19)

	Resultado globales do ITEC-19				
	P&G	Académico	Financiero	ITEC-19	p-valor
					*<0.0001**
Media	69.5	80.5	79.3	76.4	
DP	11.6	10.3	11.0	8.7	
Mediana	68.8	82.1	82.1	76.0	

* Prueba de ANOVA (Análisis de Varianza con postest de Tukey) un criterio
Fuente: Elaboración propia

Según los directivos encuestados, el sector académico fue el más afectado durante la pandemia, con una puntuación media de 80,5 puntos, seguido del sector financiero, con 79,3 puntos.

Otro análisis realizado fue investigar la puntuación ITEC-19 en función del tipo de organización en la que trabaja.

El impacto financiero según las organizaciones dio como resultado un valor p = 0,0101* (estadísticamente significativo), siendo la organización universitaria la menos afectada por el impacto financiero, con una puntuación media de 69,2 puntos, según la Tabla 5.

Tabla 5: Puntuación ITEC-19 (Impacto de las transformaciones estratégicas COVID-19) según el tipo de organización

	El tipo de organización para la que trabajo						
	Mantenedora	Facultad	C. Universitario	Universidad	Inst ou Fund	Otros	p-valor
P&G							0.5064
Media	70.7	68.9	72.5	67.9	57.3	67.5	
DP	11.2	11.2	14.3	7.8	1.5	13.0	
Mediana	69.8	70.8	68.8	66.7	57.3	68.8	
Académico							0.1754
Media	80.8	79.7	83.9	75.3	85.7	85.0	
DP	10.9	9.3	10.8	8.6	0.0	16.4	
Mediana	80.4	82.1	82.1	78.6	85.7	89.3	
Financiero							*0.0101**
Media	78.4	80.0	82.5	69.2	82.1	85.0	
DP	10.1	10.2	11.0	11.9	0.0	10.8	
Mediana	78.6	82.1	82.1	71.4	82.1	78.6	
ITEC-19							0.0998
Media	76.6	76.2	79.6	70.8	75.0	79.2	
DP	7.9	7.6	10.5	8.1	0.5	11.7	
Mediana	76.9	75.4	80.7	74.3	75.0	84.9	

* Prueba de ANOVA un criterio.
Fuente: Elaboración propia

Se observa que en el área de Planificación y Gestión (P & G), los centros universitarios fueron los más afectados, con 72,5 puntos, seguidos de los proveedores de instituciones de educación superior, con 70,7 puntos. Los institutos y fundaciones fueron los menos afectados, con 57,3 puntos.

VI. CONCLUSIONES

Con base en esta segmentación, fue posible identificar que el impacto sufrido por las IES, en general, fue de escala alta (76.4 puntos en la escala ITEC-19, de 0 a 100 puntos), y la diferenciación entre un área y otra fue baja, pero es posible inferir que el área de planificación y gestión fue la menos impactada, con 69,5 puntos en la escala ITEC-19.

La escala ITEC-19 y la escala académica fueron las más afectadas, con 80,5 puntos, seguidas de la escala financiera, con 79,3 puntos.

Comparando las áreas y el tipo de organización académica de las instituciones brasileñas encuestadas, es posible concluir que los Centros Universitarios fueron los más afectados, con 79,6 puntos en la escala ITEC-19 y las Universidades fueron las menos afectadas, con 70,8 puntos, destacándose las áreas de Planificación y Gestión y Finanzas que tuvieron las puntuaciones más altas para este tipo de institución.

Al comprobar los datos, desglosando las instituciones por número de estudiantes matriculados, es posible comprender que las instituciones más pequeñas fueron las más afectadas durante el periodo de la pandemia. Estratificando por áreas, las instituciones con hasta 499 estudiantes se vieron más afectadas en las áreas de P & G y Académica, y las de 500 a 4999 estudiantes, en la Académica.

Al final de la investigación, fue posible responder a la pregunta planteada como problema de este trabajo: "¿cómo han ocurrido las transformaciones estratégicas en las instituciones privadas de educación superior en Brasil, durante la pandemia de la COVID-19 hasta 2022?". Para reforzar la base teórica, el estudio bibliográfico fue esencial para comprender los factores que influyeron en las estrategias adoptadas por las IES.

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