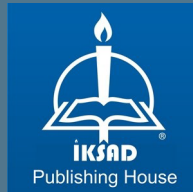# ECONOMIC DEVELOPMENT RESEARCH

From the perspectives of Industrialization, Tourism, Foreign Trade, Education and Agriculture

Edited by

Mustafa Latif EMEK
Seden Turamberk ÖZERDEN

ECONOMIC DEVELOPMENT RESEARCH
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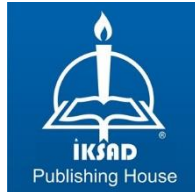
Authors

Ahmet KARDAŞLAR

Seden TURAMBERK ÖZERDEN

M.Ed. Juan Habib Bendeck SOTO

Vaibhav Kant SINGH

Ibrahim Mukisa (PhD)

Abbey Malwa Wadembere

Hendri Hermawan ADINUGRAHA

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PREFACE

The pursuit of knowledge and understanding of the intricate connections between various aspects of our world is a fundamental human endeavor. In this collection of chapters, we delve into the complex web of economic growth, development, and global interdependence. Each chapter serves as a unique lens through which we examine the multifaceted nature of our global economy and its impact on nations, industries, and individuals.

Chapter 1: "Tourism Development and Its Impact on Economic Growth in Indonesia"

Indonesia, a nation of remarkable natural beauty and cultural diversity, has long been a magnet for tourists. In this chapter, we explore how the tourism industry plays a pivotal role in the country's economic growth. We investigate the dynamic relationship between tourism development and economic prosperity, shedding light on the intricate synergy between a nation's natural treasures and its economic well-being.

Chapter 2: "Unveiling the Path to Rapid Economic Growth: Lessons from Aggressive Industrialization Strategies of Selected East Asian Countries"

The East Asian miracle of rapid economic growth has intrigued scholars and policymakers for decades. In this chapter, we dissect the strategies employed by select East Asian countries and reveal the valuable lessons they offer. As we uncover their secrets, we find inspiration and guidance for those seeking to replicate their success.

Chapter 3: "The Impact of International Trade on Regional Development in Turkey: Panel Causality Analysis"

Turkey stands at the crossroads of Europe and Asia, making it a pivotal player in international trade. In this chapter, we explore how global commerce influences regional development in Turkey. Through rigorous panel causality analysis, we gain a nuanced understanding of the interconnectedness between international trade and local prosperity.

Chapter 4: "Genetic Algorithm: An Important Approach of Machine Learning Technology Aiming at Making the Economy of the Country Better"

The synergy between technology and economic development is a defining feature of the modern world. In this chapter, we delve into the

transformative potential of genetic algorithms, a facet of machine learning technology. We uncover how this innovative approach can contribute to enhancing a nation's economic landscape.

Chapter 5: "From Classrooms to Boardrooms: The Influence of Education on Economic Dynamics"

Education has long been recognized as a driving force behind economic growth. In this chapter, we investigate the profound impact of education on economic dynamics. From classrooms where knowledge is imparted to boardrooms where decisions are made, we uncover the pivotal role education plays in shaping a nation's economic future.

Chapter 6: "The Impact of Brands Awareness on Consumer Based Brand Loyalty : Case of Kyrenia"

The tourism industry has become one of the most important industries in the world, especially in the last century. This study shows that advertising has a direct positive relationship with customer   awareness, but not with customer loyalty. For sure advertising increases the customer's awareness, but for building loyalty we need additional tools and instruments.

As you embark on the journey through these chapters, you will discover a rich tapestry of insights, revealing the intricate dance between economic growth and various factors that influence it. Whether it's the allure of tourism, the power of agriculture, the lessons from East Asia, the dynamics of international trade, the promise of cutting-edge technology, or the transformative influence of education, this collection offers a panoramic view of our interconnected global economy. Enjoy the exploration, and may these chapters inspire fresh perspectives and new pathways to prosperity.

CHAPTER 1

TOURISM DEVELOPMENT AND ITS IMPACT ON ECONOMIC GROWTH IN INDONESIA

Hendri Hermawan ADINUGRAHA[1]

[1] Faculty of Islamic economics and business, UIN K.H. Abdurrahman Wahid Pekalongan, Indonesia.ORCID ID: https://orcid.org/0000-0002-8394-5776

Tourism in Indonesia

Indonesia's economic development now places a high premium on the tourism industry (Utama et al., 2023; Remus et al., 2023; Karsono & Salma, 2023). Through the expansion of infrastructure, the creation of jobs and business possibilities, and the receipt of foreign cash, tourism is anticipated to be the key factor boosting Indonesia's economic growth (Agustina et al., 2021). Tourism can also be utilized to promote a country's culture and identity. Because of this, the development of tourism will continue and be enhanced through the development and use of available national tourism resources and potential. The role of tourism in the Indonesian economy is continuing to grow despite being one of the export items that cannot be physically observed. A focused and exact plan is required to enhance international tourism and increase the number of foreign visitors. This can be accomplished by stepping up marketing efforts and upgrading the many facilities required by foreign visitors, including immigration services, transportation options, banking, lodging, dining options, and travel agencies, among others (Sholehuddin et al., 2021).

Tourism in Indonesia is currently being developed (Santoso et al., 2024). One of the efforts made by the government to maximize tourism is by improving infrastructure, both those related to the tourism location itself and the infrastructure to reach the location, such as the construction of airports, train stations, and other accommodation facilities. Sustainable tourism development as mentioned in the Sustainable Tourism Charter is a development that can be supported ecologically and can help economic growth, as well as ethically and socially fair to the community. That is, sustainable development aims to improve living standards, especially in the economic field for communities around tourist areas, by providing facilities and developing optimal utilization and maintenance of tourism in a sustainable manner, optimal and sustainable maintenance of tourism. This is in line with the policy of the Ministry of Tourism and Creative Economy of the Republic of Indonesia which accelerates the implementation of programs that have been formulated in the 2020-2024 Short and Medium Term Plan, in the form of sustainable tourism, increasing competitiveness, creating added value, digital transformation, and increasing added value.

Tourism in Indonesia is an important economic sector in Indonesia (Adinugraha et al., 2020). By 2023, according to Bank Indonesia, tourism will be the third largest contributor to foreign exchange after CPO and coal so its

potential going forward is huge for foreign exchange. Therefore, it can directly reduce the current account deficit. Tourism is a leading sector that is expected to be able to drive the wheels of the Indonesian economy. The making of tourism as a leading sector is none other than because of the impact that tourism activities can have on the social economy, as well as the environment (Star Media Group Berhad, 2017).

As explained, Indonesia has the potential to develop into a world tourist destination. The number of foreign tourist arrivals in Indonesia has been growing steadily from year to year. The tourism sector can quickly generate foreign exchange compared to other sectors. Tourism is an invisible export because tourism looks like no goods or commodities are sent abroad (Kumar, 2018). Foreign exchange is earned by attracting foreign tourists to visit a tourist destination country. Furthermore, tourists will spend money (tourism expenditure) for all needs and desires during their stay in the tourist destination country (Raspor et al., 2017).

Tourism in Indonesia heavily relies on its wealth of both natural and cultural resources (Zebua et al., 2021). Tropical climate, 17,508 islands, 6,000 of which are deserted, and the third-longest coastline in the world, behind Canada and the European Union, make up Indonesia's natural environment. The world's largest and most populous archipelago is that of Indonesia. Natural tourist locations in Indonesia include the beaches of Bali, the diving spots of Bunaken, Lombok, and several national parks in Sumatra. With more than 300 different ethnic groups inhabiting its 17,508 islands and 81,000 km of coastline, Indonesia is the world's largest archipelago and has the potential to develop into an alluring tourist destination and overtake other countries as the most popular travel destination in the world (Pujiati et al., 2023). Indonesia has many things that can be an attraction for tourists (Juliana et al., 2023). These attractions are scattered throughout Indonesia, both in the form of historical sites and commercial tourism. Commercial attractions are divided into several types, namely: Zoo tourism, water tourism, agrotourism, cultural tourism, recreational parks, and nature tourism (Wahim et al., 2023).

The tourist industry has a sizable and important contribution to make to Indonesia's economic development (Jailani & Adinugraha, 2022). Because tourism in Indonesia has been shown to boost earnings in foreign currency, create jobs, and drive the expansion of the tourism sector, it can spur economic growth, particularly by motivating other nations to expand their tourism industries (Ismail, 2021). Based on data from the Central Bureau of Statistics (2023), Bali is still a favorite destination for foreign tourists when

visiting Indonesia in 2022. Of the 5.89 million foreign tourists who visited the country, 46.72 percent of them went to Bali.

Types of Tourism in Indonesia

As is common knowledge, there are always push and pull variables that influence whether or not a person decides to travel, with push factors typically being social-psychological or person-specific motivations and pullers typically being destination-specific characteristics. This has an influence to determine the area or country of tourist destinations he visits, the types of tourism known in Indonesia today, among others, can be seen in the following table:

Table 1: Types of tourism in Indonesia

No	Types of tourism	Description
1	Nature tourism	With more than 18% of the world's coral reefs, more than 3,000 fish species, 590 types of rock corals, 2,500 types of mollusks, and 1,500 types of crustaceans, Indonesia boasts the world's richest coral reef system. There are 600 dive sites created by this abundance of marine life, which are located from Sabang to Merauke. The largest marine park in Indonesia, Raja Ampat is located in the province of West Papua. It is home to a diverse array of marine life and is renowned as a suitable place for scuba diving due of its daytime visibility of up to 30 meters. In the Raja Ampat region, research conducted by the International Conservation Agency in 2001 and 2002 revealed at least 1,300 species of fish, 600 varieties of coral, and 700 types of shells. There are 25 dive sites in Bunaken, North Sulawesi, with a maximum depth of 1,556 meters. This National Park is home to around 70% of the fish species in the Western Pacific. According to some estimates, the coral reefs in this national park are seven times as diverse than those in Hawaii. Wakatobi, Nusa Penida, Karimunjawa, Derawan, and the Thousand Islands are a few other well-known dive sites (Wismantoro et al., 2023).
	Cultural tourism	In Indonesia, cultural tourism refers to travel that is motivated by the desire to experience new cultures, see the world from a different viewpoint, and learn about local people's circumstances as well as their traditions and way of life. There are 1,128 ethnic groups in Indonesia. Due to the diversity of these ethnic groups, Indonesia has a wide

		range of cultural items, including various dances, musical instruments, and rituals. The Ramayana Ballet, which narrates the tale of Rama's journey and is presented at the Prambanan Temple complex, is one of the most well-known dance productions in the world. Visitors frequently travel to Batubulan Tourism Village in Sukawati, Gianyar, to see performances of the Barongan, Kecak, and Legong dances (Munawar et al., 2021).
	Shopping tourism	In Indonesia, there are two main categories of shopping tourism: traditional stores where buyers and sellers haggle, and modern stores. Daily essentials are typically sold in traditional markets, which are typically located in a single structure or street. Some areas with long rivers have floating markets, like the Muara Kuin Floating Market on the Barito River, Banjarmasin, and Lok Baintan Floating Market in Banjar, but others specialize in selling art items or regional specialties, like Sukawati Market in Gianyar, which sells a variety of Balinese handicrafts and art goods, Klewer Market in Soloyang, which sells batik fabrics, Kotagede, which has silver handicrafts (Rahmiati & Amin, 2019).
	Religious tourism	Hinduism and Buddhism once penetrated Indonesia and had an impact on spiritual life, as evidenced by historical remains such temples and inscriptions in various sites. The largest Buddhist monument is the Magelang-based Borobudur Temple, which is the biggest temple in the world and was added to the UNESCO list of World Cultural Monuments in 1991. Islam arrived in the archipelago throughout the 13th to 16th century, displacing the period of Hindu-Buddhist dynasties (Adinugraha et al., 2018; Adinugraha & Sartika, 2022b; Adinugraha et al., 2022).
	Pilgrim Tourism	This kind of tourism is connected to the religion, heritage, traditions, and ideologies of individuals or social groups. This is typically done by groups or individuals that travel to holy locations, famous people's graves, sacred hills or mountains, or the final resting places of legendary characters or leaders. Bung Karno's tomb in Blitar, the Wali Songo Tomb, and other sites of worship like Borobudur Temple, Besakih Temple in Bali, Sendang Sono in Central Java, among others, are examples

		(Khairudin, 2022).
	Halal tourism	Halal tourism is a tourism concept that has been introduced in Indonesia. Halal tourism can be an alternative for Muslim tourists to travel while fulfilling their spiritual needs. Through this halal tourism program, it is hoped that the tourism sector will be able to attract more local and foreign tourists. Talking about the type of halal tourism, Lombok has become a very famous halal tourism destination. The natural beauty and religious side of the people of Lombok are very pronounced there. Nicknamed the Island of a Thousand Mosques, Lombok once occupied the top position as the best halal tourism in the world according to GMTI 2019 (Adinugraha & Sartika, 2022a).

Development of the Tourism Sector in Indonesia

Many recent studies in the literature have focused on the expansion of the tourism industry because this sector not only boosts foreign exchange revenues but also provides employment prospects for nations that are popular tourist destinations, which in turn promotes economic growth. tourist development may stimulate the transfer of resources from high-productive industries to tourist sectors like manufacturing, which could lead to a decrease in manufacturing output because tourism is a low-productivity, labor-intensive industry (Ekasani et al., 2020). Urban tourism booms have the potential to devastate rural communities, endangering Indonesia's ability to build its economy. Therefore, depending on the situation, attempts to promote tourism development may either strengthen or weaken economic growth.

The field of tourism has received attention in the literature on economic growth. Numerous studies have focused primarily on the economic impact of tourism to assess its direct and indirect effects on the economy (Lee & Syah, 2018). The majority of studies on tourism conducted in the latter half of the 20th century did not specifically address the issue of tourism's contribution to economic development.

One of the economic factors that should worry a nation is economic growth. The economy of Indonesia is now expanding and improving as measured by the country's ability to earn more foreign currency. One of these businesses is tourism, which has grown to be one of Indonesia's greatest

sources of economic growth as seen by the rise in both local and international tourist arrivals (Vella Anggresta et al., 2023).

Tourism affects economic growth via a variety of mechanisms (Adedoyin et al., 2022). First, the tourism industry generates foreign currency that can be used to buy capital equipment needed for production. Second, the growth of the tourism industry encourages infrastructural investment. Third, through direct, indirect, and induced impacts, the growth of the tourism industry promotes the growth of other economic sectors. Fourth, tourism helps to increase the number of job chances and revenue. Fifth, tourism results in beneficial scale economies. Additionally, the promotion of research and development, dissemination of technical knowledge, and the development of human capital all benefit from tourism (Romeo Asa et al., 2022).

The tourism industry is crucial for boosting a nation's economy, particularly in terms of lowering unemployment and raising productivity (Khalafov & Hanahmedov, 2020). One of the strategically important sectors that must be used for the development of the tourism industry is the national development sector. The ultimate purpose of tourism development is to raise local income, which can then boost local welfare and economic development.

Tourism is seen as a strategic asset to support development in specific places that have promise as tourist attractions because it is one of the development sectors that can boost economic growth in a region. This is so because tourism has three spheres of influence: the economic (taxes, sources of foreign cash), the social (job creation), and the cultural. The tourism sector boosts profits in foreign exchange, generates employment, and fosters the expansion of the tourism sector; as a result, it can lead to economic growth, especially given that this is what motivates various nations to develop the tourism sector (Lestari et al., 2022).

The relationship between tourism growth and exchange rates and the impact of tourism on economic growth in Indonesia in 2022 may be shown by looking at the number of visitors and the impact of tourism-related foreign exchange on the rupiah exchange rate. This is brought on by a rise in tourism-related foreign exchange, which drives up the value of the rupiah. There is a positive relationship and reciprocal influence between the number of tourists and tourism foreign exchange, and appreciation or depreciation of the rupiah will stimulate a rise or reduction in tourism foreign exchange and the number of tourists at different times (Rahmayani, Oktavilia, et al., 2022).

Based on the Press Release of the Ministry of Tourism and Creative Economy / Tourism and Creative Economy Agency of the Republic of

Indonesia (2023) the target value of tourism foreign exchange in 2023 is 2.07 billion US dollars at the lower limit and 5.95 billion US dollars at the upper limit. The value of tourism GDP contribution is 4.1 percent, and exports of creative economy products are estimated to reach 26.46 billion US dollars or Rp397.98 trillion. This reflects the activities of the restaurant and entertainment industry, economic activities generated by industries such as hotels, travel agents, airlines, and other passenger transportation services have directly supported economic improvement in Indonesia. Based on the Short and Medium Term Plan 2022-2024, in 2024 the tourism sector is predicted to bring in as many as 9.5-14.3 million foreign tourists and 1.250 - 1.5 billion foreign tourist trips. Meanwhile, the performance target of the tourism sector in 2024 is expected to generate foreign exchange of US$7.38-13.08 billion. As well as contributing to GDP by 4.5% and creating 22.8 million jobs. Through quality and sustainable tourism activities, tourism is a mainstay sector in earning foreign exchange, creating jobs, and improving people's welfare (Putri & Wakhid, 2023).

Increasing the country's foreign exchange is currently thought to be a successful strategy for Indonesia's tourism industry. This is inextricably linked to the growth of tourism demands everywhere, not just in Indonesia. Given the increasing need for travel, this industry is viewed as having bright futures. The tourism sector can revive the economy of the surrounding community, tourism is also positioned as an important means of introducing the culture and natural beauty of the region concerned. Tourism is not only beneficial for cultural and social education but also has a more important meaning from an economic perspective.

According to the Government of Indonesia's National Medium-Term Plan, tourism is crucial for boosting economic activity, enhancing Indonesia's reputation, enhancing community welfare, and creating more job possibilities. The contribution of tourism to GDP value added, employment, and foreign exchange gains from foreign visitor trips show this function, among others (Mudrikah et al., 2014). This is consistent with the Law of the Republic of Indonesia No. 10 of 2009's objectives for tourist development, which include boosting economic growth and community welfare (Rahmayani, Oktavilia2, et al., 2022).

Based on the Central Bureau of Statistics (2023) the number of tourist visits in Indonesia from year to year is increasing, entering July 2023, foreign tourist visits in Indonesia reached 1.12 million visits. This number is up 5.66 percent compared to June 2023 (month-to-month) and up 74.07 percent

compared to the same month last year (year-on-year). This success is a dedication, commitment, strategy, and theory of tourism sector development that is carried out.

One of the main drivers of economic growth in many emerging and developed nations has been tourism. Tourism boosts the economy in a number of ways, including by bringing in foreign exchange, luring foreign investment, boosting tax receipts, and adding jobs (Peristiwo, 2020).

The growth of the tourism industry in Indonesia both fuels and accelerates economic expansion. Tourism-related activities generate demand for products and services through both consumer and investor spending. Tourists will engage in shopping transactions while on the trip, directly increasing demand for products and services. Additionally, travelers indirectly increase the demand for capital goods and raw materials needed to produce the goods and services that are in demand by tourists. Investment is required in the areas of travel and communication, hospitality and lodging, handcraft and consumer product industries, services, and dining establishments in order to meet visitor demand (Ahmad, 2022).

Supply and demand are essential to the growth of the tourism sector. The increasing interest in tourism is one of the trends in tourism for the future. Travelers want more authentic travel and lifestyle experiences, while consumers want more interactive entertainment with educational components (Cholik, 2017). The tourist sector now plays a crucial role in economic development as a result of the tourism industry's rapid growth, which is furthered by the expansion of global economic prosperity (Tayibnapis & Wuryaningsih, 2017).

The dynamics of the global tourism business reveal the escalating rivalry between states that serve as tourist destinations on a national and international scale. The more competitive a country is as a travel destination, the more tourists it will draw, and the more money they will spend there. The GDP, national economic expansion, and community economic welfare will all rise as a result. Indonesia is prepared to compete in order to draw more tourists and have them spend more money there.

Tourism is fundamentally correlated with visitor expenditure, and a destination's ability to outperform rivals in both of these areas will determine how competitive it is in terms of tourism-related foreign exchange gains. A low-price level does not, however, ensure that a tourist site will earn a lot of foreign currency. A price reduction approach cannot boost a destination's foreign exchange revenues if the demand for that destination is price inelastic.

Consequently, using the demand approach to measure tourism is suitable (Yakup, 2019).

The Effect of Tourism on Indonesia's Economic Growth

Based on sector structure, tourism often has direct, indirect, and induced effects on local economies. However, how well tourism activity is connected to the local economy has a significant impact. When tourism businesses source their goods and services (including labor) locally, there are typically higher levels of local economic activity (and growth), whereas there are typically lower levels of economic linkages when tourism businesses are dependent on imports (including labor) to meet their demand (Shvets, 2020). The following are the direct, indirect, and induced consequences that make up the sector's overall impact:

Table 2. Direct and indirect impacts of tourism

Direct impacts	represents the GDP produced by activities directly associated to tourism, such as lodging, travel companies, airlines, and tour operators, as well as dining establishments and other tourist-oriented businesses (Chen et al., 2019).
Indirect impacts	Indirect effects are those that result from sector operations and depend on three separate factors: Investment in the tourism sector includes both national and local government spending as well as investment in all sectors that are directly related to the travel and hospitality industry. Government spending on tourism includes both national and local spending on the industry. Activities include marketing, administration, and visitor services related to tourism; c). Supply Chain Effects: These are the purchases made by companies in the tourism industry of domestic goods and services as inputs to the manufacture of their ultimate output; d). Impacts Induced: Reflects the larger contribution of tourism through the spending of those who are either directly or indirectly engaged in the industry (Vellas, 2011).

The table outlines the various activities carried out at three levels of impact: direct impacts will be obtained through lodging activities or tourism transportation services, indirect contributions will be made through spending on food and beverage suppliers to tourism enterprises, and induced impacts will be the spending of people who work in the tourism sector (or benefit from the sector) within the local economy (Del Corpo et al., 2011). Other impacts

that can cross borders, such as those that can be direct, indirect, or induced depending on who is performing it, are not included in the table above. For instance, taxes paid by tourist employees will have an indirect effect on the industry, whereas taxes paid by tourism corporations will have a direct impact. Similar to this, when money flows through the tourism supply chain, expenditure by tourists within the nation (Indonesia) will have both direct and indirect effects (Gannon et al., 2021).

The direct impact of tourism in Indonesia affects the wider economy in six main channels as detailed in the following table:

Table 3. Direct impact of tourism in Indonesia

No	Direct impact of tourism	Description
1	Job creation	Tourism activities in Indonesia have generated employment through several avenues i.e. hotel staff, tour operators, cooks, etc.
2	Supply of goods and services	Food and furnishings can be provided by local or national enterprises in Indonesia, but these products can also be imported if the local supply does not match demand in terms of price, quality, or quantity.
3	Direct sales of goods and services	Retailers in tourist areas can sell their goods and services directly to visitors (such as meals or souvenirs), thereby directly benefiting financially from tourism in Indonesian territory.
4	Establishment of tourism business	High levels of tourism activity could result in new tourism businesses being established and new job opportunities being created in Indonesia.
5	Tax and levy generator	While travelers are frequently subjected to direct fees, such as those associated with visas, which further increase revenue for the Indonesian government or local governments, tourism companies in Indonesia have made a financial contribution to the country.
6	Investment in infrastructure	Infrastructure at tourist locations will become more necessary as Indonesia's tourism industry grows, which in turn spurs public or private sector investment in infrastructure.

Source: Ashoer et al., (2021).

The growth of Indonesia's economy is positively impacted by the tourist sector. In other nations, like Panama, the tourism industry has a bigger impact on income than other economic sectors, meaning that work in the industry will increase household income more than ones in other industries.

Compared to jobs in the service or manufacturing sectors, the tourist industry in China contributes to moderate income fairness and is more likely to raise living conditions for those with lower earnings. This sector also has the potential to provide greater opportunities for the growth of people's economic income.

Based on some of these studies, researchers found the fact that as the tourism sector develops in an area or country, there are more options for the community to gain from the sector, including raising their income from it. Additionally, the contribution of tourism-related revenue to overall national welfare in Indonesia (Ashoer et al., 2021).

Positive and Negative Impacts of Tourism on the Economic Sector in Indonesia

Based on the above description, it is known that tourism has long been recognized as a strong and influential economic sector in the economy of a country including Indonesia. With the number of international tourists continuing to increase from year to year, it is important to understand the positive, negative, and solutions to the negative impacts generated by the tourism industry on economic growth and development in Indonesia. The following is a detailed explanation of the positive and negative impacts of tourism on the economic sector.

Table 4. Positive and negative impacts of tourism on the economic sector

No	Positive impacts	Negative impacts
1	Economic expansion: One of Indonesia's primary economic sectors, tourism may boost the country's GDP and generate employment. As a result, the economy grows favorably.	Exposure to global economic fluctuations: The tourism sector in Indonesia is significantly impacted by these changes. The number of tourists and their expenditure may decrease as a result of changes in the global economy, such as financial crises or economic slowdowns in important nations that are major sources of tourism. This might hurt allied industries and impede Indonesia's overall economic growth by lowering the country's tourism receipts.
2	Job creation: Both directly and indirectly, the tourist sector offers numerous employment opportunities for individuals in Indonesia. Jobs in	Labor shortages: Indonesia's tourism industry is expanding quickly, which frequently calls for more workers. However, the tourism industry may

	hotels, restaurants, transportation, tour guides, gift stores, and other associated industries are among them.	experience labor problems due to a shortage of suitable skills and competition for positions. It can be challenging to find enough workers in tourist locations, while structural unemployment may exist elsewhere due to an overreliance on the industry. Additionally, the tourism industry has a propensity for high seasonality, which implies that employees typically only have temporary contracts during specific tourist seasons and experience economic instability outside of those times.
3	Foreign exchange gains: Visitors visiting Indonesia will spend their money on travel-related expenses like lodging, meals, and shopping. As a result, Indonesia receives a flow of foreign currency that may be utilized to fund the construction of infrastructure and other initiatives.	Economic structure changes: An place in Indonesia may experience a change in its economic structure as tourism takes off. The tourism industry may get resources that were previously allocated to other industries, such as land utilized for the development of hotels or eateries. As a result, there may be inefficiencies or a higher reliance on the tourism industry for the economy, overlooking the potential of other industries that could potentially contribute significantly to it.
4	Growth of allied industries: Tourism also promotes the development of industries including agriculture, the creative industry, handicrafts, transportation, and other services. As a result, Indonesians have more money and new business options.	Although tourism can generate jobs and open up economic prospects for Indonesia, unequal income distribution is frequently the case. Local communities in less established tourist destinations may not see a considerable increase in income as a result of tourism, which is frequently concentrated in a few industries and huge enterprises. The social and economic gap between tourist centers and the surrounding areas may widen as a result.
5	Infrastructure development: In order to sustain Indonesia's tourism sector, it is frequently essential to make investments in the construction of roads, airports, ports, and other forms of transportation.	High reliance on tourism: Some areas or nations, notably Indonesia, which rely substantially on tourism as a primary source of income may be particularly vulnerable economically. The regional economy may be

These changes benefit not only the tourism industry but also other industries and the general population.	adversely affected by a sudden shift in travel habits or volatility in the tourism industry. If there is too much reliance on tourism and not enough economic diversification, the area may be more susceptible to financial problems.

Source: Rangkuti, (2023)

The aforementioned table indicates that tourism has a major effect on the economy. An important source of employment, revenue, and economic prosperity for a nation can come from the tourism sector. Additionally, tourism contributes to the growth of linked industries, infrastructure, and foreign exchange gains. However, tourism also has negative impacts that need to be considered. Vulnerability to global economic fluctuations, high dependence on tourism, changes in economic structure, income distribution inequality, inflation, labor issues, and social and cultural issues are some examples of such negative impacts. Adopting sustainable and ethical tourist management is crucial to reducing the damaging effects of tourism on the economy. Economic diversification, sustainable tourism development, proper regulation and policies, and local workforce training and development are measures that can be taken. Thus, tourism has great potential to make a positive contribution to the economy, but it needs to be balanced with prudent management to reduce negative impacts and ensure sustainable and inclusive economic growth (Rangkuti, 2023).

In Indonesia, the tourist industry is a significant source of foreign exchange profits and can promote national economic growth, particularly in lowering unemployment and raising productivity. One of the critical sectors that must be used for the growth of the tourism industry in Indonesia is the national development sector. The ultimate purpose of tourism development is to raise local income, which can then promote local welfare and Indonesian economic growth. Additionally encouraging and accelerating Indonesia's economic growth is the expansion of tourism. Tourism-related activities generate demand for products and services through both consumer and investor spending (Amelia, 2023).

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CHAPTER 2

UNVEILING THE PATH TO RAPID ECONOMIC GROWTH: LESSONS FROM AGGRESSIVE INDUSTRIALISATION STRATEGIES OF SELECTED EAST ASIAN COUNTRIES

Ibrahim MUKISA (PhD)[1]

Abbey Malwa WADEMBERE [2]

[1] Makerere University, School of Economics. Corresponding author, email: mukisaibrahim@yahoo.com & ibrahim.mukisa@mak.ac.ug
[2]National Planning Authority, Kampala Uganda

1. Background

The economic ascent of East Asia in the post-World War II period was remarkably swift. Led initially by Japan, followed by the "Asian Tigers" of South Korea, Taiwan, Hong Kong and Singapore, the region underwent rapid industrialisation and growth through state-led, export-oriented development models (World Bank, 1993).

Japan was the first East Asian nation to rise rapidly from the ashes of war into a modern industrial powerhouse. Though devastated by WWII, Japan recovered under American occupation guidance as reforms dissolved the pre-war zaibatsu conglomerates and expanded access to education (Johnson, 1982). By the mid-1950s, Japan's economy was growing at double-digit rates. The Ministry of International Trade and Industry (MITI) strategically targeted steel, shipbuilding, electronics, and automobile industries to promote export-oriented growth (Johnson, 1982). Japanese firms like Sony, Toyota and Honda became globally competitive through continuous innovation or improvement (Nonaka & Takeuchi, 1995). Export discipline and quality focus turned Japan into the world's second-largest economy by 1968 (Perkins, 2013).

Inspired by Japan's model, the "Asian Tiger" economies emulated their state-led industrialisation strategies from the 1960s onwards (Amsden, 1989). In Taiwan, land and tax reforms were instituted while the government invested heavily in infrastructure, R&D and universal education (Wade, 1990). Export processing zones, tax incentives and government institutes drove technological upgrading and industrialisation (Amsden, 1989). South Korea similarly expanded schooling and vocational training to develop its workforce while providing subsidies for the chaebol business groups like Samsung, Hyundai and LG to spearhead heavy export-driven industrialisation, yielding rapid GDP growth (Krueger, 1985). Singapore attracted foreign investment through incentives to develop a high-tech manufacturing base (Schein, 1996). Hong Kong flourished as a laissez-faire regional hub for trade and finance (World Bank, 1993).

By the 1980s, impressive income growth meant Japan, South Korea, Taiwan, Hong Kong, and Singapore's per capita GDP levels rivalled many Western nations (World Bank, 1993). Their collective share of global exports also soared. However, in 1997, overdependence on capital inflows left several economies vulnerable, as currency speculation triggered the devastating Asian Financial Crisis (Radelet & Sachs, 1998). Japan also stagnated throughout the 1990s due to lingering asset bubble effects and bad debts (Kwon, 1998).

In contrast, China began its economic ascent by gradually liberalising under Deng Xiaoping's reforms in 1978 (Naughton, 1996). The rise of town and village enterprises and the creation of special economic zones led to an export boom. Attracting foreign investment and technology transfers through joint ventures accelerated industrial upgrading (Huang, 2003). Strategic plans like "Made in China 2025" further expanded high-tech manufacturing (Kennedy, 2015). WTO accession 2001 cemented China's central role in global supply chains (Branstetter & Lardy, 2006). Average GDP growth exceeded 10% for over three decades, propelling China to overtake Japan as the world's second-largest economy in 2010 (Morrison, 2021). With continued productivity growth into the 21st century through digital infrastructure investment, R&D prioritisation and regional integration strategies like the Belt and Road Initiative, East Asia remains at the economic forefront globally (Du & Zhang, 2018).

Figure 1: GDP of East Asia Since 1980
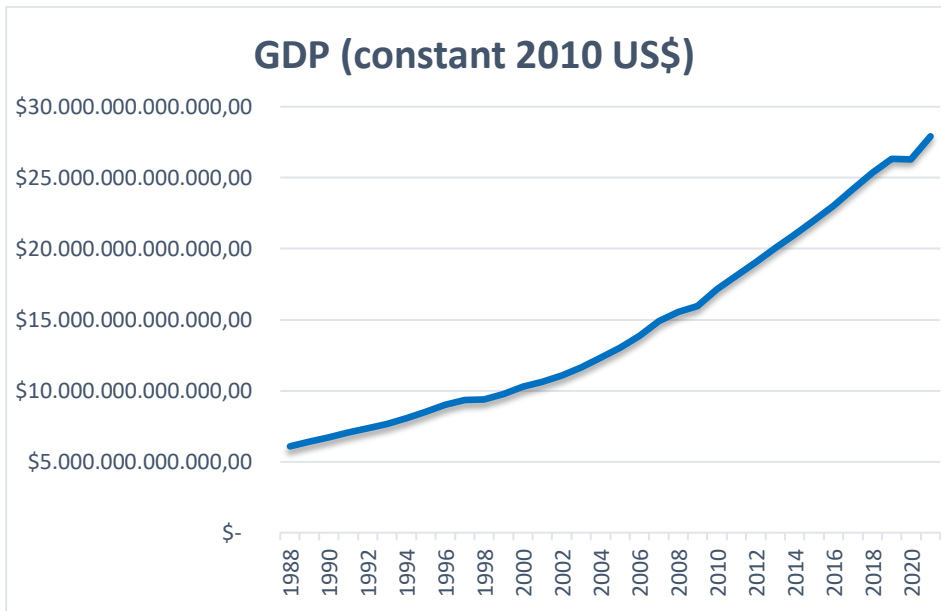
Source: World development indicators

As Figure 1 shows, the collective GDP of East Asia experienced exponential growth in the post-WWII period from around $6 trillion in 1988 to over $27 trillion by 2021. While Japan led initial regional industrialisation in the 1950s, the Asian Tigers drove rapid catch-up development from the 1960s. China's reform era ascent since 1978 fueled further explosive expansion. Despite periodic crises, state-facilitated, export-driven growth delivered decades of prosperity for Northeast Asia. However, sustaining these gains requires adapting to emerging sectors, green technology, automation and continued regional integration (ADB, 2021).

2. Aggressive Industrialisation Strategies

A key driver behind the rapid economic growth in East Asia was the aggressive industrialisation strategies pursued by countries in the region (Kumar et al., 2020). Rather than relying solely on free market forces, governments actively intervened to direct economic development through export promotion, industry targeting, state planning, and technology acquisition (Cherif & Hasanov, 2019). This state-led model challenged prevailing laissez-faire orthodoxy yet proved remarkably successful in catalysing the region's structural transformation and capital accumulation (Felipe, 2021).

2.1 Export-oriented growth model

Several East Asian economies specifically focused on exports as a catalyst for growth (Felipe, 2021). Export-oriented industrialisation (EOI) strategies aimed to harness external demand to grow domestic productivity. Figure 2 depicts the positive trend of exports of goods and services as a percentage of annual GDP ranging from 7% to as high as 180% in Singapore. In Japan, export promotion was a pillar of MITI's industrial targeting model from the 1950s onwards. Devalued exchange rates after WWII helped stimulate exports. MITI also imposed export quotas on industries it sought to develop, like automobiles, only relaxing them once international competitiveness was achieved (Solis & Katada, 2014). Exports as a percentage of GDP rose from 8% in 1955 to 14% by 1970 (World Bank, 2022). Japanese firms conquered global auto and electronics markets through continuous innovation and kaizen cost management (MacMillan, 2020).

Figure 2: Exports of goods and services (% of GDP) for the period 1988 - 2017
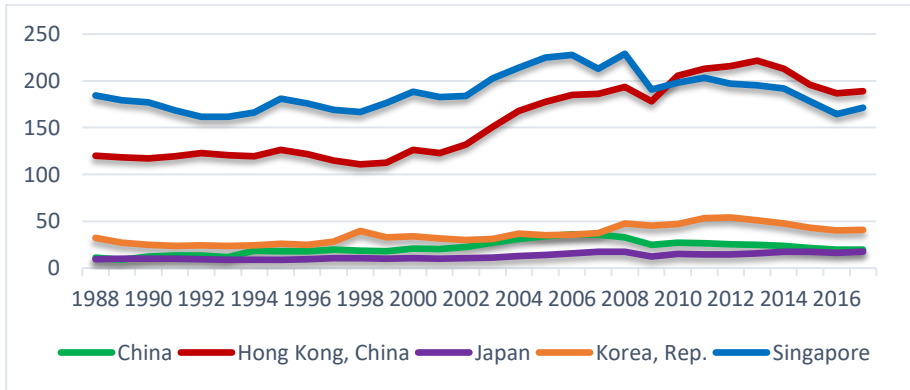
Source: World development indicators

Similarly, the Asian Tigers incentivised exports heavily. In 1960, Taiwan created export processing zones with tax breaks and infrastructure support. By the late 1960s, over 50% of industrial production was export-oriented, with labour-intensive goods like textiles and plastics leading initially, shifting to electronics and machinery over time (Berger, 2013). South Korea also oriented industrialisation around shipbuilding, automotive and IT exports through the chaebols (Lew & Kim, 2021). Singapore developed high-tech manufacturing exports in electronics, biomedical goods and petrochemicals (Cherif & Hasanov, 2019). By the 1990s, the Asian tigers derived over 40% of GDP from exports (ADB, 1997).

More recently, China's export-led growth has been unprecedented. Special economic zones like Shenzhen provided exporters with incentives and streamlined bureaucracy from the 1980s (Lo & Wu, 2014). Labor-intensive manufacturing for foreign buyers drove initial job creation (Feenstra & Wei, 2010). By the 2000s, China became the world's export powerhouse, aided by WTO entry in 2001. Exports grew from 20% of GDP in 1990 to 36% by 2014 (World Bank, 2022). However, China faces rising costs and global backlash, requiring a shift to higher-value exports (Reilly, 2015). Overall, export discipline played a key role in diffusing productivity gains across East Asia's developmental states. Exporting forced domestic firms to achieve global quality and efficiency standards to stay competitive (Cherif & Hasanov, 2019). It provided an objective metric for performance. Exporters benefited

from government incentives and access to better inputs like imported technology (Kumar et al., 2020).

However, some economists argue that the benefits of export-led growth have diminished in recent decades. Traditional economic models like the Heckscher-Ohlin theorem emphasised countries benefiting from export expansion by exploiting abundant factors like labour and land. Nevertheless, with slowing trade growth worldwide and rising protectionism, some see relying excessively on exports as increasingly risky (IMF, 2019). Export pessimists contend that domestic demand must expand to sustain growth. Furthermore, competing solely on labour costs is deemed unsustainable without upgrading skills and technology. Theories like product life cycle theory highlight the need to advance the value chain as wages rise. Critics argue that focusing narrowly on low-cost exports traps countries in a "middle-income trap" unless they innovate and move to higher value-added sectors (Felipe, 2012). With automation threatening labour-intensive manufacturing, export-oriented economies must diversify. Some also argue that openness must be reciprocal, as continued access to foreign markets is uncertain. Export-led growth relies on trading partners keeping borders open. However, protectionism has grown with trade wars between major powers (Reilly, 2015). Advocates of import substitution industrialisation contend that relying on external demand is unwise. Self-sufficiency should be prioritised instead.

However, despite these criticisms, the export-led growth model has continued generating prosperity for East Asia's most developed economies. China, Japan, South Korea, Hong Kong, and Singapore have sustained positive indicators through continued export expansion. China's share of global exports doubled from 7% in 2000 to 14% in 2017, driving average GDP growth above 8% (World Bank, 2022). Japan has maintained large trade surpluses with high-value tech exports. South Korea's exports grew from 28% of GDP in 1990 to 43% in 2017 (World Bank, 2022). Singapore and Hong Kong remain pivotal trading hubs. These countries have adapted by moving into higher-value exports in response to rising costs. Continued productivity improvements have maintained competitiveness. Export composition has evolved from raw materials to manufactured goods, services, and technology (ADB, 2018). Nevertheless, the core export discipline remains beneficial. Therefore, while export pessimism has valid concerns, the dramatic development of East Asia suggests that with sufficient economic dynamism and policy adaptation, export-oriented growth retains validity in the 21st century.

2.2 Targeting specific industries:

In addition to overall export orientation, East Asian governments strategically targeted certain industries to receive specialised promotion and subsidies. Selective targeting of priority sectors was a key tool of industrial policy to drive economic upgrading (Cherif & Hasanov, 2019). The evolution of China's industrial composition demonstrates this strategic prioritisation. As shown in Tables 1A and 1B, between 2000 and 2018, the gross output share of several heavy manufacturing industries expanded considerably in China, indicative of a shift to higher value-added sectors. The gross output percentage for general equipment manufacturing rose from 13.2% to 17.4%, while electrical and machinery manufacturing increased from 8.7% to 14.2% (ADB, 2020). Strategic state support through subsidies, tax incentives and trade policies catalysed the growth of these targeted industries (Lo & Li, 2011).

Table 1A   Input-Output Table for the People's Republic of China, 2000

Sector		Agriculture, Hunting, Forestry, Fishing	Mining and Quarrying	Light Manufacturing	Heavy Manufacturing	Utilities	Construction	Trade Services	Hotels and Restaurants	Transport and services
	Code	AHF	MIN	LMF	HMF	UTL	CON	TRD	HRS	TSP
Total imports	IMP	6,090	2,473	33,450	69,268	7,887	10,635	7,095	1,090	3,706
Total intermediate consumption	r60	132,070	39,734	450,119	659,065	89,040	181,102	115,571	45,920	68,138
Gross output	r69	314,471	100,167	640,162	863,110	120,796	248,694	214,495	71,916	138,361

Table 1B   Input-Output Table for the People's Republic of China, 2018)

Sector		Agriculture, Hunting, Forestry, Fishing	Mining and Quarrying	Light Manufacturing	Heavy Manufacturing	Utilities	Construction	Trade Services	Hotels and Restaurants	Transport and services
	Code	AHF	MIN	LMF	HMF	UTL	CON	TRD	HRS	TSP
Total imports	IMP	30,237	56,438	199,250	862,612	66,736	107,667	26,145	6,947	22,282
Total intermediate consumption	r60	774,642	731,298	4,904,488	10,106,617	973,368	3,137,833	814,544	401,253	649,970
Gross output	r69	1,977,915	1,401,270	6,407,112	12,310,258	1,236,899	4,074,139	2,165,775	657,753	1,251,565

Source: Asian Development Bank Multi-Regional Input–Output Database. https://mrio.adbx.online/ (accessed 10 October 2023).

Similarly, Japan pursued targeted industrial deepening through its Ministry of International Trade and Industry (MITI). As seen in Tables 2A and 2B, between 2000 and 2018, the gross output share of several key export industries grew substantially, reflecting MITI's strategic promotion. Transportation equipment expanded from 9.4% to 11.7% of output, while

electronic components and devices rose from 6.5% to 10.6% (ADB, 2020). MITI facilitated this upgrading by imposing export targets on industries like automobiles and electronics to sharpen international competitiveness (Maxcy, 2012).

Table 2A Input-Output Table for Japan, 2000 (at current prices, $ million)

Sector	Code	Agriculture, Hunting, Forestry, Fishing	Mining and Quarrying	Light Manufacturing	Heavy Manufacturing	Utilities	Construction	Trade Services	Hotels and Restaurants	Transport and services
		AHF	MIN	LMF	HMF	UTL	CON	TRD	HRS	TSP
Total imports	IMP	3,776	3,944	32,719	117,278	14,321	24,800	13,563	4,532	10,999
Total intermediate consumption	r60	58,232	18,558	549,567	1,234,899	97,479	384,041	371,457	159,452	149,815
Gross output	r69	133,220	31,486	921,857	1,879,163	208,677	723,757	1,025,210	290,212	349,132

Table 2B Input-Output Table for Japan, 2018

Sector	Code	Agriculture, Hunting, Forestry, Fishing	Mining and Quarrying	Light Manufacturing	Heavy Manufacturing	Utilities	Construction	Trade Services	Hotels and Restaurants	Transport and services
		AHF	MIN	LMF	HMF	UTL	CON	TRD	HRS	TSP
Total imports	IMP	6,743	13,340	51,044	343,845	69,755	53,207	18,412	7,947	16,109
Total intermediate consumption	r60	62,769	23,767	493,621	1,562,256	172,032	379,134	307,759	165,927	152,222
Gross output	r69	127,815	32,369	798,569	2,211,099	256,980	720,442	973,145	312,777	367,944

Source: Asian Development Bank Multi-Regional Input–Output Database. https://mrio.adbx.online/ (accessed 10 October 2023).

2.3 State intervention and planning:

In addition to an export focus and selective promotion of industries, state intervention was instrumental in East Asia's industrialisation push. Industrial targeting exemplified the interventionist approach. As discussed in section 3.2, governments strategically fostered preferred sectors using an array of policies. Beyond selective credit allocation and trade protections, states provided direct subsidies to reduce costs for promoted industries (Lim, 2014). Taiwan's export processing zones offered targeted tax breaks and tariff exemptions (Rasiah, 1994). South Korea's chaebols received low-interest loans to enter priority sectors (Kang, 2014). States also imposed non-tariff barriers on imports competing with favoured industries (Noland, 2000). Export quotas forced competitiveness upgrades in designated sectors before firms could export freely.

Extensive planning complemented interventionist targeting. Japan pioneered "industrial rationalisation" programs where MITI identified sectors ripe for restructuring (Johnson, 1982). Similarly, Taiwan and Korea

implemented five-year plans emphasising heavy industrialisation (Wade, 1990). China's five-year plans begin by setting high-level economic targets, cascading into detailed objectives for sectors, provinces and SOEs (Naughton, 1996). Planning aligns policies around national priorities. However, critics argue top-down planning can misallocate resources compared to markets (Lal, 2000). Overambitious targets led to excess capacity in some Asian steel and shipbuilding sectors (Huang, 2008). Thus, effective planning requires pragmatism, not rigid planning.

Currency management also facilitated export growth. Japan and Korea used undervalued exchange rates to support export competitiveness until pressure from trade partners necessitated appreciation (Park & Song, 2011). China has faced similar accusations of currency manipulation. However, exchange rates prove a blunt tool with pros and cons. Currency depreciation risks inflationary side effects while angering trade partners. Lastly, state-owned enterprises (SOEs) drove industrialisation, although their productivity lagged behind private firms (Huang, 2008). Singapore's SOEs were pioneers in sectors like shipbuilding. China's SOEs remain central despite inefficiency concerns (Lardy, 2014). However, while SOEs facilitated industrial policy, their insulation from competition can breed inefficiency. Privately-led development is associated with faster productivity growth (World Bank, 1993). Thus, reducing SOEs' economic role has enhanced efficiency in East Asia (Huang, 2008).

In summary, extensive state intervention characterised East Asia's development model. Beyond export promotion, industry targeting, planning coordination, currency policies, SOE dominance, and subsidies represented departures from pure market-based economics. However, prudent implementation requiring performance-based incentives helped maximise the benefits while minimising the distortions from interventionist policies. The role of intervention has appropriately evolved towards less blunt tools. However, selective, transparent industrial policy retains relevance alongside market forces.

3. Lessons learned

The successful industrialisation efforts of East Asian economies like the People's Republic of China (PRC), Taipei, China, and Japan offer several important lessons for other developing countries seeking to achieve rapid economic growth and prosperity today. While certain strategies must be

adapted to fit current global realities, the key principles remain relevant (Perkins, 2013).

First, the export-oriented model promoted across East Asia can be highly effective for developing countries to integrate into the global economy. Countries can harness external demand to drive productive growth by incentivising domestic industries to manufacture for export. Export discipline also promotes efficiency and quality upgrades (Krueger, 1985). However, reliance solely on low-cost manufacturing is insufficient today. As wages rise, countries must move up the value chain into more advanced exports. Consultation with private firms to encourage innovation and entrepreneurship is vital (Stiglitz, 1996).

Second, state direction to foster targeted industries can accelerate development if pursued judiciously. As seen in the PRC and Taipei, China, selective promotion of manufacturing catalysed structural transformation (Amsden, 1989). However, governments must regularly re-evaluate targeted sectors based on changing comparative advantages and avoid excessive subsidies that distort markets. Cooperation with the private sector and civil society strengthens outcomes (Rodrik, 2004). Targets must also align with sustainable growth objectives beyond GDP, including environment, social welfare, and governance goals (Wade, 1990).

Third, technology assimilation and innovation are imperative for competitiveness but require comprehensive policies. Beyond technology licensing and foreign partnerships, as in Taipei, China, long-term investments in technical education, research infrastructure, and intellectual property systems are essential (Kim & Nelson, 2000). Governments should facilitate joint R&D between universities and industry (Intarakumnerd et al., 2002). Modern innovation policies also entail robust digital infrastructure and ecosystems, entrepreneurial finance, and dynamic firm clusters (OECD, 2015). Alignment with the fourth industrial revolution is necessary.

In summary, the rapid industrialisation modelled by high-performing East Asian economies provides a proven template for other emerging economies to adapt elements of this strategy using cooperative state intervention, calibrated targeting of industries, technological advancement, human capital focus, and responsible macroeconomic management (Perkins, 2013). While global conditions have evolved, the core tenets of strategic export orientation, well-directed industrial policy, technology absorption, human capital development, and sound economic governance retain relevance for developing countries seeking to emulate East Asia's growth miracle. With

prudent implementation tailored to local contexts and 21st-century demands, the foundations and principles of Asia's development model can be selectively applied to unlock inclusive, sustainable prosperity.

4. CONCLUSION

The extraordinary economic ascent of Japan, the Asian Tigers, and, more recently, China is one of history's most remarkable development success stories. Within a few short decades, these nations transformed from agrarian backwaters into leading industrialised economies integrated into the global marketplace. Aggressive state-directed industrial policies focused on exports, technology acquisition, and strategic sectors catalysed the rapid structural transformation.

While controversial at the time among proponents of free market orthodoxy, the effectiveness of the East Asian model has since been widely recognised. As noted by the World Bank's seminal East Asian Miracle study, "the state intervened – systematically and through multiple channels – to foster development, and in some cases the development of specific industries" (World Bank, 1993). Selective industrial planning and export discipline successfully aligned incentives to accelerate economic upgrading and capital accumulation. However, the global landscape has changed considerably since the peak interventionist years. Developing countries today face a far more complex and competitive environment. Globalisation, the digital revolution, climate change, shifting demographics, and other mega-trends create new tailwinds and headwinds. The rise of China and other emerging economies also alters the development equation.

In this context, some question whether active industrial policies retain relevance or risk distorting markets. States also have mixed records in picking winners. However, heterodox economists argue that pragmatic industrial strategy is valuable if deployed astutely and flexibly. Cambridge professor Ha-Joon Chang noted that "industrial policy is as necessary as ever, if we want to achieve development and manage structural change in a world of rapid technological changes and intense global competition" (2007). Indeed, while policies must be adapted, the strategic essence of the East Asian model remains applicable. Export discipline can help unlock productivity gains. Carefully time-bound subsidies may catalyse infant industries. Joint R&D and vocational training address coordination failures. FDI can be channelled to maximise spillovers. Trade tensions may necessitate greater self-reliance in key sectors. Beyond manufacturing, state-business collaboration and public

investment principles also extend to nurturing competitive services and building digital infrastructure.

Crucially, industrial strategy today must align with sustainable development and the capabilities of the 4th Industrial Revolution. Climate considerations require cleaner, greener technologies. Job losses from automation necessitate expanded social safety nets. Heightened economic nationalism worldwide means constructive engagement, not passive integration alone, better serving national interests. Lastly, governance capabilities determine policy effectiveness – failing states cannot emulate developmental ones. While the precise policy mix must be tailored, East Asia's rapid industrialisation still offers key lessons. The strategic export push developed competitive firms attuned to global markets. Targeted investment fostered new comparative advantages. Joint ventures facilitated technology transfer. Human capital focus expanded skilled workforces. Pragmatic state-business collaboration remains vital if updated for modern realities.

However, local context and good governance determine outcomes. Success requires highly skilled bureaucrats in capable states - conditions often lacking in today's developing world. Vested interests may also derail reforms. Therefore, while strategic trade and industrial policy principles retain validity, their practical application requires nuance, patience, and local adaptation. In conclusion, the state-led industrialisation path pioneered by high-performing East Asian economies remains instructive, even if specific policies are dated. Fundamentally, it expanded productive capabilities, attracted technology, developed human capital, spurred entrepreneurship, and established globally competitive firms. Adapting these core principles thoughtfully to align with 21st-century demands can help other emerging economies unlock similarly transformational growth. With the pragmatic implementation and updating for new local and global realities, selective elements of the East Asian model still offer vital wisdom to developing country policymakers aiming to turn rapid growth from myth into miracle.

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CHAPTER 3

THE IMPACT OF INTERNATIONAL TRADE ON REGIONAL DEVELOPMENT IN TURKEY: PANEL CAUSALITY ANALYSIS

Ahmet KARDAŞLAR[1]

[1]Department of Foreign Trade, Bahce Vacational School, Osmaniye Korkut Ata University, e-mail: akardaslar@osmaniye.edu.tr, ORCID: 0000-0002-6415-8822.

1. INTRODUCTION

Development and underdevelopment are among the most important problems of developing countries. Especially in the new world order that emerged with the globalization process, one of the ways that countries should follow to overcome this problem is to identify priority sectors in development. In doing so, it is vital to make appropriate choices by taking into account the internal dynamics of countries, regional differences and potentials (Özaytürk and Mike, 2020).

Regardless of the economic development levels of countries, there is evidence of heterogeneity in regional development levels in all country practices. The different levels of regional development are currently considered as a national problematic. In the economic literature, the economic and political problems caused by the level of development between regions became an area of focus only after World War II. Basically, the positive correlation between the spatial distribution of factors of production and income has brought up the necessity of analyzing spatial factors within the scope of development economics (Öztürk, 2001).

In discussing regional development, it would be useful to first examine the types of regions. In this context, regions with the same or as close as possible structure and quality in terms of all elements are defined as homogeneous regions (Boudeville, 1966). On the other hand, in an area connected to one or more centers, the unit that connects the periphery to the center with its social and economic relations covering different lifestyles is called a polarized region. In polarized regions, there is a central executive city and there are units with high living standards and production capacity (Taneri, 1977). Apart from these, the units defined to establish uniformity and synchronicity in the process of executing the plans developed in terms of economic development can be called planning regions (Gündüz, 2006).

Based on the homogeneous region approach in region definitions, it is possible to reach a plan region through a classification that includes geographically, socially and economically similar neighboring provinces. In this context, the Statistical Classification of Territorial Units (CUT) for Turkey has an extremely important place in the process of applicability and examination of regional development plans. The NUTS, which basically has 3 levels, is primarily at the provincial level within the scope of Level 3 and includes 81 units. Level 2 includes 26 sub-units, taking

into account the homogeneous structure of neighboring provinces. Finally, Level 1 reduces the 26-unit Level 2 to 12 units at the plan scale.

Figure 1: NUTS Level 2 Regions and Development Levels
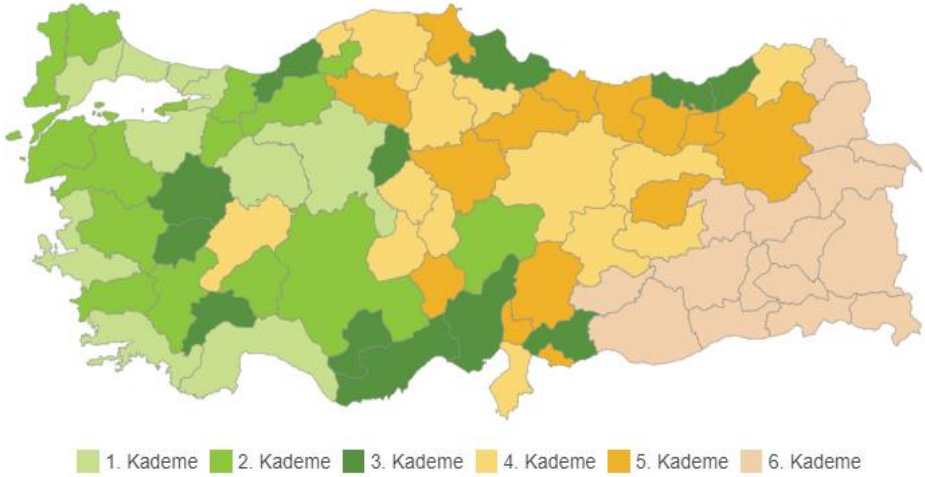
Source: SEGE (2017)

The development levels in the legend in Figure 1 are based on the Socio-Economic Development Ranking Surveys. Based on Figure 1, it is possible to say that the level of development for 26 regions decreases as one moves from west to east, and that the regions with ports, industrial and touristic cities where international trade is intense have higher levels of development.

Apart from the geographical aspect of regional development, there are many economic factors that concern the development aspect. The most important of these is the effective and efficient use of already scarce resources. On the other hand, the socio-economic structure of the region should be compatible with the existing infrastructure and superstructure. The negative effects of sudden waves of migration that transform the demographic structure, social life and even business processes are inevitable. In addition, achieving development, ensuring interregional convergence and sustainability of this whole structure is directly related to the production and commercial capacity of the region. In terms of the convergence of a region's development with other regions, domestic trade can lead to the displacement of resources

between regions, while international trade can bring new resources into the region.

In addition to all these, it is extremely important that the level of development among regions is as low as possible in terms of income distribution and distributional outlook. The main objective of this study is to empirically analyze the relationship between international trade and regional development in Turkey. In this context, panel causality analysis method is used to analyze the data compiled within the scope of NUTS Level 2. The following sections of the study are organized as follows: The second section presents the conceptual framework. The third section introduces the data set and the fourth section presents the econometric methodology. The empirical findings are reported in the next section. The study is then concluded by discussing the findings.

2. Review of Theoretical and Empirical Literature

Within the scope of development economics, there are many factors that are considered to be effective in the development process. These include land and agriculture, capital accumulation and technological development, population and human capital. On the other hand, domestic savings, taxes, foreign aid, foreign debt, foreign direct investment and international trade revenues are used to finance development (Kaynak, 2011).

Figure 2 presents the channels through which international trade has the potential to have a positive impact on regional development. At this stage, international trade, or in other words exports, increasing in favor of a region increases the total volume of economic activity in the region and thus acts as a catalyst in the process of economic growth and development.

Figure 2: The Relationship between International Trade and Regional Development
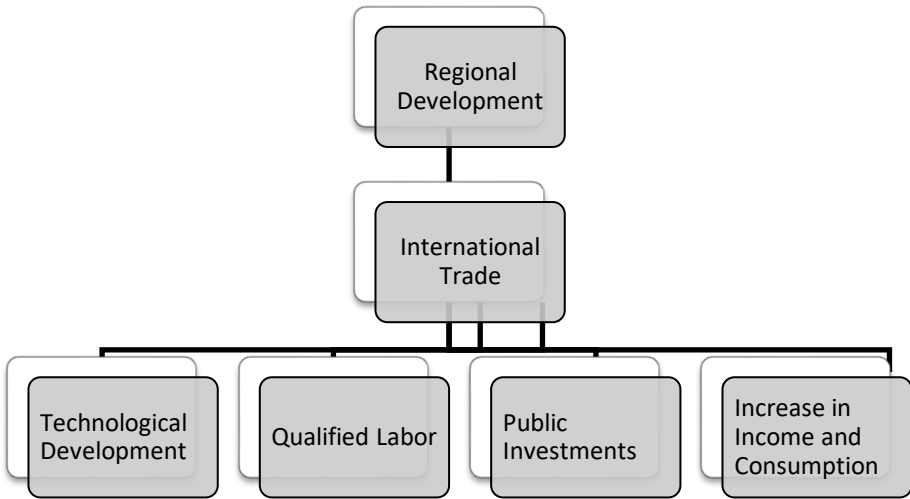
Source: General Directorate of Development Agencies (2023)

On the other hand, in order to realize and sustain regional development, it is necessary to build an internationally competitive structure on a regional basis. The fact that international trade is concentrated in a few regions, which we can define as pole regions, is one of the main and strong reasons for regional development disparities in our country. Therefore, there is a significant need for technological development and specialized labor force to ensure regional convergence. However, in order for these factors to be realized, public infrastructure and superstructure investments need to increase. In other words, regions need to be prepared for the stage of preparation for take-off, which Rostow introduces as the stages of development. In this process, increasing income level and the associated increase in consumption are factors that can slow down or prevent regional divergence (Kaynak, 2011).

There are a limited number of empirical studies that examine the propositions introduced above for different periods and cases. For instance,

Pernia and Quising (2003) analyzed the effects of trade openness on regional economic development in the Philippines using panel data. The findings imply that trade openness contributes positively to the level of regional economic development. On the other hand, González Rivas (2007) analyzed the relationship between trade openness and regional inequality in Mexico. According to the results obtained, the level of trade has a reducing effect on regional inequality by providing more benefits to regions with lower levels of education. On the other hand, the level of trade openness also provides more benefits to regions with higher levels of income and infrastructure. The author argues that foreign trade has a negative impact on regional development as the second effect is larger than the first.

Considering that regional inequalities in India and Brazil are quite large and a barrier to development, Daumal (2013) investigates the link between regional inequalities and a country's trade openness. The findings show that while Brazil's trade openness contributes to the reduction of regional inequalities, the opposite is true for India. The author underlines that FDI exacerbates regional inequalities, which is true for both countries.

Furthermore, Oktay and Gozgor (2013) investigated the relationship between trade openness and regional development (regional development index) in Turkey using panel data method. The authors find that trade openness has a positive effect on regional development. The authors also underline the bidirectional causality relationship between trade openness and regional development. Özaytürk and Mike (2020) investigated the relationship between foreign trade and regional development in TR10, TR41 and TR42 regions with the highest level of foreign trade performance in Turkey. The findings indicate that international trade has a decisive and important role in regional development. Finally, Bühler (2023) concluded that trade activities in Africa negatively affect regional economic development.

There is a considerable theoretical and empirical literature on the effects of increasing international trade volume and structure on economic growth and development of countries. However, the relationship between international trade and regional development has been neglected in the literature. In this context, the main objective of this study is to empirically test the relationship between international trade and regional development at the regional level in Turkey.

3. Data Set

This study mainly aims to investigate the impact of international trade on regional development for Turkey through panel causality analysis. The functional relationship for the model to be applied in the study is given in Equation 1:

$$\ln RD = f(GDP, X, M) \tag{1}$$

In Equation 1, RD stands for regional development, GDP stands for economic growth, X stands for exports and M stands for imports. As a proxy for regional development, regional hospital bed count data, which takes into account the health sector, is used. Regional gross domestic product per capita (2009 US$) is used for economic growth, while total exports and total imports in dollars ($) are used for exports and imports, respectively. In the analyses, the two-way causality relationship between the dependent and independent variables will be investigated.

In this direction, based on the Regional and ISIC classification made by the Turkish Statistical Institute (TUIK), analyses were carried out for 26 regions in Turkey. Information on these regions can be found in Table 1. Analyses were carried out in line with the annual observations for 2004-2021. The fact that the data for the health sector started in 2004 is the most important factor in determining the study period. The series were logarithmized and included in the analyses.

Table 1. Turkey's Classification of Statistical Regional Units (IBBS, Level 2)

	Code	Name		Code	Name
1	TRA1	Erzurum, Erzincan, Bayburt	14	TR41	Bursa, Eskişehir, Bilecik
2	TRA2	Ağrı, Kars, Iğdır, Ardahan	15	TR42	Kocaeli, Sakarya, Düzce, Bolu, Yalova
3	TRB1	Malatya, Elazığ, Bingöl, Tunceli	16	TR51	Ankara
4	TRB2	Van, Muş, Bitlis, Hakkâri	17	TR52	Konya, Karaman
5	TRC1	Gaziantep, Adıyaman, Kilis	18	TR61	Antalya, Isparta, Burdur
6	TRC2	Şanlıurfa, Diyarbakır	19	TR62	Adana, Mersin
7	TRC3	Mardin, Batman, Şırnak, Siirt	20	TR63	Hatay, Kahramanmaraş, Osmaniye
8	TR10	İstanbul	21	TR71	Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir

9	TR21	Tekirdağ, Edirne, Kırklareli	22	TR72	Kayseri, Sivas, Yozgat
10	TR22	Balıkesir, Çanakkale	23	TR81	Zonguldak, Karabük, Bartın
11	TR31	İzmir	24	TR82	Kastamonu, Çankırı, Sinop
12	TR32	Aydın, Denizli, Muğla	25	TR83	Samsun, Tokat, Çorum, Amasya
13	TR33	Manisa, Afyonkarahisar, Kütahya, Uşak	26	TR90	Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane

Source: TUIK.

4. Econometric Method

LM (Breusch and Pagan, 1980), Pesaran CD$_{LM}$ (Pesaran, 2004), Pesaran CD (Pesaran, 2004) and LM$_{adj}$ (Pesaran, Ullah and Yamagata, 2008) tests are used to test for the presence of horizontal cross-section dependence. The stationarity properties of the variables are analyzed using the CIPS (Pesaran, 2007) unit root test. Finally, the causality relationships between the variables are investigated using panel Fourier causality analysis (Yilanci & Gorus, 2020).

Yilanci and Gorus (2020), Emirmahmutoğlu and Köse (2011) extended the panel causality test with Fourier function and proposed the panel Fourier Toda-Yamamoto (Fourier TY) test. In the panel Fourier TY test, the following bivariate panel VAR model is used:

$$y_{i,t} = \mu_i + \sum_{j=1}^{k_i+d_{maxi}} A_{11}y_{i,t-j} + \sum_{j=1}^{k_i+d_{maxi}} A_{12}x_{i,t-j} + A_{13}sin\left(\frac{2\pi tf_i}{T}\right)$$
$$+ A_{14}cos\left(\frac{2\pi tf_i}{T}\right) + u_{i,t} \quad (2)$$

$$x_{i,t} = \mu_i + \sum_{j=1}^{k_i+d_{maxi}} A_{21}y_{i,t-j} + \sum_{j=1}^{k_i+d_{maxi}} A_{22}x_{i,t-j} + A_{23}sin\left(\frac{2\pi tf_i}{T}\right)$$
$$+ A_{24}cos\left(\frac{2\pi tf_i}{T}\right) + u_{i,t} \quad (3)$$

Here, t is the time, T is the sample size and f_i is the number of frequencies. In the panel Fourier TY causality test, the Fisher statistic given in Equation 4 is used:

$$F_{FTY} = -2 \sum_{i=1}^{N} \ln(p_i) \qquad (4)$$

Where p_i denotes the bootstrap p-values corresponding to the Wald statistic for the i th cross-section.

5. Empirical Findings

Before the stationarity test, the presence of horizontal cross-sectional dependence between the units was tested. The results are presented in Table 2.

Table 2. Horizontal Cross-Section Dependence

Methods	lnRD	lnGDP	lnX	lnM
LM	585.608*	745.804*	556.224*	488.918*
	(0.000)	(0.000)	(0.000)	(0.000)
PesaranCD$_{LM}$	10.222*	16.505*	9.069*	6.429*
	(0.000)	(0.000)	(0.000)	(0.000)
PesaranCD	-1.617***	-1.951**	-0.091	-0.748
	(0.053)	(0.026)	(0.464)	(0.227)
LM$_{adj}$	2.184**	9.078*	5.834*	5.021*
	(0.014)	(0.000)	(0.000)	(0.000)

Note: *, ** and *** denote significance at the 1%, 5% and 10% levels, respectively. Values in parentheses indicate p-values.

According to the results of the horizontal cross-section dependence test, the null hypothesis is rejected for all variables. Accordingly, it is concluded that there is horizontal cross-section dependence among the units. In order to investigate the stationarity properties of the series, the CIPS unit root test, which takes into account horizontal cross-section dependence, is used. The results are given in Table 3.

Table 3. CIPS Unit Root Test

Variables	Level		First Difference	
	Intercept	Intercept and Trend	Intercept	Intercept and Trend
lnRD	-1.830	-2.690***	-2.605*	-3.338*
lnGDP	-1.980	-2.534	-2.952*	-3.254*
lnX	-1.836	-2.321	-2.785*	-2.806**
lnM	-1.832	-2.223	-2.707*	-2.662***

Note: *, ** and *** denote significance at the 1%, 5% and 10% levels, respectively.

When Table 3 is analyzed, the null hypothesis indicating the existence of unit root for the model with constant cannot be rejected for all variables. Accordingly, all variables in the model with constant contain unit root. In the model with constant, it is observed that the variables become stationary when first differences are taken. The null hypothesis indicating the existence of a unit root is rejected for the variable lnRD in the model with constant and trend. Accordingly, lnGDP, lnX and lnM variables contain unit root in the model with constant and trend. When the first differences of these variables are taken, they become stationary.

In the last stage of the econometric analysis, the Panel Fourier TY causality test was used. The results are presented in Table 4, Table 5 and Table 6.

Table 4. Panel Fourier TY Causality Test (lnRD and lnGDP)

Region	lnGDP→ lnRD			lnRD → lnGDP		
	Frequency	Wald	p-value	Frequency	Wald	p-value
TRA1	1	11.120	0.154	1	1.956	0.645
TRA2	1	2.062	0.599	1	1.767	0.641
TRB1	1	2.110	0.614	1	702.025*	0.000
TRB2	1	3.740	0.429	1	5.819	0.297
TRC1	1	1.418	0.516	1	0.063	0.975
TRC2	1	19.811***	0.079	1	12.104	0.154
TRC3	2	6.624	0.284	2	8.607	0.201
TR10	1	9.965	0.172	1	11.785	0.142
TR21	1	13.378	0.146	1	0.704	0.871

TR22	1	1.616	0.675	1	42.707**	0.026
TR31	1	0.650	0.862	1	0.527	0.913
TR32	1	3.048	0.513	1	58.844**	0.023
TR33	1	5.261	0.344	1	7.458	0.218
TR41	2	2.291	0.570	2	72.954**	0.013
TR42	3	24.260***	0.065	3	18.663***	0.091
TR51	1	226.981*	0.002	1	0.595	0.880
TR52	1	18.722***	0.076	1	47.421**	0.026
TR61	1	1.144	0.291	1	0.096	0.778
TR62	1	1.241	0.275	1	0.000	0.994
TR63	2	127.673*	0.009	2	14.302***	0.098
TR71	1	21.709***	0.074	1	3.641	0.446
TR72	1	2.291	0.568	1	26.115**	0.046
TR81	1	3.924	0.438	1	251.115*	0.001
TR82	1	0.706	0.420	1	3.398***	0.098
TR83	1	1.474	0.730	1	5.377	0.330
TR90	1	2.008	0.630	1	0.518	0.892
Panel	**Panel Fisher**		**p-value**	**Panel Fisher**		**p-value**
	78.197**		0.011	106.743		0.000

Note: *, ** and *** denote significance at 1%, 5% and 10% levels, respectively.

According to the individual causality results in Table 4, the null hypothesis "lnGDP is not the cause of lnRD" is rejected for TRC2, TR42, TR51, TR52, TR63 and TR71 regions. Accordingly, it is concluded that there is causality from lnGDP to lnRD in these regions. When the results for the overall panel are analyzed, the null hypothesis "lnGDP is not the cause of lnRD" is rejected. Accordingly, it is found that there is causality from lnGDP to lnRD for the whole panel. Again, when Table 4 is analyzed, according to the individual causality results, the null hypothesis "lnRD is not the cause of lnGDP" is rejected for TRB1, TR22, TR32, TR41, TR42, TR52, TR63, TR72, TR81 and TR82 regions. Accordingly, it is concluded that there is causality from lnRD to lnGDP in these regions. When the results for the overall panel are analyzed, the null hypothesis "lnRD is not the cause of lnGDP" is rejected. Accordingly, it is found that there is causality from lnRD to lnGDP for the whole panel.

Table 5. Panel Fourier TY Causality Test (lnRD and lnX)

Region	lnX → lnRD			lnRD → lnX		
	Frequency	Wald	p-value	Frequency	Wald	p-value
TRA1	1	1.624	0.681	1	2.266	0.604
TRA2	1	4.296	0.395	1	4.682	0.387
TRB1	1	1.542	0.683	1	20.558***	0.082
TRB2	2	1.186	0.802	2	18.956***	0.078
TRC1	3	3.662	0.433	3	0.713	0.875
TRC2	1	23.265***	0.079	1	6.542	0.293
TRC3	2	16.458***	0.096	2	30.855**	0.045
TR10	1	5.727	0.289	1	0.256	0.956
TR21	2	8.182	0.225	2	10.780	0.167
TR22	3	118.823*	0.006	3	6.123	0.265
TR31	3	0.892	0.828	3	2.120	0.592
TR32	1	13.840	0.108	1	11.305	0.159
TR33	1	8.232	0.194	1	5.311	0.327
TR41	1	8.214***	0.080	1	1.082	0.617
TR42	2	3.356	0.472	2	0.780	0.857
TR51	2	19.004***	0.079	2	25.657***	0.057
TR52	1	16.138***	0.078	1	12.824	0.132
TR61	1	2.578	0.530	1	1.405	0.722
TR62	1	7.229	0.245	1	5.160	0.330
TR63	1	33.326**	0.041	1	13.206	0.110
TR71	1	5.493	0.300	1	11.495	0.137
TR72	1	4.011	0.448	1	24.589***	0.061
TR81	1	0.437	0.914	1	1.517	0.722
TR82	3	11.510	0.147	3	6.284	0.272
TR83	3	3.878	0.419	3	9.461	0.189
TR90	1	1.187	0.764	1	3.201	0.481
Panel	Panel Fisher		p-value	Panel Fisher		p-value
	76.583**		0.014	71.180**		0.039

Note: *, ** and *** denote significance at 1%, 5% and 10% levels, respectively.

According to the individual causality results in Table 5, the null hypothesis "lnX is not the cause of lnRD" is rejected for TRC2, TRC3, TR22, TR41, TR51, TR52 and TR63 regions. Accordingly, it is concluded that there is causality from lnX to lnRD in these regions. When the results for the overall panel are analyzed, the null hypothesis "lnX is not the cause of lnRD" is rejected. Accordingly, it is found that there is causality from lnX to lnRD for the whole panel. Again, when Table 5 is analyzed, according to the

individual causality results, the null hypothesis "lnRD is not the cause of lnX" is rejected for TRB1, TRB2, TRC3, TR51 and TR72 regions. Accordingly, it is concluded that there is causality from lnRD to lnX in these regions. When the results for the overall panel are analyzed, the null hypothesis "lnRD is not the cause of lnX" is rejected. Accordingly, it is found that there is causality from lnRD to lnX for the overall panel.

Table 6. Panel Fourier TY Causality Test (lnRD and lnM)

Region	lnM → lnRD			lnRD → lnM		
	Frequency	Wald	p-value	Frequency	Wald	p-value
TRA1	1	6.486	0.276	1	5.459	0.314
TRA2	2	60.164**	0.020	2	1.271	0.745
TRB1	3	1.862	0.664	3	9.081	0.215
TRB2	1	6.898	0.280	1	10.839	0.160
TRC1	3	4.583	0.173	3	0.191	0.902
TRC2	3	14.203	0.130	3	0.996	0.816
TRC3	1	1.196	0.742	1	8.249	0.235
TR10	1	8.857	0.222	1	0.213	0.976
TR21	1	7.140	0.272	1	0.723	0.860
TR22	3	14.373	0.113	3	5.793	0.299
TR31	1	0.104	0.992	1	4.310	0.381
TR32	1	4.050	0.408	1	8.249	0.207
TR33	1	14.343	0.130	1	20.496***	0.090
TR41	1	2.216	0.360	1	0.901	0.646
TR42	2	9.228	0.180	2	11.041	0.152
TR51	3	4.953	0.327	3	2.510	0.536
TR52	1	24.780***	0.061	1	20.069***	0.068
TR61	3	0.055	0.831	3	0.061	0.816
TR62	1	6.653	0.100	1	6.972	0.100
TR63	1	18.614***	0.075	1	4.346	0.376
TR71	1	12.236	0.154	1	53.869**	0.011
TR72	2	2.966	0.290	2	1.646	0.474
TR81	3	11.358	0.170	3	2.250	0.593
TR82	1	0.747	0.845	1	2.890	0.505
TR83	1	0.058	0.968	1	5.319	0.153
TR90	1	4.357624	0.394	1	2.330	0.582
Panel	Panel Fisher		p-value	Panel Fisher		p-value
	73.298**		0.027	61.810		0.165

Note: *, ** and *** denote significance at 1%, 5% and 10% levels, respectively.

According to the individual causality results in Table 6, the null hypothesis "lnM is not the cause of lnRD" is rejected for TRA2, TR52 and TR63 regions. Accordingly, it is concluded that there is causality from lnM to lnRD in these regions. When the results for the overall panel are analyzed, the null hypothesis "lnM is not the cause of lnRD" is rejected.

Accordingly, it is found that there is causality from lnM to lnRD for the overall panel. Again, when Table 6 is analyzed, according to the individual causality results, the null hypothesis "lnRD is not the cause of lnM" is rejected for TR33, TR52 and TR71 regions. Accordingly, it is concluded that there is causality from lnRD to lnM in these regions. When the results for the overall panel are analyzed, the null hypothesis "lnRD is not the cause of lnM" cannot be rejected. Accordingly, it is found that there is no causality from lnRD to lnM for the overall panel.

6. Conclusion

In order to analyze economic development at the spatial level, inter-regional and intra-regional development differences should be evaluated. In theory, the spatial distribution of factors of production and natural resources affects development at the initial level. However, the effective and efficient production of these resources and the subsequent trading of these resources in a way that creates a foreign trade surplus in favor of the region deepens the gap between the level of development between regions.

In this context, it is observed that the regions in Turkey, especially in the northwest and coastal regions of the country, have a relative advantage in terms of natural resources and factors of production compared to the eastern and inland regions of the country. This study mainly investigates the effects of international trade on regional development for 26 regions in Turkey in the NUTS Level 2 classification. The analyses are conducted for the period 2004-2021 with panel Fourier Toda-Yamamoto causality test. In this context, the relationship between regional development and economic growth, total exports and total imports is empirically tested.

The findings point to three main conclusions. The first one is that there is a bidirectional causality relationship between economic growth and regional development. The second one indicates the existence of a bidirectional relationship between the level of regional exports and regional development. The third and final finding reveals that there is a unidirectional causality relationship from the level of imports to regional development. This empirically confirms the importance of international foreign trade activities

for regional development in Turkey. Accordingly, changes in regional trade, as expected, also have an impact on regional development. In this context, it is important for policy makers to implement incentive policies to increase the foreign trade levels of regions.

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CHAPTER 4

GENETIC ALGORITHM AN IMPORTANT APPROACH OF MACHINE LEARNING TECHNOLOGY AIMING AT MAKING THE ECONOMY OF THE COUNTRY BETTER

Vaibhav Kant SINGH[1]

[1] Assistant Professor, Department of Computer Science & Engineering, School of Studies of Engineering and Technology, Guru Ghasidas Vishwavidyalaya, Central University, Bilaspur, Chhattisgarh, India.vibhu200427@gmail.com
ORCID ID: 0000-0002-6776-9573

INTRODUCTION

A genetic algorithm is an adaptive heuristic search algorithm inspired by "Darwin's theory of evolution in Nature." It is used to solve optimization problems in machine learning. It is one of the important algorithms as it helps solve complex problems that would take a long time to solve.
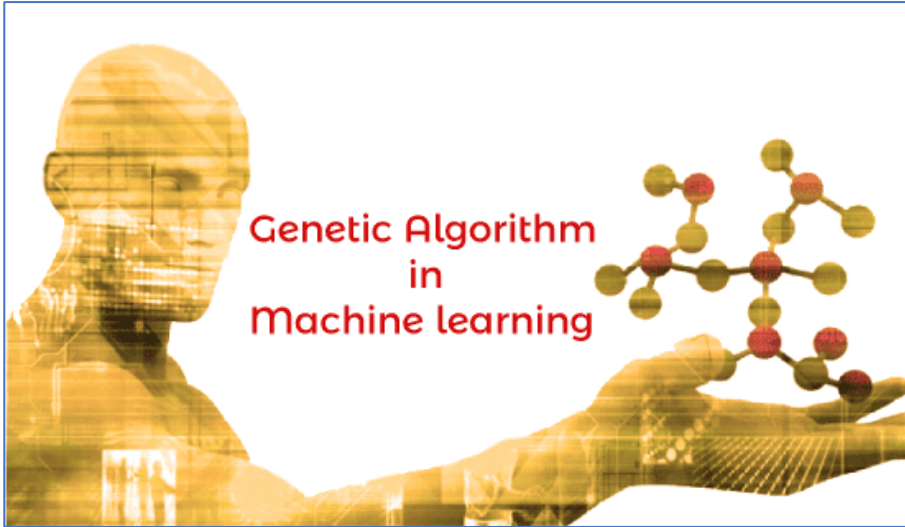

Figure1: Genetic Algorithm in ML

Genetic Algorithms are being widely used in different real-world applications, for example, Designing electronic circuits, code-breaking, image processing, and artificial creativity. In this topic, we will explain Genetic algorithm in detail, including basic terminologies used in Genetic algorithm, how it works, advantages and limitations of genetic algorithm, etc.

What is a Genetic Algorithm?

Before understanding the Genetic algorithm, let's first understand basic terminologies to better understand this algorithm:

- Population: Population is the subset of all possible or probable solutions, which can solve the given problem.
- Chromosomes: A chromosome is one of the solutions in the population for the given problem, and the collection of gene generates a chromosome.

- Gene: A chromosome is divided into a different gene, or it is an element of the chromosome.
- Allele: Allele is the value provided to the gene within a particular chromosome.
- Fitness Function: The fitness function is used to determine the individual's fitness level in the population. It means the ability of an individual to compete with other individuals. In every iteration, individuals are evaluated based on their fitness function.
- Genetic Operators: In a genetic algorithm, the best individual mate to regenerate offspring better than parents. Here genetic operators play a role in changing the genetic composition of the next generation.
- Selection

After calculating the fitness of every existent in the population, a selection process is used to determine which of the individualities in the population will get to reproduce and produce the seed that will form the coming generation.

Types of selection styles available
- Roulette wheel selection
- Event selection
- Rank- grounded selection

So, now we can define a genetic algorithm as a heuristic search algorithm to solve optimization problems. It is a subset of evolutionary algorithms, which is used in computing. A genetic algorithm uses genetic and natural selection concepts to solve optimization problems.

How Genetic Algorithm Work?

The genetic algorithm works on the evolutionary generational cycle to generate high-quality solutions. These algorithms use different operations that either enhance or replace the population to give an improved fit solution.

It basically involves five phases to solve the complex optimization problems, which are given as below:

Encoding selection
- Initialization
- Fitness Assignment

- Selection
- Reproduction(crossover and mutation)
- Termination

1. Initialization

The process of a genetic algorithm starts by generating the set of individuals, which is called population. Here each individual is the solution for the given problem. An individual contains or is characterized by a set of parameters called Genes. Genes are combined into a string and generate chromosomes, which is the solution to the problem. One of the most popular techniques for initialization is the use of random binary strings.
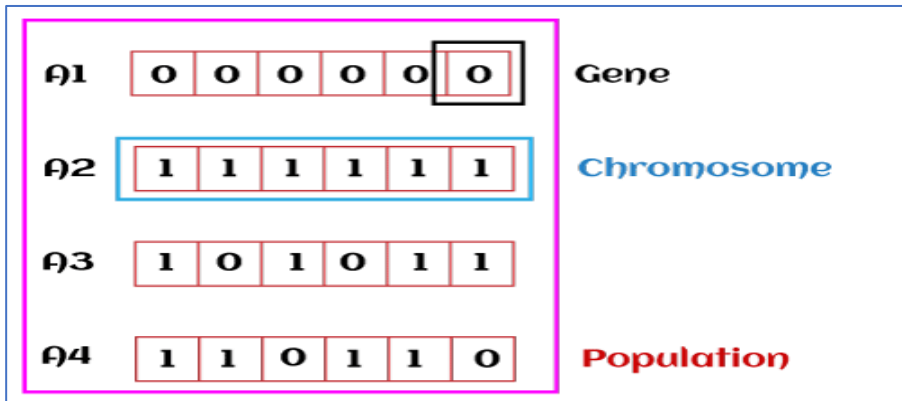

Figure2: Initialization

2. Fitness Assignment

Fitness function is used to determine how fit an individual is? It means the ability of an individual to compete with other individuals. In every iteration, individuals are evaluated based on their fitness function. The fitness function provides a fitness score to each individual. This score further determines the probability of being selected for reproduction. The high the fitness score, the more chances of getting selected for reproduction.

3. Selection

The selection phase involves the selection of individuals for the reproduction of offspring. All the selected individuals are then arranged in a pair of two to increase reproduction. Then these individuals transfer their genes to the next generation.

There are three types of Selection methods available, which are:

- Roulette wheel selection
- Tournament selection
- Rank-based selection

4. Reproduction

After the selection process, the creation of a child occurs in the reproduction step. In this step, the genetic algorithm uses two variation operators that are applied to the parent population. The two operators involved in the reproduction phase are given below:

- **Crossover:** The crossover plays a most significant role in the reproduction phase of the genetic algorithm. In this process, a crossover point is selected at random within the genes. Then the crossover operator swaps genetic information of two parents from the current generation to produce a new individual representing the offspring.
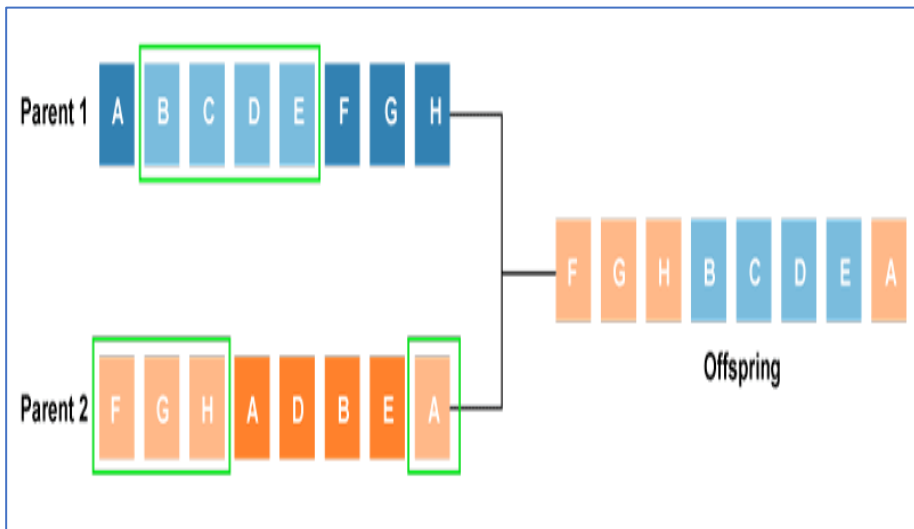

Figure3: Crossover

The genes of parents are exchanged among themselves until the crossover point is met. These newly generated offspring are added to the population. This process is also called or crossover. Types of crossover styles available:

- One point crossover

- Two-point crossover
- Livery crossover
- Inheritable Algorithms crossover
- Mutation

The mutation operator inserts random genes in the offspring (new child) to maintain the diversity in the population. It can be done by flipping some bits in the chromosomes.

Mutation helps in solving the issue of premature convergence and enhances diversification. The below image shows the mutation process:

Types of mutation styles available,

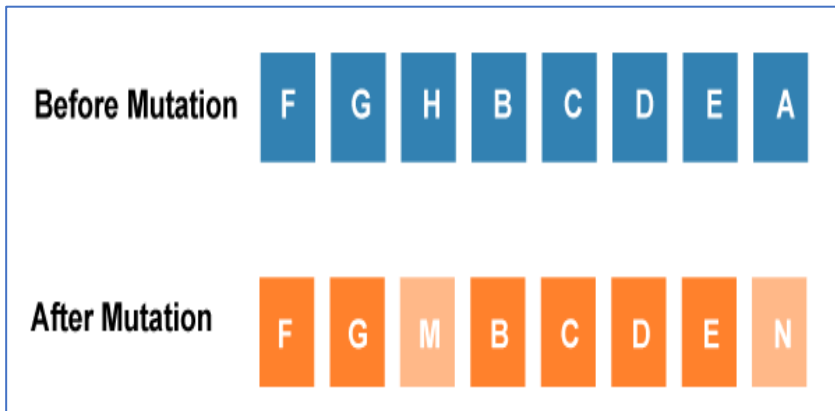- Flip bit mutation
- Gaussian mutation
- Exchange/Swap mutation

Figure4: Mutation

5. Termination

After the reproduction phase, a stopping criterion is applied as a base for termination. The algorithm terminates after the threshold fitness solution is reached. It will identify the final solution as the best solution in the population.

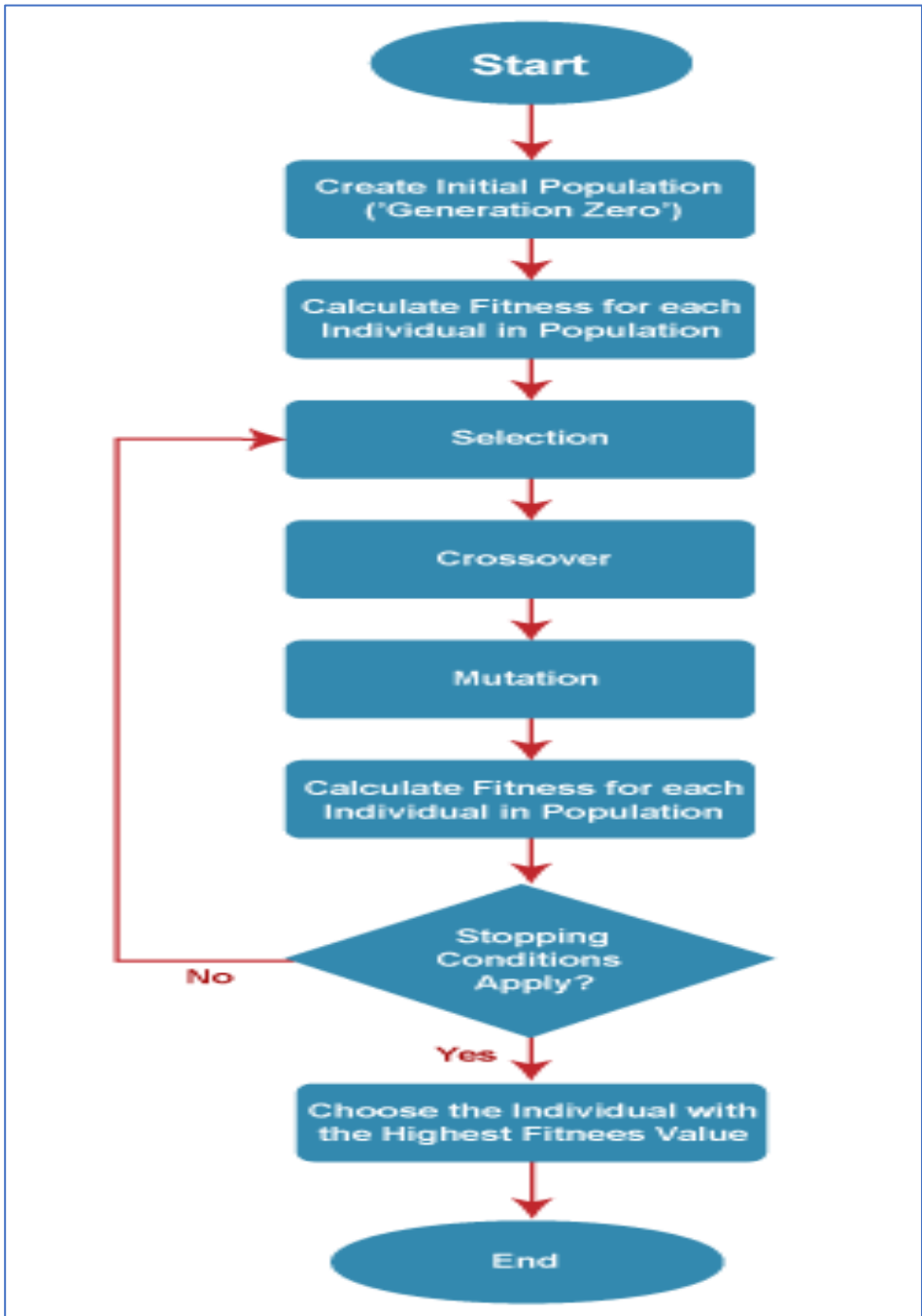**General Workflow of a Simple Genetic Algorithm**

Figure 6: Flow Diagram for Genetic Algorithm

Advantages of Genetic Algorithm

- The parallel capabilities of genetic algorithms are best.
- It helps in optimizing various problems such as discrete functions, multi-objective problems, and continuous functions.
- It provides a solution for a problem that improves over time.
- A genetic algorithm does not need derivative information.

Limitations of Genetic Algorithms

- Genetic algorithms are not efficient algorithms for solving simple problems.
- It does not guarantee the quality of the final solution to a problem.
- Repetitive calculation of fitness values may generate some computational challenges.

Difference between Genetic Algorithms and Traditional Algorithms

- A search space is the set of all possible solutions to the problem. In the traditional algorithm, only one set of solutions is maintained, whereas, in a genetic algorithm, several sets of solutions in search space can be used.
- Traditional algorithms need more information in order to perform a search, whereas genetic algorithms need only one objective function to calculate the fitness of an individual.
- Traditional Algorithms cannot work parallelly, whereas genetic Algorithms can work parallelly (calculating the fitness of the individualities are independent).
- One big difference in genetic Algorithms is that rather of operating directly on seeker results, inheritable algorithms operate on their representations (or rendering), frequently appertained to as chromosomes.
- One of the big differences between traditional algorithm and genetic algorithm is that it does not directly operate on candidate solutions.
- Traditional Algorithms can only generate one result in the end, whereas Genetic Algorithms can generate multiple optimal results from different generations.

- The traditional algorithm is not more likely to generate optimal results, whereas Genetic algorithms do not guarantee to generate optimal global results, but also there is a great possibility of getting the optimal result for a problem as it uses genetic operators such as Crossover and Mutation.
- Traditional algorithms are deterministic in nature, whereas Genetic algorithms are probabilistic and stochastic in nature.

Conclusion

After looking into the Survey report presented in the paper the author would propose the usage of Genetic Algorithm in order to perform Machine Learning for a variety of tasks.

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CHAPTER 5

FROM CLASSROOMS TO BOARDROOMS: THE INFLUENCE OF EDUCATION ON ECONOMIC DYNAMICS

M.Ed. Juan Habib Bendeck SOTO

INTRODUCTION

In the complex tapestry of global socio-economic development, education emerges as a linchpin that intricately weaves together human capital, innovation, and economic growth. The interplay between education and economic dynamics has been a subject of extensive scholarly investigation, revealing the profound impact education exerts on shaping the pathways of nations, from classrooms to boardrooms. This chapter embarks on a journey to unravel the multifaceted relationships between education and economic dynamics, delving into the mechanisms through which education molds individuals, fuels innovation, and ultimately propels economies towards sustainable prosperity.

The profound implications of education on economic growth have been repeatedly underscored by empirical studies and theoretical frameworks. Acquiring knowledge and skills through formal education equips individuals with the cognitive tools necessary for meaningful participation in the labor force and fosters adaptability in an ever-evolving economic landscape. As Heckman et al. (2013) elucidate, investments in early childhood education not only enhance human capital accumulation but also foster critical non-cognitive skills that bear lasting influences on workforce productivity.

Moreover, the transformative potential of education extends beyond the immediate confines of the classroom, extending its tendrils into the realm of innovation and entrepreneurship. The pivotal role of education in nurturing an innovative society has been well-documented. Research by Audretsch and Thurik (2001) illustrates how education fosters a culture of entrepreneurship by providing the knowledge and confidence necessary to seize opportunities, drive technological advancements, and foster a climate of creativity that fuels economic dynamism.

In the wake of the Fourth Industrial Revolution, characterized by technological disruptions and digital transformations, the nexus between education and economic dynamics takes on renewed significance. The escalating demand for specialized skills necessitates a paradigm shift in educational curricula and pedagogical approaches. The work of Frey and Osborne (2017) accentuates the urgency of equipping individuals with skill sets resilient to automation, thereby fortifying economies against job displacement and fostering a workforce poised to harness emerging opportunities.

As nations grapple with the imperatives of economic competitiveness and social equity, the dialogue surrounding education's role in economic dynamics gains prominence. The synergy between education, innovation, and economic growth demands a holistic understanding that transcends disciplinary boundaries. This chapter bridges the chasm between the realms of economics and education, offering a comprehensive exploration of how investments in education reverberate through the corridors of economic power, steering societies from classrooms to boardrooms.

In the subsequent sections, we will navigate through the intricate web of education's influence on human capital formation, technological innovation, and the dynamics of labor markets. The empirical evidence presented in this chapter will shed light on the causal links between education and economic outcomes, unearthing insights that policymakers, educators, and economists alike can leverage to propel nations towards sustainable and inclusive economic development.

Theoretical Background:

The intricate relationship between education and economic dynamics has long captivated scholars in the fields of economics and education. This chapter delves into the theoretical underpinnings that illuminate the profound interplay between education and economic growth, shedding light on the mechanisms that bridge classrooms and boardrooms. By examining key theoretical frameworks and models, we unravel the nuanced pathways through which education shapes human capital accumulation, innovation, and labor market dynamics, ultimately steering nations towards sustainable economic prosperity.

Human Capital Theory:

At the heart of the education-economic nexus lies the influential Human Capital Theory (Becker, 1964). This seminal framework posits that individuals accumulate human capital through investments in education, training, and experience, thereby enhancing their productive capacities and earning potential. Education serves as a pivotal conduit for human capital formation, equipping individuals with cognitive skills, technical proficiencies, and problem-solving abilities requisite for effective participation in the labor force (Schultz, 1961). Empirical evidence by Mincer (1974) substantiates the positive correlation between education levels and income, emphasizing

education's role in nurturing a skilled workforce that propels economic growth.

Endogenous Growth Theory:

Building upon the foundation of Human Capital Theory, Endogenous Growth Theory extends the discourse by highlighting education's role in fostering technological progress and innovation (Romer, 1990). In this framework, education not only enhances individual productivity but also fuels the engine of innovation that drives economic advancement. A well-educated populace is better equipped to absorb and generate knowledge, leading to the creation and dissemination of new ideas, technologies, and processes (Jones, 1995). Romer's theory posits that investments in education amplify a nation's long-term growth trajectory by catalyzing a virtuous cycle of innovation and productivity gains.

Innovation and Entrepreneurship:

Education's impact on economic dynamics transcends traditional classroom settings, extending its influence into the realm of innovation and entrepreneurship. Schumpeterian theories (Schumpeter, 1942) posit that education plays a pivotal role in fostering a culture of entrepreneurship, enabling individuals to identify opportunities, take risks, and drive technological disruptions. The knowledge acquired through education equips aspiring entrepreneurs with the expertise to navigate complex business landscapes and exploit untapped market niches (Audretsch & Thurik, 2001). Moreover, education nurtures the critical thinking and problem-solving skills necessary for developing innovative solutions that address societal challenges, further driving economic progress.

Labor Market Dynamics:

Education's imprint on labor markets reverberates through the channels of skill composition, occupational mobility, and income inequality. The Skill-Biased Technological Change theory (Acemoglu, 2002) posits that advances in technology disproportionately favor skilled labor over unskilled labor, creating a demand for individuals with specialized knowledge and technical competencies. Education acts as a bulwark against obsolescence, enabling individuals to adapt to shifting skill demands and secure stable employment amidst technological disruptions (Autor et al., 2003). Additionally, education's influence on occupational mobility empowers

individuals to ascend the economic ladder, fostering social mobility and attenuating income inequality (Blanden et al., 2004).

Methodology:

This chapter endeavors to empirically investigate the intricate relationship between education and economic dynamics through a qualitative research approach. By employing in-depth interviews as the data collection instrument, we aim to capture the nuanced perspectives of key stakeholders, including educators, policymakers, entrepreneurs, and industry leaders. This qualitative exploration seeks to unveil the multifaceted mechanisms through which education shapes economic growth, innovation, and labor market dynamics, offering rich insights that complement existing quantitative analyses.

Research Design:

1. Research Paradigm: This study adopts an interpretivist paradigm, recognizing the significance of social context and individual experiences in understanding the complex interplay between education and economic dynamics. By delving into the lived experiences and perceptions of participants, we aim to construct a holistic narrative that unveils the intricate dynamics underpinning this relationship.

2. Data Collection: In-depth interviews serve as the primary data collection method, allowing for an in-depth exploration of participants' perspectives and insights. A semi-structured interview protocol will be developed, comprising open-ended questions that encourage participants to reflect on their experiences, observations, and beliefs regarding the influence of education on economic dynamics.

3. Sampling Strategy: A purposive sampling strategy will be employed to ensure a diverse and representative range of participants. Key informants will be selected based on their expertise in the fields of economics, education, entrepreneurship, and policymaking. Participants may include educators, policymakers, entrepreneurs, industry leaders, and representatives from educational institutions.

4. Data Collection Instrument: The semi-structured interview protocol will encompass a series of open-ended questions designed to explore

participants' perspectives on the following key themes: a. The role of education in human capital formation and its impact on workforce productivity. b. Education's contribution to fostering innovation, entrepreneurship, and technological advancement. c. The influence of education on occupational mobility, income distribution, and social equity. d. Challenges and opportunities in aligning educational curricula with evolving economic demands.

Data Analysis:

1. Thematic Analysis: The collected interview data will undergo thematic analysis to identify recurring patterns, themes, and insights. This iterative process involves coding the data, categorizing emerging themes, and refining the analysis to construct a coherent narrative.

2. Triangulation: To enhance the validity and reliability of findings, triangulation will be employed by cross-referencing interview data with existing literature, policy documents, and quantitative studies. Triangulation ensures a comprehensive understanding of the research phenomenon from multiple angles.

3. Reflexivity: Researchers' reflexivity will be upheld throughout the study to acknowledge and mitigate potential biases that may arise during data collection and analysis. Reflexivity enhances the rigor and credibility of the research findings.

Ethical Considerations:

1. Informed Consent: Participants will provide informed consent prior to participating in the study, understanding the purpose, confidentiality, and voluntary nature of their involvement.

2. Confidentiality: Measures will be taken to ensure the confidentiality and anonymity of participants. All collected data will be de-identified and stored securely.

3. Researcher's Positionality: The researchers' backgrounds and potential biases will be transparently acknowledged in the research process to promote transparency and accountability.

Results:

This chapter presents a comprehensive set of results derived from a qualitative research study investigating the intricate relationship between education and economic dynamics. By conducting in-depth interviews with key stakeholders, including educators, policymakers, entrepreneurs, and industry leaders, we have gained valuable insights into the multifaceted ways in which education shapes economic growth, innovation, and labor market dynamics. The results are organized into four main themes, each shedding light on distinct dimensions of the influence of education on economic dynamics.

Theme 1: Human Capital Formation and Workforce Productivity

Participant	Perspective and Insights
Educator	"Education equips individuals with cognitive skills and critical thinking, fostering adaptability in the labor market."
Policymaker	"Investments in education lead to a skilled workforce, enhancing productivity and contributing to economic growth."
Industry	"Well-educated employees bring valuable skills to the workplace, contributing to higher organizational efficiency and innovation."

Theme 2: Fostering Innovation and Entrepreneurship

Participant	Perspective and Insights
Entrepreneur	"Education fosters a culture of innovation, providing the knowledge and confidence needed to seize entrepreneurial opportunities."
Educator	"Curricula designed to encourage creativity and problem-solving nurture an entrepreneurial mindset among students."
Policymaker	"Education that emphasizes research and development helps generate new ideas, fueling technological progress and economic dynamism."

Theme 3: Impact on Occupational Mobility and Income Distribution

Participant	Perspective and Insights
Economist	"Education plays a pivotal role in facilitating occupational mobility, allowing individuals to access higher-paying jobs."

Industry	"Higher education levels are associated with greater income mobility, reducing income inequality and promoting social cohesion."
Policymaker	"Targeted educational interventions can alleviate disparities, enabling individuals to transcend economic barriers and achieve upward mobility."

Theme 4: Challenges and Opportunities in Aligning Education with Economic Demands

Participant	Perspective and Insights
Educator	"Educational institutions must adapt curricula to meet evolving skill demands, bridging the gap between academia and industry."
Entrepreneur	"Collaborative efforts between academia and industry are crucial to aligning education with real-world economic needs."
Policymaker	"Policies that promote flexible education and skill upgrading empower individuals to remain competitive in a rapidly changing economy."

The results of this qualitative research study provide a nuanced understanding of the ways in which education influences economic dynamics. The perspectives and insights gleaned from educators, policymakers, entrepreneurs, and industry leaders underscore the pivotal role of education in shaping human capital, fostering innovation, and driving economic growth. These findings have profound implications for policymakers, educators, and economists, offering valuable guidance in crafting strategies to leverage education's transformative potential for sustainable and inclusive economic development.

Discussion of Results:

The results obtained from the qualitative research study examining the intricate relationship between education and economic dynamics provide a comprehensive understanding of the multifaceted ways in which education influences economic growth, innovation, and labor market dynamics. This discussion explores the key findings within each of the four thematic areas, highlights the triangulation process employed to enhance the validity of the

results, and contextualizes the findings within the broader landscape of economics and education.

Theme 1: Human Capital Formation and Workforce Productivity

The perspectives gathered from educators, policymakers, and industry leaders underscore the pivotal role of education in human capital formation and workforce productivity. As highlighted in Table 1, participants emphasize that education equips individuals with cognitive skills and critical thinking, fostering adaptability in the labor market. This aligns with the Human Capital Theory (Becker, 1964) which posits that education enhances individual productive capacities, thereby contributing to economic growth. The consistency between participant viewpoints and established economic theory reinforces the significance of education in shaping a skilled and productive workforce.

Theme 2: Fostering Innovation and Entrepreneurship

Table 2 presents insights from entrepreneurs, educators, and policymakers, emphasizing education's role in fostering innovation and entrepreneurship. Participants recognize that education nurtures an entrepreneurial mindset, equipping individuals with the knowledge and confidence to seize opportunities. These findings align with Schumpeterian theories (Schumpeter, 1942) which highlight education's role in driving technological progress and disruptive innovation. The triangulation process involved cross-referencing participant perspectives with existing literature on innovation and entrepreneurship (Audretsch & Thurik, 2001), ensuring a comprehensive understanding of education's impact on economic dynamism.

Theme 3: Impact on Occupational Mobility and Income Distribution

The perspectives gathered from economists, industry representatives, and policymakers, as displayed in Table 3, underscore education's influence on occupational mobility and income distribution. Participants note that education facilitates upward mobility and reduces income inequality. These findings resonate with the Skill-Biased Technological Change theory (Acemoglu, 2002) which posits that education enables individuals to adapt to changing skill demands and secure higher-paying jobs. By triangulating participant insights with established economic theories, the study enhances the

robustness of its conclusions regarding education's role in mitigating income disparities.

Theme 4: Challenges and Opportunities in Aligning Education with Economic Demands

Table 4 presents perspectives from educators, entrepreneurs, and policymakers, highlighting challenges and opportunities in aligning education with economic demands. Participants stress the need for curricular adaptability and collaboration between academia and industry. These insights mirror the evolving nature of labor markets in the face of technological disruptions (Frey & Osborne, 2017). The triangulation process involves connecting participant viewpoints with contemporary economic challenges, enhancing the study's relevance and applicability to real-world scenarios.

The discussion of the results underscores the significance of education as a potent catalyst shaping economic dynamics. By aligning participant perspectives with established economic theories and contemporary challenges, the study unveils a comprehensive picture of education's multifaceted influence. Triangulation enriches the validity of the findings, demonstrating the resonance between participant insights and the broader economics and education landscape. The insights garnered from this research offer valuable guidance for policymakers, educators, and economists in harnessing education's transformative potential for fostering sustainable and inclusive economic growth.

Conclusions:

The exploration of the intricate interplay between education and economic dynamics has yielded profound insights into the transformative role that education plays in shaping the trajectory of nations. As we traverse the diverse landscapes of human capital formation, innovation, occupational mobility, and curricular alignment, the holistic understanding derived from this study illuminates the manifold ways in which education serves as a linchpin connecting classrooms and boardrooms.

Education as the Catalyst for Human Capital Formation:

The collective wisdom of educators, policymakers, and industry leaders underscores education's pivotal role in human capital formation. The linkage between education and workforce productivity, as revealed by

participant perspectives and corroborated by Human Capital Theory (Becker, 1964), highlights the symbiotic relationship between educated individuals and economic growth. The cultivation of cognitive skills, critical thinking, and adaptability within classrooms contributes to a skilled and dynamic workforce that forms the bedrock of prosperous economies.

Fostering Innovation and Nurturing Entrepreneurs:

Entrepreneurial vigor, underscored by innovation and technological advancement, is a hallmark of vibrant economies. The insights gleaned from entrepreneurs, educators, and policymakers mirror Schumpeterian theories (Schumpeter, 1942), portraying education as the crucible in which innovative minds are forged. Education fosters a culture of entrepreneurship, equipping individuals with the knowledge and confidence to seize opportunities, incubate ideas, and drive economic dynamism. The alignment between participant perspectives and seminal theories underscores education's role in shaping innovative ecosystems.

Elevating Occupational Mobility and Alleviating Inequality:

Amidst the evolving contours of modern labor markets, education emerges as a potent driver of occupational mobility and a mitigator of income inequality. The resonance between participant viewpoints and the Skill-Biased Technological Change theory (Acemoglu, 2002) underscores education's transformative potential in empowering individuals to navigate shifting skill demands. This study affirms education's contribution to reducing income disparities and facilitating upward socioeconomic mobility, reinforcing its significance as a conduit of societal progress.

Navigating Challenges to Realize Educational Impact:

The discussions surrounding challenges and opportunities in aligning education with economic demands accentuate the importance of curricular adaptability and collaboration between academia and industry. Participants' insights, coupled with the recognition of contemporary challenges such as automation (Frey & Osborne, 2017), underscore the imperative for agile educational systems that equip individuals with the skills required for the Fourth Industrial Revolution and beyond. The synergy between participant perspectives and real-world challenges underscores the relevance and timeliness of this study's findings.

This study provides a holistic framework that bridges the realms of education and economics. Through a synthesis of participant perspectives and established theories, this chapter affirms education's transformative power in shaping economic growth, fostering innovation, enhancing occupational mobility, and addressing contemporary challenges. As nations endeavor to navigate the ever-evolving global landscape, the insights garnered from this study serve as a compass guiding the formulation of policies and strategies that harness education's influence to propel societies towards sustainable and inclusive economic prosperity.

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CHAPTER 6

THE IMPACT OF BRAND AWARENESS ON CONSUMER BASED BRAND LOYALTY: CASE OF KYRENIA

Seden TURAMBERK ÖZERDEN[1]

[1] Dr., International Final University, Tourism Department, TRNC, seden.ozerden@final.edu.tr. ORCID ID: 0000-0002-2484-9856.

INTRODUCTION

The island of Cyprus, which is the third largest island in the Mediterranean after Sicily and Sardinia, has a surface area of 9251 km2. Although it is located in the temperate zone, the effect of the warm zone is always valid. This situation is reflected in the climate and vegetation. The island of Cyprus, which remained under the rule of the Byzantine Empire, also known as the Eastern Roman Empire, for about 700 years after the Roman Empire was divided into two, was ruled by some principalities and knights from time to time during this period. The island, which was under the rule of the Venetians in 1489, was conquered by the Ottoman Empire in 1571. In Cyprus, which came under British rule in 1878, a Republic consisting of Turkish and Greek people was established in 1960. This short-lived Republic collapsed in 1963. Following the Peace Operation carried out by Turkey as the Guarantor State in 1974 as a result of the war between Greek Cypriots and Turkish Cypriots, two separate administrations were formed on the island (Kapluhan, 2018, p.12-13). The research in the study was conducted in the Turkish Republic of Northern Cyprus, located in the northern part of the island.

The tourism industry has become one of the most important industries in the world, especially in the last century. Especially considering the island countries, the impact of this industry on the national economy is an undeniable fact (Ayres, 2000; Croes, 2006, Alipour and Vughaingmeh, 2010). Among various tourist destinations located in the Mediterranean region, Kyrenia, North Cyprus faces a tough competition. There are many other destinations in the region which offer almost the same tourism products as Kyrenia. This study tries to find out what could possibly make Kyrenia stand up and shine as a different and unique destination.

Especially in recent years, it has been observed that consumers' consumption awareness has increased due to the rapid rise in technological developments. This has also caused a change in consumers' tendencies. So much so that consumers tend to prefer to buy the brand they know, know and like. For this reason, businesses that want to survive and be at peace in the developing competitive market have to introduce their products and brands to their potential consumers and make them like buying them in order to get ahead of their competitors. Brand awareness is an important factor to effect consumer decision on purchasing a product. When consumers want to buy a product, and a brand name can come to their minds at once, it reflects that

product has higher brand awareness. Consumers' purchase decision can be influenced if a product has higher brand awareness (Hsin, Huery & Ya, 2009). Brand loyalty appears as an important dimension in determining consumer behavior. According to Kottler and Keller (2006), this loyalty includes repeated purchases even when exposed to marketing pressures from other competing businesses and is expressed through positive behaviors such as word-of-mouth advocacy.

According to the results of some studies on the competitive advantages of businesses in terms of brand value; The more satisfied the consumer is with the service or product he/she purchased, the more likely they are to purchase the product/service again and encourage their relatives to become customers (Chi & Qu, 2007). Therefore, to improve the competitive advantage of Kyrenia as a tourist destination, an evaluation on relationship between costumer brand loyalty and brand awareness was conducted. According to Aaker (1996) Brand awareness refers to the strength of the presence of the in costumers' minds.

Brand loyalty can provide essential benefits for both consumers and companies. For consumers, a brand toward which they feel loyal, can act as a signal of achieved expectation. Because of familiar and favourable signal that a brand sends consumers buy the brand with more comfort believing that the brand will meet their expectations. This comfort would mostly come from the credibility of the brand established from past experiences. For companies, customer loyalty enhances brand equity by lowering vulnerability to competitive marketing actions, increasing, margins, increasing marketing communication, effectiveness and possibly generating more brand licensing or extension opportunities (Al-Msallam, S., 2015).

Research Background

The subject of modern branding, which was of interest to researchers towards the end of the 19th century, has become a very important phenomenon, especially with the major developments in the field of media such as radio, TV and the internet (Moore and Reid, 2008, p.429). (Moore and Reid, 2008, p.429). Although, branding for tourism destinations was introduced not so long ago by Konecnik and Gartner in 2007 in their article Customer-based brand equity for a destination. Konecnik and Gartner implied that not only brand image is a factor influencing tourism destinations, but other brand equity dimensions such as brand loyalty, brand quality and brand awareness also influence customer-based brand equity. Many other studies

since 2007 have developed new study models related with brand equity for a tourism destination by considering other factors. This study also considers other influential factors such as advertising and service performance along with brand awareness and brand loyalty to discover the relations between advertising and service performance with brand equity elements (brand awareness and brand loyalty).

Study Aims and Objectives

This study was conducted to evaluate the competitive advantage of the Kyrenia region by analysing two of the consumer based brand equity dimensions which are brand awareness and brand loyalty and two other factors of advertising and service performance on these dimensions. Since advertising can impact the consumer's destination brand awareness prior to their visit and service performance may impact their awareness after they receive the service products offered to them in Kyrenia, this study tries to find out whether there is a positive relation between advertising and brand awareness, and whether there is a positive relation between service performance and brand awareness. On the other hand, this study tries to figure out the relation between these elements and brand loyalty.

Study Questions

Hence, the purpose of the study is to find an answer for each of the following questions:

1. Is there a positive relation between brand awareness and advertising in tourism sector of Kyrenia?
2. Is there a positive relation between brand awareness and service performance in tourism sector of Kyrenia?
3. Is there a positive relation between advertising and brand loyalty in tourism sector of Kyrenia?
4. Is there a positive relation between service performance and brand loyalty in tourism sector of Kyrenia?
5. Does brand awareness create brand loyalty in tourism sector of Kyrenia?

Brand

From the perspective of the hotel industry, Brand can be defined as a product or service that reveals the difference of the service producer with its

own name and unique presentation, such as Marriott or Hilton for a hotel business. In this sense, many hotel chain businesses strive to meet the expectations of their target audiences and engage in the production process of products specific to these audiences. (Tepeci, M.1999, pp.223). Accordingly, the branding movement within the tourism industry is understood as "*a unique combination of product features and added values, both functional and non-functional, the awareness of which may be conscious or intuitive, which has acquired a relevant meaning that is inextricably linked with the brand*". (Morgan, 1998, p.140). The benefits of branding for businesses reveal themselves in the long run. Since the target audience of businesses that choose branding will be clear, loyalty to the brand increases. In a competitive environment, its difference compared to its imitations becomes evident. In particular, it eliminates the indecisiveness that has developed among consumers in today's world and allows them to shop with confidence (Aaker, 1991).

Brand Equity

Brand equity is a very important concept for both academic research and business practices. Because businesses can gain competitive advantage thanks to successful brands (Lassar et al. 1995, p.11). Although there are many definitions of brand value in the literature, there is no exact consensus yet (Park and Srinivasan, 1994). The concept of brand value is the additional value added to the product and the consumer by the positive impressions created by a strong brand name and symbol in the consumer's mind. The value in question makes the value of the product and the business in the market more valuable than the assets of the business due to positive impressions (Alkibay, 2002, p.11, Cop and Bekmezci, 2005, p.69).

According to Leuthesser (1988), brand equity; A brand's customers are associations and behaviors that allow the brand to earn more volume or more margin than it could without the brand name. Pitta and Katsanis (1995) also mention that brand equity increases the likelihood of that brand being chosen by consumers and creates brand loyalty on customers. In addition, this formation gives the brand an advantage in the competitive environment and protects it from future threats. Aaker (1991) argues that companies with strong brands will generally make higher profits due to the diversity in distribution channels and increasing product diversity by focusing on different products (Wood, L., 2002, p.663). According to Aaker and Joachimsthaler

(2000), the factors that determine the equity of a brand are brand awareness, perceived quality of the brand, brand associations and loyalty to the brand.

According to Aaker, Biel and Keller, a business with positive consumer-based brand equity allows consumers to constantly choose that brand. Brand recognition is paved with the spread and increase of positive word-of-mouth comments made by consumers. In addition, it is inevitable that they will have a consumer portfolio that is less sensitive to price increases caused by periodic inflations (Zhuowei, Liping, 2015, p.432).

Destination Brand Equity

According to Konecnik and Gartner (2007, p. 417), the awareness of a destination's Consumer Based Brand Value in Tourism Destinations (CBBETD) is determined by the dimensions of image, quality and loyalty. Perhaps the most important thing to consider in destination branding is strategic marketing. In other words, when following the path of destination branding, the main strategic purpose should be taken into account and the branding methods should be determined within this strategy. Destination awareness among tourists should be created and increased by creating appropriate marketing strategies to reflect the basic purpose. Additionally, a loyalty dimension should be created by appealing to image or quality perceptions. Different marketing strategies can be used for different foreign markets, but all strategies to be prepared must be compatible with the brand identity of the destination (Konecnik, Gartner, 2007, p.417).

Therefore, when destination studies are examined, while the universality and originality of a brand are highlighted, its tourism characteristics and the qualities of the destination should not be ignored. Functional, symbolic and experiential elements of a brand should be brought together to create a unique, memorable and awareness-raising destination identity (Boo, S., Busser, J. &Baloğlu, Ş., 2009).

Brand Loyalty

Brand loyalty can be defined as a behavioral response and psychological processes created by consumers. So, accordingly, brand loyalty is a result of both behavior and attitudes. If the purchasing action is not intentional, repurchase, the existence of brand loyalty cannot be proven. Brand loyalty includes positive attitudes formed by consumers towards the brand and repeated purchasing behavior. In the globalizing world, it is very easy to reach more than one brand of a product or service. The consumer has

to make a choice among the brand categories available to him. Today, many products and services offered to consumers are sold under a certain brand. This proves the importance of branding. Many products and services are sold as branded products and services; This shows great confidence in the effectiveness of branding. The satisfaction achieved by consumers results in a high probability of that brand being preferred again by the consumer in the next consumption need (Balgopal, S. 2012, p.46).

According to many different searches; loyalty has been an important research area in tourism destinations. The loyalty effect, explains the advantages of brand loyalty which are:

Continues profit is related with long term customer loyalty, the longer a customer remains loyal, the more profit a business can get from that single customer; reducing marketing cost by having repeat loyal guests; Increases per-customer revenue growth. Customer spending tends to increase over time because the loyal customers are familiar with all the products of the company; decrease of operating cost due to the familiarity of loyal customer with information and services; increases referrals is about loyal customers recommending the business to friends and the other people; due to perception of unique brand value by loyal customers, price premiums increases; providing competitive advantage is another important factor because loyal customers become less sensitive to a price incise (Reichheld, F.F 1996).

The reasons for brand loyalty for consumers may vary. But loyal customers usually have some common behaviors: These are; It manifests itself in the form of repeated purchases, trying different products of the same company, a resistant stance against competition, giving advice to people around him, and individually promoting the product he is satisfied with (Tepeci, M. 1999, p. .224).

According to Oliver (1999), brand loyalty occurs over time. During this time period, the business must make continuous efforts and focus on details. Because loyalty is the ongoing repurchase process that occurs in consumers towards a product within the scope of these efforts of the business.

Basically, two types of loyal customers can be mentioned. These are Behavioral customer type and emotional customer type. The behavioral type of customer is loyal to the brand, but does not have any emotional bond with the brand. In the emotional customer type, an emotional bond develops towards the brand (Ojele, Y.C., 2016).

Brand Awareness

Having a strong brand awareness and knowing that brand is a prerequisite for thoughts, feelings and behaviors about the brand (Keller, 2003, 253). The concept of brand awareness is a very important detail in terms of institutions being able to convey their brands to their determined target audiences and potential target audiences. The target audience's first impression of the brand can be formed after the awareness process is completed. After this process, the image of the brand is positioned and if this image is positive, the target audience begins to become attached to that brand. This enables all brand-owning institutions to progress towards brand loyalty, which is the ultimate goal they want to achieve (Özyurt Kaptanoğlu, Kılıçarslan and Tosun, 2019, p.258).

Brand awareness has a four-stage process. The first stage of this process is not being aware of the brand, the second stage is knowing the brand, the third stage is remembering the brand and the last stage is becoming the first brand that comes to mind. Brand recognition can be defined as the ability of the consumer to first verify the appearance of the brand when given a clue about the brand. Brand recognition can be defined as the brand in question being in the consumer's mind or having enough information for the brand to be in the consumer's mind. Brand recognition, at the lowest level, is based on assisted recall tests and is particularly important for brand preference at the time of purchase. Brand recognition can be seen as the first stage of brand awareness. The consumer at the time of making the purchase Awareness of the brand they choose is especially important (Başarır, 2020, p. 386).

Service Performance

Service performance has an important factor between the business that is the brand producer and the consumers. This factor can be expressed as holistic experiences that reveal the brand's difference from other brands. Consumers who have previously received the service evaluate the brand according to the level of performance they perceive. With this evaluation, service performance creates a strong impact on brand building and consumers gradually begin to learn about the brand. Therefore, brand awareness and brand meaning are created in the long run. When the tourism industry is examined, it is seen that tourists' beliefs stemming from their actual experiences with destination service providers are quite strong. Consumers trust the information and opinions derived from their individual experiences more than the information they receive through external communication. For

this reason, individual and direct experiences gain more importance than indirect experiences such as advertising, word of mouth and similar experiences. Accordingly, as in every field, although various communication methods make significant contributions to the formation of a destination brand, the primary impact for tourists visiting the destination is the real interaction with the destination (Yan Y., Xiaoming L. and Jun L., 2015, p.5).

Advertising

According to the definition of the American Marketing Association, advertising is a form of non-personal promotion of ideas, products and personal services through a specific sponsor, in return for a certain fee. Advertising essentially aims to create a certain impact on the consumer audience it targets, to influence the thinking habits of this audience, to direct them to purchase and to increase the profitability of the business. When considered as a promotional tool that allows it to stand out from its competitors and gain a deep-rooted place in the market, its purpose is; By promoting products and services to consumers, it is to create a strong tendency to create product, service and brand loyalty in consumers. Advertising essentially aims to create a certain impact on the consumer audience it targets, to influence the thinking habits of this audience, to direct them to purchase and to increase the profitability of the business. As a result of their research, Herremans, K Ryans and Aggaruval revealed that advertising plays a more important role in brand strengthening and brand creation compared to other promotional techniques (Oturanç, 2005, p.56).

Eng and Keh (2007) in their study examining the joint effects of advertising and brand value on the firm's future business and market performance, found that both advertising and brand value improve future accounting returns at the firm level, and that advertising and brand value improve future accounting returns at the firm level. It was determined that the effect of brand value on future stock returns is minimal, and advertising expenditures increase brand sales and brand profitability (Poyraz ve Mirgen,2020, p.109).

Methodology
Conceptual Framework

This study's questions lead us to five hypotheses. The first hypothesis is concerned with the relation between advertising and brand awareness. The second hypothesis is related with the relation between service performance and brand awareness. The third hypothesis is about the relation between advertising and brand loyalty. The fourth hypothesis is related with the influence of service performance on brand loyalty. And finally, the fifth hypothesis is concerned with the impact of brand awareness on brand loyalty.

In the literature review, it was seen that some field-specific studies were conducted. In Tandoh's 2015 study investigating the effect of brand awareness on brand loyalty, he concluded that the brand awareness strategy that customers are most aware of is traditional advertising and that brand awareness has a significant effect on brand loyalty (Ojele, Y.C., 2016, p: 19-20). Agrawal, on the other hand, thinks that in the study conducted in 1996, advertising can be seen as a "defensive" strategy applied to create repeat customers and ensure brand loyalty, and price promotions can be seen as an "offensive" strategy used to alienate loyal consumers from the rival brand.

Research shows that one of the most important factors of brand loyalty is advertising. In this sense, it can be said that advertising has a significant impact on strengthening the performance and usage experience of consumer perception towards a particular brand. (Hong-Youl H., Joby J., Swinder J., Siva M., 2011, p. 675).

According to the results of their research, Aaker and Keller (1990) argue that high brand awareness and creating a good image can increase brand loyalty in customers. In addition, high brand awareness determines the trust environment towards the brand and the increase in customers' purchasing tendencies. Peng (2006) emphasizes that brand awareness has the greatest impact on brand loyalty. Accordingly, when businesses develop a new product or a new market, they must increase their brand awareness. Because brand awareness is positively related to brand loyalty (Aaker and Keller, 1990; Peng, 2006; Subhani, M.I and Osman, A.2009).

In his study conducted in 1991, Aaker states that brand awareness, the quality perceived by consumers and the brand identity created can contribute greatly to the development of brand loyalty (Subhani, M.I and Osman, A. (2009).

The quality of the service offered by businesses is one of the most important determinants of overall customer satisfaction. This satisfaction ensures retention of the target audience and customer loyalty. According to the results of the research conducted by Parasuraman et al. in 1991,

consumers' perception of service quality positively affects their willingness to recommend the brand to other people. In addition, consumers' willingness to recommend is an important indicator of customer loyalty (Ojele, Y.C., 2016, p: 20).

The model of the research to be conducted in the light of the above information is given in Figure 1.
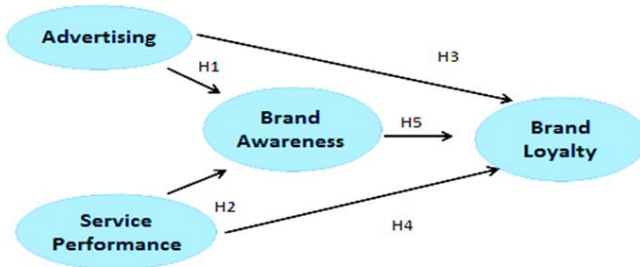
Figure 1: Framework

According to **Figure 1**, hypotheses are formulated as below:

H1: Advertising positively effects brand awareness in tourism sector of Kyrenia.

H2: Service Performance positively effects brand awareness in tourism sector of Kyrenia.

H3: Advertising positively effects brand loyalty in tourism sector of Kyrenia.

H4: Service Performance positively effects brand loyalty in tourism sector of Kyrenia.

H5: Brand Awareness positively effects brand loyalty in tourism sector of Kyrenia.

Method of data collection

This study was applied to foreign tourists visiting Kyrenia, one of the cities of Northern Cyprus. The study used quantitative data collection method and analysis using five-point Likert scale surveys. The questions asked aim to reveal tourists' perceptions of the destination image, tourists' loyalty to the destination, the service performance of the destination according to tourists, and the adequacy of the advertising promotions used by the city of Kyrenia as a tourism destination. The questions applied in the survey were grouped under four main headings. These are respectively; They include destination image, destination loyalty, service performance and advertising.

Destination Awareness

1. Do you think Kyrenia is popular as a destination?
2. Do you think of Kyrenia as a prominent destination?
3. Do you think that, when you think about similar types of destination, this destination comes to your mind immediately?

Destination Brand Loyalty:

1. Would you consider visiting Kyrenia again in the future?
2. Kyrenia is my preferred choice for a destination.
3. Do you advice others to visit Kyrenia as a destination?

Destination Service Performance:

1. Do you think you are receiving proper services for the price you are paying?
2. Do you think that the natural environment of the surrounding area is clean relative
    to the other destinations that you have previously visited?
3. To what extent do you rate the infrastructure facilities of the region relative to
    other destination?
4. The service provided by the destination is in good order

Advertising

1. Do you think there is adequate advertising for Kyrenia as a destination?
2. Did you become aware of this destination through advertising?
3. There are many campaigns advertising for this destination.

The five level Likert scale questionnaires were arranged in the following order to determine the level of participants' agreement

To a great extent	To a moderate extent	To some extent	to a small extent	Not at all

Sample size and population

The population of the study was the number of tourists visiting Kyrenia City during September 2023 till October 2023. The sample size was 220 and the participants were chosen randomly among tourists visiting Kyrenia without considering their gender, age, or nationality. From the total 220 sample size, 204 questionnaires were returned and actually were accounted.

Limitation

The only limitation of the study relates to data collection. The surveys were prepared in English and German. Since some tourists did not speak English or German, professional tour guides occasionally provided translation assistance to answer surveys.

Method of analysis

The collected data were analyzed in SPSS software version 23. The analysis tool used to plot correlations between dependent and independent variables and test the null hypothesis is multiple linear regression analysis. A 95% confidence interval of freedom was used for the sample mean. Cronbach Alpha reliability coefficient was calculated for each correlation. The range of majority results obtained; Advertising-Brand Awareness, 0.708 Service Performance-Brand Awareness, 0.704 Advertising-Brand Loyalty, 0.538 Service Performance-Brand loyalty, 0.703 Brand Awareness-Brand Loyalty, 0.734 It shows a high degree of reliability. Of the Cronbach Alpha values mentioned above, only advertising-brand loyalty shows a weak coefficient value (0.538). The validity of the questionnaires was previously tested by Yang et al (2015).

The multiple regression analysis tool in SPSS, has drawn two tables which this study used for data analysis, one is the correlations table and the other coefficients table. The correlations table shows the strength of the

relationship between the two variables. The coefficient table shows the lower and upper bond B value for the 95% confidence interval; The B and Beta value; T value; and the P value or sig. which shows how two variables interact and if the association between the two variables is statistically significant.

Data Analysis

The data collected was analysed is the SPSS software as was mentioned in chapter 4. The following tables show the results of the correlations' analyses used for testing the study's hypotheses.

Brand Awareness-Advertising

Hypothesis 1: Advertising positively effects brand awareness in tourism sector of Kyrenia; a multiple linear regression analysis was performed and the following results were drawn:

Table 1: The descriptive statistic between Brand Awareness and Advertising

Correlations

		brand_awareness	advertising
Pearson Correlation	brand_awareness	1.000	.394
	advertising	.394	1.000
Sig. (1-tailed)	brand_awareness	.	.000
	advertising	.000	.
N	brand_awareness	200	200
	advertising	200	200

Table 2: Correlations of Brand Awareness-Advertising

Descriptive Statistics

	Mean	Std. Deviation	N
brand_awareness	2.6750	.97035	200
advertising	3.1475	1.12397	200

Table 3: B, Beta, T Value, P Value, lower and upper bound intervals for B

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.603	.188		8.512	.000	1.232	1.975
	advertising	.340	.056	.394	6.038	.000	.229	.452

a. Dependent Variable: brand_awareness

The multiple regression analysis on the two variables of brand awareness and advertising shows that there is a positive relationship between the two with a significant P value of 0.000. A Beta value of 0.394 indicates the strength of the correlation. The null hypothesis is accepted in this case. Therefore, we can come to the conclusion that the destination's brand awareness is influenced by advertising in Kyrenia.

Brand Awareness-Service Performance

Hypothesis 2: Service Performance positively effects brand awareness in tourism sector of Kyrenia; a multiple regression analysis has drawn the following tables which can indicate the strength of the correlations between the two variables. The following results were drawn:

Table 4: The Descriptive Statistics of Brand Awareness-Service Performance

Descriptive Statistics

	Mean	Std. Deviation	N
brand_awareness	2.6750	.97035	200
Service_performance	2.6700	.82126	200

Table 5: Correlations of Brand Awareness- Service Performance

Correlations

		brand_awareness	Service_performance
Pearson Correlation	brand_awareness	1.000	.422
	Service_performance	.422	1.000
Sig. (1-tailed)	brand_awareness	.	.000
	Service_performance	.000	.
N	brand_awareness	200	200
	Service_performance	200	200

Table 6: B, Beta, T Value, P Value, lower and upper bound intervals for B.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.345	.213		6.323	.000	.925	1.764
	Service_performance	.498	.076	.422	6.545	.000	.348	.648

a. Dependent Variable: brand_awareness

The multiple regression analysis on service performance and brand awareness shows a very strong positive correlation between the two variables. We can say that service performance as the independent variable and brand awareness as the dependent variable, hold a strong positive relationship by looking at the Beta value of 0.422 and the significant P value of 0.000. The null hypothesis is accepted for this test.

Advertising - Brand Loyalty

Hypothesis 3: Advertising positively effects brand loyalty in tourism sector of Kyrenia; a multiple regression analysis has drawn the following tables which can indicate the strength of the correlations between the two variables. The following tables were drawn:

Table 7: The Descriptive Statistics of Advertising-Brand Loyalty

Descriptive Statistics

	Mean	Std. Deviation	N
brand_loyalty	2.2175	.92505	200
advertising	3.1475	1.12397	200

Table 8: Advertising-Brand Loyalty Correlations

Correlations

		brand_loyalty	advertising
Pearson Correlation	brand_loyalty	1.000	.124
	advertising	.124	1.000
Sig. (1-tailed)	brand_loyalty	.	.041
	advertising	.041	.
N	brand_loyalty	200	200
	advertising	200	200

Table 9: B, Beta, T Value, P Value, lower and upper bound intervals for B.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.897	.194		9.783	.000	1.515	2.280
	advertising	.102	.058	.124	1.753	.081	-.013	.216

a. Dependent Variable: brand_loyalty

The regression analysis for the two variables of advertising and brand loyalty, indicate that there is not a significant correlation between the two variables, since the P value is higher than the value expected for accepting the null hypothesis. The Beta value is not high enough either. So there is not a strong significant relationship between the two.

Service Performance - Brand Loyalty

Hypothesis 4: Service Performance positively effects brand loyalty in tourism sector of Kyrenia; a multiple regression analysis has drawn the following tables which can indicate the strength of the correlations between the two variables. The following tables were drawn:

Table 10: Descriptive Statistic of Service Performance-Brand Loyalty

Correlations

		brand_loyalty	Service_performance
Pearson Correlation	brand_loyalty	1.000	.465
	Service_performance	.465	1.000
Sig. (1-tailed)	brand_loyalty	.	.000
	Service_performance	.000	.
N	brand_loyalty	200	200
	Service_performance	200	200

Table 11: Correlation between Service Performance and Brand Loyalty

Descriptive Statistics

	Mean	Std. Deviation	N
brand_loyalty	2.2175	.92505	200
Service_performance	2.6700	.82126	200

Table 12: B, Beta, T Value, P Value, lower and upper bound intervals for B.

Correlations

		brand_loyalty	Service_performance
Pearson Correlation	brand_loyalty	1.000	.465
	Service_performance	.465	1.000
Sig. (1-tailed)	brand_loyalty	.	.000
	Service_performance	.000	.
N	brand_loyalty	200	200
	Service_performance	200	200

Table 13: Descriptive Statistics of Brand Loyalty-Brand Awareness

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.818	.198		4.134	.000	.428	1.208
	Service_performance	.524	.071	.465	7.398	.000	.384	.664

a. Dependent Variable: brand_loyalty

The regression analysis on service performance and brand loyalty shows a very strong correlation between the two variables with a significant P value of 0.000, a high Beta value of 0.465, and t value of 7.398. All the values shown on the above tables indicate the positive relationship between the two. Therefore, we can say that the null hypothesis is accepted for this relationship.

Brand Awareness - Brand Loyalty

To test the Hypothesis 5: Brand Awareness positively effects brand loyalty in tourism sector of Kyrenia; a multiple regression analysis has drawn the following tables which can indicate the strength of the correlations between the two variables. The following tables were drawn:

Table 13: Descriptive Statistics of Brand Loyalty-Brand Awareness

Descriptive Statistics

	Mean	Std. Deviation	N
brand_loyalty	2.2175	.92505	200
brand_awareness	2.6750	.97035	200

Table 14: Brand Awareness-Brand Loyalty Correlations

Correlations

		brand_loyalty	brand_aware ness
Pearson Correlation	brand_loyalty	1.000	.456
	brand_awareness	.456	1.000
Sig. (1-tailed)	brand_loyalty	.	.000
	brand_awareness	.000	.
N	brand_loyalty	200	200
	brand_awareness	200	200

Table 15: B, Beta, T Value, P Value, lower and upper bound intervals for B.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	1.056	.172		6.153	.000	.717	1.394
	brand_awareness	.434	.060	.456	7.202	.000	.315	.553

a. Dependent Variable: brand_loyalty

The multiple regression analysis on brand-awareness and brand-loyalty shows a high positive correlation between the two. The null hypothesis is accepted because the P value is 0.000 and the Beta value shows a high number of 0.456. The dependent variable of brand-loyalty is highly influenced by brand-awareness.

Discussion and Conclusion

Tourism industry is heavily dependent on loyal customers. The way services are offered and presented is the main factor in building a strong relationship between the tourism firms and its customers. As discovered previously by the scholars, awareness about a product may have high impacts on loyalty. This study has focused on the impact of awareness on customer loyalty for a destination. The data analysis shows the significance of relationship between destination brand loyalty and destination brand awareness for Kyrenia. The research has also indicated the high impact of service performance on brand loyalty. According to the results of this study, service performance impacts the band loyalty to a high degree. With the highlights of this study's results, tourism stakeholders of Kyrenia should focus on the importance and role of service performance. Offering more

professional services through enhanced human resource management may lead to higher quality services.

This study shows that advertising has a direct positive relationship with customer   awareness, but not with customer loyalty. For sure advertising increases the customer's awareness, but for building loyalty we need additional tools and instruments.

In global tourism industry, its quite obvious that employee's skills could play a critical role in gaining success due to the face to face interactions with consumer. Therefore, to improve the employees' skills, proper education should be considered by universities and educational institutions. Besides training the industry's human forces, educating the local community regarding tourists' needs and demands should not be forgotten. Since service performance is not only an issue of offering services, but also what tourists perceive about a destination's total appearance and image, the industry needs to consider those other aspects as well.
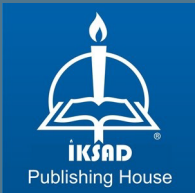
The government's role in the success of tourism of a destination should not be forgotten. The correlations between the universities or educational institutions, and tourism coordinators or/and stakeholders are other option for reaching the goals of a successful destination.

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