INNOVATIVE ECONOMIES IN TERMS OF COMPETITIVENESS: AN EVALUATION OF THE TURKISH ECOSYSTEM

Dr. Ahmet EFE
Kıdemli Denetçi
Uluslararası Kızılhaç ve Kızılay Federasyonu, Denetim Birimi
icsiacag@gmail.com, ORCID:0000-0002-2691-7517

ABSTRACT
This study explores the challenges faced by competition policy in the international arena, particularly in developing countries, and the relationship between competition policy and trade liberalization. It discusses the factors that contribute to the success or failure of countries, including the quality of education, political continuity, developed capital markets, and the level of competition. The study while highlights the importance of understanding the advantages and problems of developing countries for policymakers and businesses and by discussing the challenges faced by competition authorities in tackling anti-competitive practices of export cartels and proposes the need for a global competition policy agreement. Furthermore, the study developes a formula model for innovation that includes research and development investment, creative thinking, risk-taking, problem-solving skills, competitive ecosystem, incentives and funding opportunities, and divine bounties. The modelled formula aims to quantify the interplay of different factors that drive innovation and identify areas where additional investment or support may be needed. The study also discusses the affiliation of innovation model within the cosmos as a lessons learned for business culture processes, emphasizing the importance of understanding the order established in the universe, obeying natural laws, and acting in a way that produces beneficial results with harmonious goals. It is asserted within the model formula that economic actors should consider not only worldly and temporary gains in innovation and competitiveness, but also medium and long-term gains, both worldly and hereafter, in a balanced way.

Keywords: Competitiveness, Innovative Economies, Turkish Ecosystem
JEL Codes: M10, M13, M21

REKABET AÇISINDAN YENİLİKÇİ EKONOMİLER: TÜRK EKOSİSTEMİ ÜZERİNE BIR DEĞERLENDİRME

ÖZ
Bu çalışma, uluslararası arenada, özellikle gelişmekte olan ülkelerde rekabet politikasının karşılaştığı zorlukları ve rekabet politikası ile ticaretin serbestleştirilmesi arasındaki ilişkiyi incelemektedir. Eğitim kalitesi, siyasi süreklilik, gelişmiş sermaye piyasaları ve rekabet düzeyi dahil olmak üzere ülkelerin başarısına veya başarısızlığına katkıda bulunan faktörleri tartışmaktadır. Çalışma, gelişmekte olan ülkelerin avantajlarını ve sorunlarını anlamanın politika yapıcılar ve işletmeler için önemini vurgularken, rekabet otoritelerinin ihracat kartellerinin rekabete aykırı uygulamalarıyla mücadelede karşılaştıkları zorlukları tartışarak küresel bir rekabet politikası anlaşmasına ihtiyaç olduğunu öne sürmektedir. Ayrıca çalışma, inovasyon için araştırma ve geliştirme yatırımı, yaratıcı düşünme, risk alma, problem çözme becerileri, rekabetçi ekosistem, teşvikler ve finansman fırsatları ve ilahi nimetleri içeren bir formül modeli geliştirmektedir. Modellenen formül, yeniliği yönlendiren farklı faktörlerin etkileşimini ölçmeyi ve ek yatırım veya desteğin gerekli olabileceği alanları belirlemeyi amaçlamaktadır. Çalışma, evrende kurulu düzeni anlamanın, doğa kanunlarına uymanın ve uyumlu hedeflerle faydalı sonuçlar üretecek şekilde hareket etmenin önemine vurgu yaparak, inovasyon modelinin kainatla ilişkisini iş kültürü süreçleri için bir ders olarak ele almaktadır. Model formülünde, ekonomik aktörlerin

Gönderim Tarihi:18 Şubat 2023; Kabul Tarihi:07 Nisan 2023

yenilik ve rekabet gücünde sadece dünyevi ve geçici kazanımları değil, aynı zamanda orta ve uzun vadeli dünya ve ahiret kazanımlarını da dengeli bir şekilde dikkate almaları gerektiği ileri sürülmektedir.

Anahtar Kelimeler: Rekabet Edebilirlik, Yenilikçi Ekonomiler, Türkiye Ekosistemi
JEL Codes: M10, M13, M21

1. INTRODUCTION

Technological innovation involves several scientific, technical, financial, and commercial activities. As is known, technological innovations are becoming more concrete as new products and services. The economy of creation is a discipline focused on change, transformation, and re-engineering processes. Especially developing countries should follow more active policies, procedures, and human capital. Today, scientific and technologically innovative activity is not seen as an external factor in economic growth. The incentives made by financial institutions are effective in creating innovation but also may be distortive in fair competition and liberal economies. Innovation provides a competitive advantage and enhances national and international competition. Thus, it is the driving force behind the scientific and economic policies for economic growth and development. Those who invest in innovation want to profit or gain an advantage due to their innovative efforts. However, the cost of technology in the first implementation stage is high. Therefore, the sudden increase in productivity after an innovation may initially be lower. Moreover, organizations should support investments that provide a shared capital for research institutions and new high-tech enterprises. R&D expenditures within the gross national domestic product have increased over time. It is observed that R&D activities positively affect the growth process (OECD, 2011).

Economic development depends on the quantity and quality of the factors used in production. Therefore, in addition to the amount of labor, capital, and natural resources, factors that increase productivity, such as technological advances, innovative procedures, institutional maturity, and human capital accumulation, should also be considered. Demographic structure and population growth, democratic and cultural environment, economic and political stability, conjectural cycles, international relations, climate, and geographic conditions, directly and indirectly, affect economic development (Yumuşak, 2016). For this reason, instead of considering all economic factors when analyzing economic growth, it can be regarded as a correct approach to include other elements by exploring the issue from a broader perspective.

1.1. Method

Innovation needs to be studied at the root level at the beginning of the education process. Preschool education and formal education system, which allows for developing analytical thinking, inquisition, and critical thinking skills where innovative culture is at the forefront, is essential in raising people who will develop original ideas. However, the education system has been introduced in the last 30 years with numerous unplanned policies in Turkey (Akçomak, 2018). Therefore, the structure that triggers innovation is not simple but has political, geographical, economic, cultural, and historical determinants. Still, the most vital point of resistance is production. In chaos and storm where virtual coins are printed, non-counterclaimed assets are bought, and market actors buy expectations and demands. The developing world will either produce or drown in the raging waves of speculation.

In this study, a literature survey and formulation modelling methods are conducted to find some answers to problems related to the relationship between competitiveness and innovation in terms of developing countries such as Turkey. It is so complex that we need some of the interrelated questions to be asked:

- Can innovation change the current global order? If so, then what is its formula?
- How can we affiliate the innovation in the cosmos with the one in the business culture processes?

1.2. Research Problem

The study aims to explore the relationship between innovation and competitiveness in developing countries, with a specific focus on Turkey. The research will investigate the impact of policies and programs on R&D and innovation activities and identify the factors that contribute to the development of a supportive business environment for innovation. Additionally, the study will examine the role of education in fostering analytical thinking, inquisition, and critical thinking skills that are essential for innovation, and how innovation in the cosmos can be affiliated with the one in the business culture processes.

1.3. Research Assumptions

1. Developing countries face unique challenges in fostering innovation and achieving competitiveness due to a range of economic, political, cultural, and historical determinants.
2. Policies and programs that encourage R&D and innovation activities can have a significant impact on the competitiveness of developing countries.
3. The quality of education plays a crucial role in developing the necessary skills for innovation.
4. An innovation formula can provide a comprehensive framework for understanding the complex interplay of different factors that drive innovation.
5. Lessons from the order established in the universe can guide innovation in business culture processes.

1.4. Research Hypothesis

Innovation is a critical factor for the economic development and competitiveness of developing countries, and policies and programs that encourage R&D and innovation activities can have a significant impact on their economic growth. Education plays a crucial role in developing the necessary skills for innovation, and the proposed innovation formula can provide a comprehensive framework for understanding the complex interplay of different factors that drive innovation. Additionally, lessons from the order established in the universe can guide innovation in business culture processes, leading to more significant breakthroughs and positive results.

1.5. Literature Knowledge

We made research in the Scholar database with the keywords "Competitiveness, Innovative Economies, Turkish Ecosystem" and found 19.800 research items in general. However, when we limit the search to the ones that include all search words in the research “header” we have found nothing. So, it is an indication of the fact that this study adds value to the literature. It is discussed on various platforms, especially the World Trade Organization, the European Economic Cooperation, Development Organization, and the European Union, that the global problems faced by the competition policy in the international arena require new global solutions (Demir, 1998). The global trade process means removing the foreign trade barriers in front of the goods flows of the countries and bringing the world into a single market (Kazgan, 1997; Joekes and Evans, 2008; Rodrik, 1997). In the Diamond Model, four critical factors in determining the competitiveness and ability of countries are the four corners of diamonds. In addition to the primary factors, two indirect factors should be examined. These factors:

- Factor conditions such as infrastructure and qualified workforce of a country,
- Demand requirements for products and services within an industry,
- A side industry that will support the competitiveness of a drive in the country in the global market,
- Strategies of firms, industrial structure, and competition between each other.

The most important aspect of the Diamond Model regarding the competitive advantage of nations is that it examines them from a comprehensive perspective while addressing the conditions necessary for enterprises to achieve international success. Thus, issues such as the determinants and measurement of international competitiveness at the firm and sector levels can be realized in a more complete and more realistic framework (Koç and Özbozkurt, 2014). Organizations can use Porter's Diamond Model to transform national benefits into international benefits The main determining factors distinguished by Michael Porter are (Porter, 1990):

- Factor Conditions
- Related Supporting Industry and Sectors
- Demand Conditions of the Internal Market
- Strategy, Structure, and Competition
- The Government
- Chance Factor

The diamond model requires examining the four basic elements that determine the national competitiveness in an industry in relation to each other. These are national factor endowment, demand conditions, related and supporting sectors, and business strategies. In addition to the four main variables, the government, that is, public administration, is often considered in the diamond model. Moreover, according to Porter, competitive advantages are created by businesses operating within the country, not countries (Gürpınar and Sandıkçı, 2008).

Innovative economies and competitiveness based on ICT issues have been studied a few decades ago and its volume is constantly increasing. The concept of a new technology-based economy, also known as the New Economy or Digital Economy, has been studied for decades and is supported by basic statistics. The transition to this economy is attributed to developments in information and communication technologies (ICT) and globalization of companies, which have

created a new transformation and a new kind of economy. The New Economy can be defined as the adaptation of globalization and ICT to the production and trade processes of the old economy, with productivity, inflation-unemployment dilemma, cyclical fluctuations, and changes in enterprises as its basis. However, its mechanisms are not fully resolved, and its main characteristics are not fully understood, making it difficult to give a precise definition for the New Economy. (Alexander, 1983; Koski et al., 2002; Jalava and Pohjola, 2002). They write that the reason for this is that governments are at various stages in the transition process. Shao and Shu (2004) measure productivity growth using the Malmquist total factor productivity (TFP) Index and find that each country's ICT industry exhibits a unique behavior. Myro et al. (2009) confirm the impact of ICT on per capita income using data from 102 countries. Jorgenson et al. (2011) identify 40% of the total productivity increase of TFP originating from the ICT-production sector. Daveri and Mascotto (2006) are other studies supporting this idea. Thus, the transition to the New Economy originating from the ICT revolution, is supported by basic statistics. Çevik Tekin and Küsbeci (2021) argued that the realization of products' sales through digital platforms increases market share by gaining a competitive advantage. There are other names for New Economy such as Digital Economy, Network Economy, or Knowledge Economy. Within this study's scope, the New Economic can be briefly defined as the adaptation of globalization and ICT to the production and trade processes of the old economy (Deardorff's Glossary of International Economics, 2013) are the basis for the New Economy. Since it is an ongoing process, its mechanisms are not fully resolved, and its main characteristics are not understood. It is not easy to give the correct definition for the New Economic today (Kiracı, 2016).

In the last twenty years of the 21st Century, this situation is primarily replaced by the economies of scale, the benefits of being connected, the flexible production systems, and the centralization of R&D. Flexibility, connectivity, and business collaboration are all based on IoT, which facilitates research diversity and interdisciplinary approaches. Some developing countries like Turkey try to replace their production infrastructure and whatever has strategic importance in production supremacy with national and local ones due to foreign trade wars. All government plans, programs, and strategies are designed to mobilize this opportunity. All strategies need to be revised quarterly (Ertem, 2011).

China was among the first 20 countries in the 2018 Global Innovation Index report of WIPO for the first time. China, which ranks 22nd in last year's ranking, climbed to 17th place in 2019, rising five. Last year, Switzerland, which ranked first with 80 indicators of research and development spending, patent numbers, and information-intensive industries, maintained its leadership. Sweden, England, and Singapore followed Switzerland. The United States was ranked sixth by two places. Turkey was located on the list last year taking 51st place (WIPO, 2018).

While the quantity of production factors comes into prominence in the economic development of industrial societies, the quality of the production factors in the information societies has strategic importance, which is being affected by innovation capability. As a result, the role of the knowledge economy and the economy of innovation as an essential factor in the economic development of countries is an undeniable fact. Developing countries have begun to step back into the competition which necessitates implementing more active policies (Yumuşak, 2016).

Turkey is in a new technological transformation stage with a weak national innovation system, which is wedged between solid value chains and financial

support. Such a fiction and technology development policy would produce high value-added products and processes over time. Turkey applied science and technology policies based on monetary support to development projects. As a result, the number of techno-parks, development agencies, TTOs, hatchers, and accelerators, and the number of firms and entrepreneurs benefiting from these interfaces increased exponentially. This is only the scale, whereas the main problem is how we did with this scale, i.e., the quality and capability of the innovation ecosystem. In the list of the 2500 companies that make the most R&D investments, there are only 2 Turkish companies in the first one thousand; there are only 6 Turkish companies in the list. In the last 15 years, technology development zones, development agencies, technoparks, project bazaars, technology transfer offices (TTO) and accelerators, and startup firms focused on the intended application of creating interfaces and commercialization components may provide excellent results (Akçomak, 2018). While product innovation increases the probability of firms to participate in exports, it also positively and significantly affects export intensities in exporting firms. According to the results of the study conducted by Tuncel (2021), product innovation emerges as an important factor in the opening of companies to new markets abroad.

Quantitative or qualitative analysis of the impact of policies implemented in Turkey is minimal. However, the only way to know if policy tools increase their R&D and innovation activities and expenditures is to conduct an impact analysis of the programs and projects. As a result, an economic structure has emerged in which fixed capital investments in the construction sector are three times more than fixed capital investments. Technology policy is shifting to a mission-oriented approach, where the effectiveness of the state is increasing, more than a regulatory role for the state. Government-backed organizations such as Havelsan, Aselsan, Roketsan, TUBITAK, and TAI are examples of institutions and agencies forcing and pulling the industries to produce national and local innovative products. However, the competitiveness and quality are still far behind the developing markets. We will see the increasing importance of science and industrial policies at the new technological paradigm threshold.

2. COMPETITIVENESS CONCEPT

There are many methods measuring competitiveness; the leading and most attractive ones are WEF's Global Competitiveness Report, IMD's World Competitiveness Yearbook, and IFC's Business Competitiveness - Ease of Doing Business Report (Arslan and Tatlıdil, 2012). According to the 2018 Global Competence Competitiveness Index, Switzerland, Singapore, and the United States are the top three in competitiveness. The last three are Yemen, Madagascar, and Mozambique. Turkey, in terms of competitiveness, ranks sixty-eight among 119 countries. Competitiveness is defined as "countries, regions and cities train, attract, and hold talent." In the report determining the competitiveness ranking, it is emphasized that there is a massive gap between the countries where all countries can be vital in a competitive economy (Halife, 2020).

Undoubtedly, technology will be the most critical factor that cannot be ignored in the face of the increasing globalization tendency and the developing competitive environment. The technology, which is effective in all areas of life by introducing scientific studies, has always brought essential effects on the enterprises (Ersöz, 2006). These aspects are to produce goods and services through automation in controlling machines after the industrial revolution. Especially the integration of technologies used for processing, storing, and transmitting information with communication technologies has led to revolutionary changes in all areas.

2.1. Globalization and Technology Relations

Globalization and technological innovation, the most critical determinants of strategic change in the business world, seem to increase their impact by gaining more importance in the future. Globalization shows the effects of diverse ways of global products in various sectors, such as creating similar demands for end-users, changing the needs of international customers, encouraging economies of scale, increasing research and product development, and reducing production costs. Technology allows businesses to focus on globalization and reach economies of scale. Global enterprises rely on technological innovation to increase their capabilities of competition. In other words, technology promotes both globalization and competition on exporting economies. "Learning by exporting" appears to have a relative skill-biased impact, while FDI implies an absolute skill bias (Meschi et al., 2016).

In fact, with the formation of competition beyond normal limits, the "hyper-competition" paradigm has entered the literature as a new concept. Hyper-competition arises from the dynamics of strategic maneuvers of big-size global and innovative competitors. Environmental factors, continuous uncertainty, political tendencies, and dynamism cause heterogeneity of competitors and increase hatred among them to the extent that big ones tend to buy small ones like the behavior of big-small fishes. It is seen that this competition has emerged in every sector. Still, the enterprises operating in the high technology field are in more intense competition due to the destructive effects of innovative technology (Bulut, 2004).

2.2. Technology and Competitive Support

The importance of technology management is a vital determinant of the long-run success or failure of organizations in today's world (Erensal et al., 2006). Technological change and innovation play a leading role in shifting existing industrial structures and new industries due to competition. Undoubtedly, technological change is one of the factors that can change the rules of competition.

The technologies of a business are related to technologies that meet the needs and expectations of key stakeholders and customers. The points where the value chain of the enterprise and the value chains of its customers and stakeholders intersect are seen as potential areas of technological advancement. Indeed, a business's order processing technology will be affected by the purchase methods of its customers. Technological progress can make it easier to reach economies of scale through the achievement of efficiency, economy, and effectiveness, or it can make it insignificant by providing flexibility in processing (Dereli, 2017). The following factors can be considered concerning where the technological change may give an advantage or disadvantage in the global competition:

- Technological change itself reduces costs or allows differentiation. It can be a competitive advantage if its technical leadership, governance, and management are continuously coherent.
- If the technological change affects the cost or differentiation reasons advantageously, it will be a competitive advantage for its products and services.
- In addition to pioneering the technological change, firstly, going into operation in the market may provide significant advantages even if the followers start imitating. First comers usually win.

In an era in which technological change has reached the highest speed and caused fluctuations by affecting all industries globally, the work may be affected by technological change even if it is not in the industry related to technology. Technology can create new business methods and naturally lead to new rivalries. However, as technology is rapidly becoming the common property of everyone, the leadership that will be achieved through technology will continue at best between 5-6 months and one year (Bulut, 2004). Technology is changing rapidly, increasing in the same way as the competition. Reduction of natural resources, aggravation of organizational conditions, conjectural cycles, ecosystem malfunctions, and raising environmental awareness are essential factors of growing competition.

2.3. Factors Affecting Global Competition

Ten key sub-factors identified were: quality of labor force, the existence of modes of transportation, quality, and reliability of modes of transportation, availability of labor force, quality and reliability of utilities, wage rates, motivation of workers, telecommunication systems, a record of government stability and industrial relations laws (Kaur, 2017). The identified factors have implications for management practice, governments, and other agencies' policy-making and academic research in international operations (MacCarthy and Atthirawong, 2003). Some trends attach significant importance to competition in the existing global and new sectors. We have categorized the critical factors: Decrease in Differences between Countries; More Threatening Sector Policy; Protection of National Recognition and Distinguished Assets; More Free Flow of Technology and Competitiveness in Developing Countries.

2.3.1. Decrease in Differences between Countries

The effects of differences in technology and endowments on the pattern of trade and welfare are examined by Venables (1985). According to some authors, it is seen that economic differences between developing and developing countries shrink in areas such as revenue, factor costs, energy costs, marketing practices, and distribution channels.

2.3.2. More Threatening Sector Policy

Rising inequality and slow growth problems are themselves symptoms of an underlying malady that the US political system may not address (Stiglitz, 2019). The industrial policies of many countries are constantly changing. States such as Japan, South Korea, Singapore, and Germany move from passive or protective positions to aggressive positions that stimulate industry in carefully selected sectors. Their policies are positioned to gain the most advantageous strategies of Industry 4.0 full automation. These policies also make it easier to leave fewer desirable sectors.

2.3.3. Protection of National Recognition and Distinguished Assets

Governments are becoming increasingly aware of which sources of economic competitiveness are distinctive and becoming increasingly prone to take on the economic benefits of having these assets. Natural resources are prominent examples of assets that are either directly controlled by state property or indirectly controlled by the partnerships of states and producers. Low-paid, abundant semi-qualified, and unskilled workers are well-accepted entities in some countries (Bulut, 2004).

2.3.4. More Free Flow of Technology

Learning from foreign technologies and adapting and absorbing them into the domestic competition is critical for achieving sustained economic transformation and productivity growth. More free flow of technology, including competitors in developing countries, offers the opportunity to invest in a wide range of companies in modern world-sized facilities. All these activities tend to encourage global competition. The gradual emergence of new large-scale markets: While the United States and China have been strategic markets for long-time international competition, Russia, India, and Turkey may emerge as major future markets due to their unique size. This possibility has a consequence that if China and Russia control their needs, their companies can become the leading global forces.

2.3.5. Competitiveness of Developing Countries

One of the main tasks of developing countries is to create a favorable environment for investors, considering that this is one of the methods to ensure more significant capital inflows (Domazet and Marjanović, 2018). Traditionally, developing countries have competed based on cheap labor and natural resources, which is continuing. However, the competition of developing countries is making an ever-greater impact in capital-intensive sectors, such as shipbuilding and television sets, steel, fiber, and even the production of cars. Developing countries take significant risks because of some of the ideas presented above. The sectors that are most exposed to the competition of developing countries are the sectors that do not have the following entry barriers (Bulut, 2004):

Figure 1. Potential Barriers of Developing Markets
Source: Developed by the researcher

As indicated in the fig 1., some of factors that will be considered as global competition barriers may be due to the lack of resources or skills, experience, credibility, established relations, or many differences from local conditions. If they do not remove competitors from developed countries due to not understanding the requirements in traditional developed markets (e.g., distribution, consumer marketing, and sales), in terms of firms, the solution is challenging problems.

2.3.6. Joint Competition

The effect of firm innovativeness on business performance varies across market turbulence and competitive intensity configurations. However, the performance benefits of firm innovativeness fail to materialize under low market turbulence and highly competitive intensity (Tsai and Yang, 2013).

"Disruptive innovation" based on the "internet space" and "digital transformation" brought forward by the 21st Century, as well as the opportunities it has brought to the world economy, is increasingly hardening global competition in all sectors. On the other hand, it brings the consumers' expectations to a more critical point. In an environment where consumers can search for the product they need on a global scale and obtain it from anywhere in the world, we can think that fierce competition will continue. However, the market reality points to a reverse picture (Alkın, 2019). This situation causes them to join forces in critical sectors, especially automotive, which have marked the world economy, especially in the last ten years, to survive the competition based on 'disruptive innovation,' even large-scale and even giant companies (Hopp et al., 2018). For this reason, the merger decision of Renault and its Italian American rival Fiat Chrysler, where France is the biggest shareholder, and the rapid progress of the merger process fully confirm this matter.

3. PROBLEMS OF GLOBAL COMPETITIVENESS AND HEALTH SECTOR RISKS

In the present day the problems associated with determining the factors of competitiveness of healthcare organizations come to the forefront (Pashkus et al., 2017). With the globalization trends, the distinction between the domestic and the foreign markets has become increasingly uncertain, resulting in essential relations between competition policy and trade policy. The globalization of trade and competition policy regulations is a process that must go parallel. Otherwise, one of the consequences of trade liberalization will be global cartels. With the deregulation of the world economy, global problems related to competition policy such as global cartels and mergers are gaining importance. For this reason, competition authorities should closely monitor the global issues of competition and seek international cooperation in this area (McGreevy et al., 2019). In other words, it should be more tolerant in the control of inter-enterprise mergers in developing countries. Various methods can be proposed to create and implement a global discipline against cross-border anti-competitive enterprise practices. Directly signing the international competition agreement is seen as the most challenging approach in this regard. The globalization of competition standards is a more straightforward strategy with common competitiveness policies becoming widespread through regional integrations and agreements (Sabır, 2013). It also points to a severe problem for the near future regarding risks related to a field that we experienced at the beginning of the 21st Century and whose effects are still underlying the "global monetary crisis." The essence of this problem is international investment funds. These private sectors and estate-sized international investment funds trigger a considerable risk that we can express as a "financial bubble" effect on real estate, stocks and raw materials, commodity prices on a global scale, related companies, and investments. In the USA real estate market, this process, which caused the housing prices to swell excessively, is 1 in 600 thousand American families (Stiglitz, 2019).

The funds in question have been a significant threat to the global economic system since the late 1990s, oil, gold, minerals, and metals, even agricultural product prices, are out of control, excessive "swell," and the transaction volume in the world

financial system exceeded nine hundred trillion dollars. There is concern about price increases with the influence of international investment funds or new pharmaceutical companies under their control. Although some price increases are due to stock problems, many of these investment funds also stem from the strategy of buying neglected medicines and converting them to high-priced specialty medicines, which have been on the shore for some time now (Alkın, 2016).

4. COMPETITIVENESS INDEX

The World Economic Forum, based in Switzerland, announces the Global Competitiveness Report results. According to the 2017-2018 Global Competitiveness Index Turkey has risen to 53 from 137 countries. Last year, Turkey, 55 of 138 countries, has positioned #51 among 140 countries in the prior year. As in the previous two years, the best performance among the components included in the Global Competitiveness Index is shown in Market Size, which remains 14th. The most significant increase was observed in the Macroeconomic Environment and Technological Preparation indexes, and there has been an increase of 1-2 digits in other indices. The most severe decline in the last two years was the Health and Primary and Infrastructure indices (Dalkılıç, 2017).

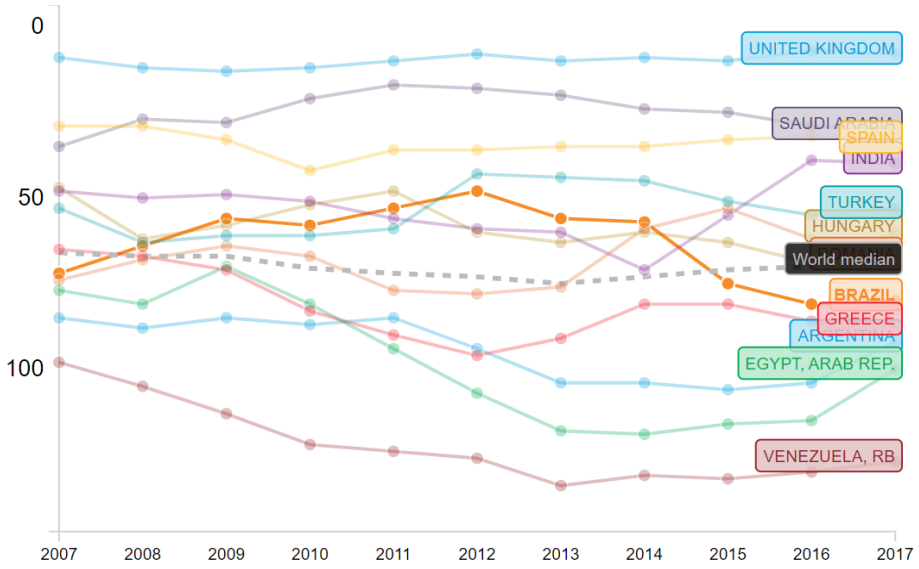

Figure 2. Global Competitiveness Index (Partly)
Source: (Worldbank, 2017)

Turkey rose two places, but still historically a lower position (as was 43 in 2012). According to the report, Turkey should improve the institutional framework that exists in the labor market rigidities must resolve necessary and strengthen financial markets' efficiency and stability. According to the report, in 2017, Turkey's economy is expected to grow by 2.9 percent (Schwab, 2019). The top 30 countries in the competitiveness ranking in 2022 are demonstrated in the following figure in which Turkey still does not exist.

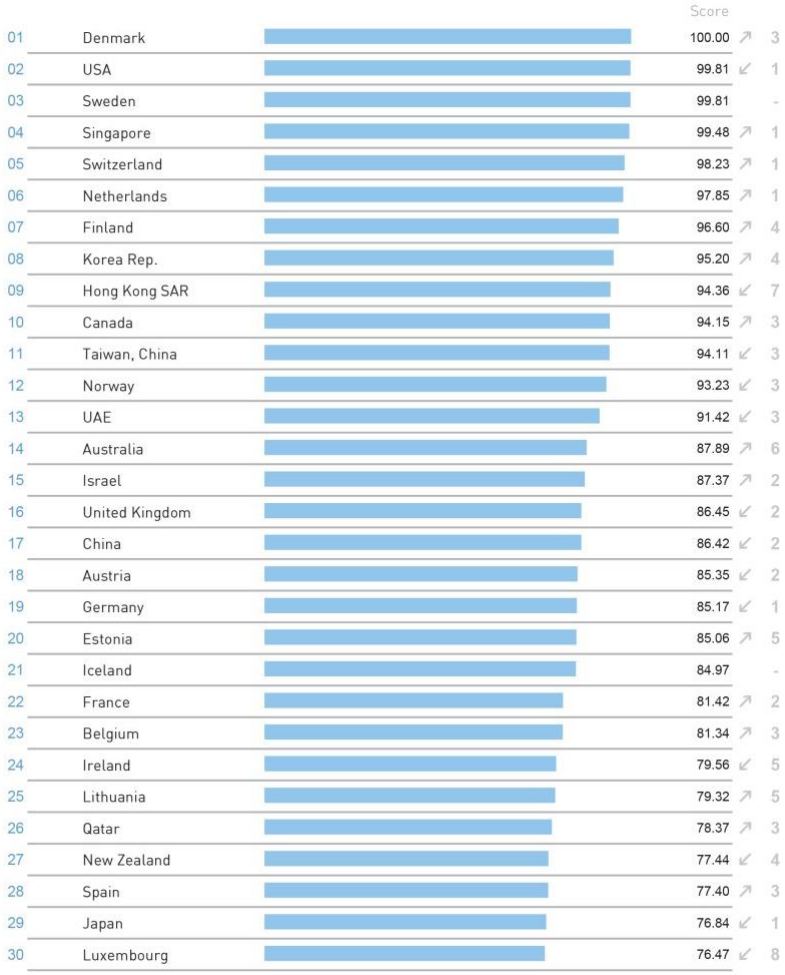

Figure 3. Global Competitiveness Ranking for 2022
Source: (Cabellero, 2022)

5. MORAL AND RELIGIOUS PERSPECTIVES TO COMPETITION

In the free market, manufacturers strive to provide the goods and services demanded by consumers. They invest, take risks, and produce innovative and higher quality products at less cost than before. Therefore, the sense of self-interest in producers and sellers has a vital role in enabling the goods and services in the market to reach everyone effectively. Adam Smith mentioned in The Wealth of Nations: "As long as the entrepreneur pursues his interest, he supports the benefit of society much more effectively and consistently than when he prioritizes the benefit of the society. I have never seen such a beneficial job done by the employees by prioritizing increasing the public interest." (Smith, 2016).

Therefore, it is true that the market promotes a sense of interest, but a purpose of interest is not an emotion that causes negative results. Selfishness is morally wrong, but markets do not encourage self-interest. On the contrary, consumers punish interest producers by not buying goods and services from them if they want. Producers who wish to continue doing business on the market also abandon their interests. However, with the mass media and promotional activities, customers' perception of good or wrong is being shaped in any way, even sometimes by supporting artificial scientific backgrounds.

Although the regulations to establish the conditions of perfect competition do not have a "moral" code still visible, the existence of "ethical business" rules offers us "beneficial structures" as well as benefits for entrepreneurs. The Competition Authority, which we created based on these needs, "regulation" and "preventing violations," focuses on disciplined effort. Over time, we know it will become a "more productive" institution against evolving needs and diversified violations. In the 1990s, when Turkey's lost years, we tried unhealthy behaviors, from cartels to monopolies, defrauding their partners, and piling up their shareholders. We saw that sustainable development is not taking place. Only "destructive competition" could emerge from this business culture that everyone lost. Today, under the pressure of global competition, it is evident that our entrepreneurs need "fair competition conditions" more than yesterday. Nevertheless, we need to think about how this could be preserved while the capitalists without moral and spiritual values still affect policymakers and critical bureaucracy to keep their interests safe.

We want a better look, a better home, the latest technology, and the best at school or work. We want more of everything, and we get it. Have we taken our place to prove ourselves and satisfy our ego? We are busy drawing false profiles on social media to prove that we are happier. We need to be liked by people; there are aesthetic, cosmetic, and bodybuilding saloons. Fashion and technology also serve this self-proving race. We are very generous in praising ourselves and our lives, but we are very intolerant of others. However, we are sure that this is not what God is content with. Otherwise, material competitiveness will just work until death.

Encouraging goodness and competing in honor is one of the commands of our God. For example, it is stated in the Qur'an: "(O Believers!) You can never reach goodness unless you spend the things you love in the way of God. God knows what you spend." (Qoran 3:92). Therefore, competition in goodness is the key talisman. In Islamic tradition, both the Quran and Hadith provide guidance and encouragement towards competition in good deeds. This concept is rooted in the belief that such competition leads to personal betterment, societal upliftment, and greater closeness to God. Surah Al-Mu’minun (23:61) states, "These are they who hasten in good deeds, and they are foremost in them" (Ali, 2001). This verse implies a sense of urgency and competition in accomplishing good deeds. Another example can be found in Surah Al-Baqarah (2:148), which reads, "So race to [all that is] good. Wherever you may be, Allah will bring you forth [for judgement] all together" (Ali, 2001). This verse explicitly promotes competition in doing good.

Furthermore, Hadith, which are the sayings and actions of the Prophet Muhammad, also encourage competition in good deeds. For example, a famous Hadith narrated by Bukhari and Muslim reports the Prophet as saying: "Do not envy each other except in two cases: a man whom Allah gives wealth and he disposes of it rightfully, and a man to whom Allah gives knowledge and he applies and teaches it" (Khan, 1997). This Hadith encourages competition in acquiring and applying knowledge and wealth for the betterment of society.

The Prophet Mohammed (PBUH) said, "The best of the people is the one that is beneficial for the people; the best of goods is the one that is spent in the way of God; Spending in the way of God is the most auspicious that meets the thing that people are the most in need." (Khatun, 2018).

While the Quran and Hadiths encourage competition in good deeds, it is important to note that this competition is not meant to incite jealousy, strife, or ill-will. The aim is to inspire individuals to strive for excellence and to contribute positively to their

communities. It is a race towards self-improvement and societal benefit, not towards the detriment of others.

As a result, market morality and spirituality encourage market sustainability as it avails humankind of happiness. In a society that does not allow actors with different preferences to live in the market, conflicts become inevitable. The effective intervention of each group that takes power in narrowing the economic life to its opponents leads to an unavoidable division within the society and the more inefficient use of resources. Wealth, however, depends on a wide range of economic enterprises, for which capital owners must be able to come together based on mutual consent and trust. The only system that allows this is the free-market system that respects the right to make savings and voluntary exchange as people know about their private property. The redistribution of wealth through donation and Zakat will be positively reflected by increased demand for goods and services.

6. DISCUSSION ON THE LATEST DEVELOPMENTS IN TURKEY

Industry 4.0 has changed the structure of labor and significant factors that affect competitiveness, such as institutions, the financial system, the infrastructure, innovation skills, health, education, and macroeconomic variables (Bal and Erkan, 2019). Many factors have affected Turkish competitiveness on a global scale. Turkey's remarkable economic and democratic performance (6% GDP growth between 2002 and 2007) was halted by endogenous (increasingly dictatorial/authoritarian rule and dysfunctional politics (Taskinsoy and Kuzey, 2020).

In its simplest definition, industrial policies are all of a series of decisions taken by state administrators to ensure sustainable growth and to gain competitiveness in production (Doğan Çalışkan, 2020). One of the primary objectives of Turkey is to ensure the maximum use of domestic opportunities and capabilities in information and communication technologies and to increase the rate of domestically meeting the needs via its industrial and technological policies. In this direction, studies aiming to produce all kinds of software and hardware needs in the country are conducted by applying for industry cooperation programs in the ICT procurements of the public that require excessive cost and include high technology. Industry cooperation programs are a public procurement policy tool that aims to ensure localization, innovation, and technology transfer through public procurement, develop production and technology capability, increase product and service quality, and create international cooperation and investment opportunities. This framework is being implemented as an industrial policy tool that significantly contributes to the world's domestic industry and technology development. It is seen that many countries apply various applications under different names such as industry cooperation, industry participation, offset, industry balance, and domestic contribution while making public procurements (TCKB, 2018). Within the scope of activities conducted by Turkey regarding industry cooperation programs according to its respective development plans. Within the scope of Turkey's 11th Development Plan (2019-2023), chemistry, pharmaceuticals and medical devices, electronics, machinery-electrical equipment, automotive, rail system vehicles have been determined as priority sectors for competitive production and efficiency (Karakurt and Yazıcı, 2021). There are many amendments to current legislation in the cause of supporting competitive industries:

• In 2014, with Law No. 6518, an arrangement was made to exempt "goods and service procurements that include industry participation practices aimed at

ensuring innovation, localization and technology transfer in public procurement" from the Public Procurement Law.

• With Law No. 7033 in 2017, the scope of the said exception was expanded to include "construction works."

• As of the current stage, under subparagraph (u) of Article 3 of the Law No. 4734, "goods and service purchases and construction work involving industry cooperation practices aimed at ensuring innovation, localization and technology transfer" are not subject to the Public Procurement Law, except for penalties and prohibitions from tenders (KIK, 2002):

"Regulation on the Procedures and Principles of the Industrial Cooperation Program Regarding the Procurement of Goods and Services to be delivered by Sub-paragraph (u) of Article 3 of the Public Procurement Law No. 4734", which regulates the procedures and principles for the implementation of the said exception, was prepared by Turkey and was officially published on February 15, 2015. It was published in the Gazette and entered into force. However, no industry cooperation program has been implemented in the public procurements realized following the publication of the said regulation.

7. CONCLUSIONS

In this study, the problems encountered in the international arena regarding competition, the issues of developing countries, and the relationship between competition policy and trade liberalization have been discussed. Although the factors behind the success or failure in the international arena are unique to each country, factors such as the quality of education, political continuity, the presence of developed capital markets, the regulatory role of the public in the economy, the level of competition in the country in most of the developed countries have a significant role in the success of these countries. In addition, it has been observed that the awareness of the different advantages and problems that developing countries have in their structure helps both public administrators and businesses to make their decisions about the future more easily. In addition, when the structure of both developed and developing countries is examined, the main points emphasized are similar, and that it points to the points that those who are in a decision-making position should focus on increasing competitiveness (Çivi and Erol, 2008). Moreover, competition authorities are in trouble in the face of export cartels because the competition authority cannot impose sanctions on a company originating in another country, both in terms of authorization and evidence of cartel activities. Developing countries suffer more from the anti-competitive attitudes of export cartels, as they cannot be a factor of pressure politically and economically. In terms of creating and implementing a global discipline on cross-border anti-competitive enterprise practices and global competition problems, standard competition policies became widespread through regional integrations. Then globalization of competition standards through the agreements these integrations will make among themselves, creating a worldwide competition policy agreement.

After logical and conceptual analysis based on the literature information, we can find answers to the research questions:

• Can innovation change the current global order? If so, then what is its formula?

A capitalist company that holds innovative big data and artificial intelligence can own everything financially and influence the political will in power. Thanks to the disruptive competitive advantage gained through advanced innovation, it can hide

the data it buys, sells, or uses with crypto, part to blockchains. In this case, neither the law nor the law enforcement officers can access the data they store and use and cannot delete or destroy them to prevent their use. Just as the Covid-19 pandemic caught the global capitalist view, which says that they can get any goods or services from wherever they are cheap in the world, unprepared for masks, vaccines and medical services, the Ukrainian war also shows how nations that do not have an advantage in economic competition can create havoc by using their military power. Despite all this uncertainty, it seems that after the pandemic, global information technologies and crypto systems that offer decentralized data roaming infrastructure will dominate, and those who can use their competitive advantage in innovative technology in favor of Ukraine war will gain. This is the same in meeting global food and energy needs. So, competitiveness in innovation capability overall can global dynamics. Here we provided a comprehensive formula for the innovation:

Innovation (I) = R&D + CT + RT + PST + CE + IF + DB

Where:

- R&D (Research and Development Investment): The amount of financial and human resources invested in scientific research and product development.
- CT (Creative Thinking): The ability to generate and develop new ideas and concepts that are unique and valuable.
- RT (Risk-Taking): The willingness to take risks and try new approaches, despite the possibility of failure.
- PST (Problem-Solving Skills): The ability to analyze complex problems and develop effective solutions.
- CE (Competitive Ecosystem): The presence of a supportive business environment, including competition, cooperation, and access to resources.
- IF (Incentives and Funding Opportunities): The availability of financial and other rewards for innovation, such as grants, patents, and tax breaks.
- DB (Divine Bounties): The role of divine inspiration or luck in creating innovative breakthroughs.

To demonstrate the equilibrium, functional parameters can be added to each independent variable, as follows:

I = f(R&D) + f(CT) + f(RT) + f(PST) + f(CE) + f(IF) + f(DB)

Where:

- f(R&D) = k1 * (investment in scientific research and product development) + k2 * (number of R&D personnel)
- f(CT) = k3 * (number of new ideas generated) + k4 * (value of new concepts)
- f(RT) = k5 * (willingness to take risks) + k6 * (frequency of new approaches tried)
- f(PST) = k7 * (analytical skills) + k8 * (creativity in problem-solving)
- f(CE) = k9 * (access to resources) + k10 * (competition and cooperation)
- f(IF) = k11 * (availability of funding opportunities) + k12 * (incentives for innovation)
- f(DB) = k13 * (divine inspiration or luck) + k14 * (random chance factors)

The functional parameters represent the specific ways in which each independent variable contributes to innovation, and the constants (k1, k2, etc.) reflect the relative importance of each factor. Together, they allow us to quantify the complex interplay of different factors that drive innovation, and to identify areas where additional investment or support may be needed.

- How can we affiliate the innovation in the cosmos with the one in the business culture processes?

Because of the secret that every beauty and perfection owner see and wants to show his own beauty and perfection, Almighty Allah, the Eternal Sultan, wanted to see and show his endless perfection and ultimate beauty. He built this palace of the world in such a way that each being mentions his perfection in many languages and shows his beauty and beauty with many signs. This universe shows with all its existence and presence how many hidden spiritual treasures are found in each name of the Esmâ-i Hüsnâ and how many hidden beauties and subtleties are found in each sacred title. Whatever the man who looks at the universe on behalf of Allah observes, is science, which is the basis of innovation. If he heedlessly looks at the account of causes, what he thinks is knowledge becomes ignorant. Likewise, a person who looks with faith and oneness will see the world as luminous and will see the world in oppression. Likewise, there are two aspects to human activities. If it is done with intention for the sake of Allah, it becomes a mirror, transparent and bright to manifestation. If it were not for the sake of Allah, it would have shown a cruel view. Allah Almighty created man to know himself (marifetullah) and to love himself (muhabbetullah). For this reason, the highest rank and rank of man is marifetullah, and the highest happiness and blessing that man can achieve is love of love in marifetullah.

Man is the most important fruit of the tree of the universe. In other words, the universe serves man with everything in the perfect order established with inanimate, plants and animals. It was arranged, rearranged, and formed to give a result to the human being that the tree of the universe was formed from human beings. In other words, the system and law in trees is also valid for the universe, which is a single tree. Just as all the features and beauties of the tree it represents in a fruit or seed exist as a core, plan, and project. So, since man is the seed and fruit of the universe, whatever exists in the universe; exists in man as plans and indexes. If we look at it from this point of view, the essence and summary of the universe, which is the world of cosmos, is compiled and placed in man, a small example of it. Therefore, by drawing lessons from the order established in the universe, acting in accordance with wisdom, obeying natural laws, and acting in a way that produces beneficial results with harmonious and lofty goals from the smallest atom to the largest star, by capturing real innovation, thus realizing real innovations for both the world and the hereafter.

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