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ADVANCES IN GLOBAL SERVICES AND RETAIL MANAGEMENT

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Innovative Entrepreneurship in Turkey: Micro and Macro Perspectives

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Abstract

Entrepreneurship is a scarce factor of production in the economy like labor and capital; it is a business area which is culture and finance related. Turkey is an average country in the entrepreneurship world league. This negative situation in terms of entrepreneurship also continues in terms of innovation and innovative entrepreneurship. Although Turkey is counted among the world's GDP in the rich, in terms of the capacity to innovate is among the poorest. This paper discusses how Turkey can change this "reverse fortune" through developing an internal innovation culture and opening this culture to the outside world. Naturally, the ongoing Turkish industrialization policy should focus on innovation and use the "EU anchor" to transfer innovations to the industrial sector.

Keywords: innovative entrepreneurship, micro and macro innovation geographies

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Introduction

The innovative entrepreneurship in Turkey is affected by a variety of factors in micro and macro levels. R&D opportunities, branding, quality and prevalence of entrepreneurship education, cultural and demographic factors, financing possibilities of enterprises, crises, ease of establishing a business and innovation capacity of the enterprise, development level of entrepreneurial marketing, communication, innovation capacity of Small and Middle Size Businesses (SMBs) are the prominent determinants. On the other hand, it is important to analyze Turkey's entrepreneurship and innovation capacity. Turkey's journey of entrepreneurship must be considered together with the history of industrialization. This journey is also shaped by the development and sectoral transformation process. This transformation process from the agricultural sector to the industry and services sectors requires the analysis of production factors in terms of the efficiency function of production possibilities as well as the qualitative and quantitative transformation in the employment structure. In addition to labor and capital, the differences in the activity level of the entrepreneur between "old" and "new" affect the journey of this development geography. In this respect, the industrialization journey is also the discovery of an "entrepreneur" to be aware of

himself/herself. His or her success is determined based on the factors: possibilities of using technology, innovation capacity, efficiency, etc.

Literature Review

Odabaşı (2004), while explaining how innovation came about, explores that a wide variety of ideas pass through a funnel system and very few ideas turn into patent and commercial innovation. Ministry of Development (2014) and KOSGEP (2013, 2014), reveals the innovative entrepreneurship goals and macro geography in Turkey. Kiper (2010a and 2010b) examines micro-models of innovative entrepreneurship that explain university-industry collaboration and technology transfer interfaces as a tool for it. Arslanhan (2015) found that countries with high R&D expenditures are more innovative while making science-technology-innovation comparisons on the basis of G-20 countries. Yokoyoma (2006) states that while the fashion for entrepreneurial universitization has begun in the world, there are many examples of apprentice and master-level universities.

Methods

The thought method used in this study is descriptive and abstractive, but the research method is deductive in the sense of separating the whole from the general to the specific or the whole (micro and macro). Problematic of innovative entrepreneurship in Turkey has been examined aspects both sectoral (micro) and both regional (macro)

Historical Background

Turkey's industrialists are an entrepreneur first and foremost because they have an added value in the sector. Starting from the historical background until today, we must explore and heed the importance of the roles entrepreneurship and entrepreneurs play for Turkish economy from the perspective of industrialization and innovation (Cansiz et al., 2013):

- Economic activities in the Ottoman Empire were largely under state control. From the foundation years, as in the Anatolian Seljuk State, the artisans who produce in the cities have united as semi-official organizations such as Ahi, with the guidance of the central authority. Since the 15th century, Ahi-based guilds were widely active in Ottoman cities). The main purpose of guilds, which have a large influence and restrict competition, is to ensure social equality and solidarity between member tradesmen and craftsmen, and to regulate and supervise the implementation of professional activity.

- One of the factors that negatively affect the development of entrepreneurship in Turkey was the increasing wealth based on individual property, the other was intense interest in the state jobs (civil service).

- In the early years of the Turkish Republic, efforts to create an independent economy, industry and entrepreneurial class gained importance. In February 1923, İzmir Economy Congress, a protectionist and national economic policy based on private initiative was envisaged and decisions were taken for the state to protect and support entrepreneurs from minorities to Turkish ones. In this context, the new Republic regime implemented the

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project of creating its own entrepreneurial class. The resources of the state have been distributed through bidding opportunities, establishing partnerships with the state, low-interest loans, providing intermediate goods from state-owned enterprises, and providing easy access to foreign exchange. During the 1923-1930 period, 178 incorporated companies were established.

- With the planned development period in the 1960s, the development of entrepreneurship and the industrial sector has been one of the most important policy areas. Industrialization strategies and economic policies adopted in the 1970s and 1980s showed great differences, and after January 24, 1980, with the implementation of the privileges granted to capitalist entrepreneurship and export-oriented industrialization, it accelerated the development of the institutions and rules of the free market economy.

- After entering to the Customs Union (CU) with European Union (EU) in 1995, Turkey's industrialists audience initially lived in a turbulent period, then continued on its way increasing the competitiveness after several reforms to bring the pressure and made it international competition. CU with EU made significant contributions to enhancing the dynamism of the private sector and increased the adaptability of the Turkish economy against internal and external influences.

Innovation Related Entrepreneurship Problems in Turkey

As scarce factors of entrepreneurs in Turkey, innovation capacity has remained low. In the list of most innovative countries, Turkey ranked as number 58 out of 141 countries in 2015. The situation for Turkey in some sub-index is even worse (please see the rankings in Table 1.

Table 1. Turkey's Rank in Global Innovation Index (2015)

Components of Innovation	Within 141 countries
Corporate Structure Components	84
Human Resources	50
Innovative Products	37
Information-Technology Intensive Products	60
Business Equipment and Business Sophistication	117
Market Sophistication	58
Infrastructure Sophistication	63

Source. GII:2015

The Global Innovation Index examines the innovation activities of countries on a multi-dimensional basis in 2015. It focused on long-term growth of countries, encouragement of production activities and business development of 141 countries which cover 95.1% of the world population. The main theme of the report was the "Effective Innovation Policies for Development". In this report, it is emphasized that in order to ensure local economic development and develop innovative aspects, it is necessary to be aware of the human power behind innovation (Kılıç, 2015). According to the innovation report of 2014, the crucial innovation capacity in terms of Turkey innovative entrepreneurship, available patents, scientific research institutions, private sector R&D expenditure, and university-industry collaboration components stays behind China. Similar results appear in the "World Global Competition Report" of 2015 and 2014 in terms of various factors affecting innovation. Turkey in 2014 and 2015 annual "Global Competitiveness Index" ranking in innovation, higher education and job training, is in the middle of the ranking in terms of

institutional capacity building subcomponents. As Table 2 shows, Turkey holds rank 56 within 144 countries and 60 in 2015 within 140 countries in terms of innovation.

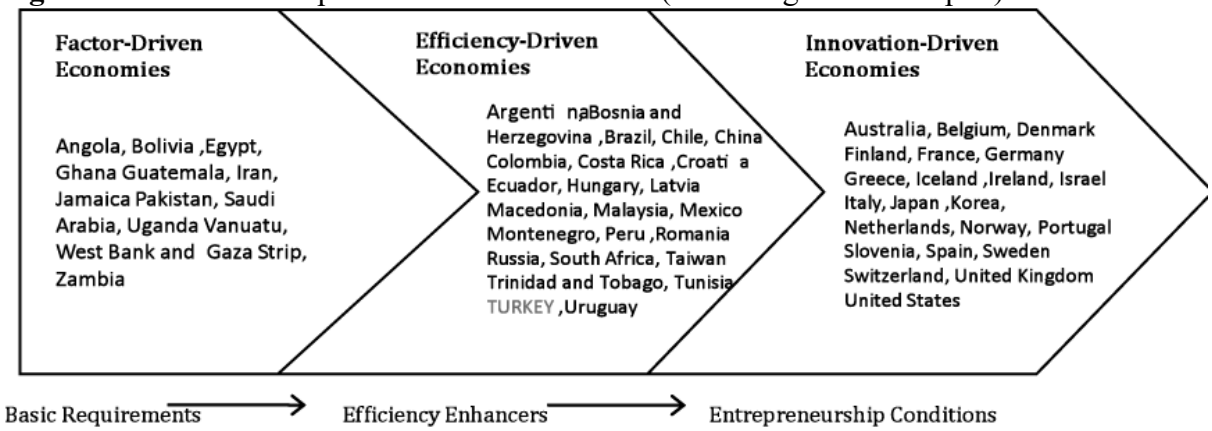
Table 2. Competitiveness Index (Turkey 2014-2015)

	140 countries (2015)	144 countries (2014)
Health and primary education	73	69
Higher education & on the job training	55	50
Efficiency of the Commodity-Commodity markets	45	43
Market size	16	16
Innovativeness	60	56
Labor markets	127	131

Source. Sabancı University, 2016

On the other hand, the development of innovation-based entrepreneurship has an important place in the EU targets. In this respect, the EU is also an innovation integration model. According to the "EU Innovation Score Table" (2011), while Germany is the growing leader, Turkey, as a least inovative country, along with Macedonia, is considered to be within "modest innovators" countries. Those in this group are also "patent poor" countries. In terms of per capita "triple patents" and "trademark" Turkey is located within East European countries. On a global scale, the USA and Japan compete in high-tech industrial innovations (EC, 2011). Turkey, in terms of the evaluation of the level of entrepreneurship, is a Global Entrepreneurship Monitoring (GEM)'s topic. Entrepreneurship has two pillars depending on the social, cultural and political environment: the "general framework" consisting of economy, technology, etc. and the "entrepreneurial environment" consisting of areas such as government policies, R&D and the market. If the first is called "lid" and the second is called "pot", and if the two fit together, "new entrepreneurs" will emerge that can be converted into growth and employment. According to GEM report, Turkey falls between the 1st and the 3rd rank among the "Productivity-Oriented" Economies (Figure 1).

Figure 1. Economic Groups and Their Characteristics (According to GEM Report)



Factor-driven economies > efficiency-driven economies > innovation-driven economies

Source. Xavier, et al., 2013

In development and industrialization of Turkey, "physical infrastructure", "education", "R&D transfer", "female entrepreneurship", "internal market dynamics," the government policies and programs "," social and cultural norms have been determinants of failure. But if Turkey fixes its deficiencies, then it can be among "innovation driven economies".

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Local / Regional Entrepreneurship Map and Innovation Capacity of Turkey

The density of the mass of entrepreneurship and entrepreneurs in Turkey are not showing a balanced distribution. While this is to some extent related to regional development policies, it is also due to the fact that potential entrepreneurs abandon “local nationalism” and migrate to big markets where they can gain more profits (Kasımoğlu, 2012).According to the 2014 report of KOSGEP, "the most enterprising" regions are Aydın, Ankara and Bursa sub-regions, while the "least enterprising" regions stand out as Kastamonu and Samsun sub-regions. In entrepreneurship, it can be regarded as a striking development that Malatya from Eastern Anatolia and Antep, Mardin and Urfa subregions from East Anatolia 'overtake' Western subregions such as Istanbul, İzmir and Tekirdağ.

When evaluated from another perspective, provinces differ from each other, with high and limited entrepreneurial capacity. The openness, diversity and development of entrepreneurial capacity in a province is measured to some extent by industrial establishments. Especially Industrial Zones (IZ), Small Industrial Sites (SIS), Technology Development Zones (TDZ), Free Zones (FZ), Technology Development Centers (TDC) established in accordance with the "clustering" logic and "cluster policy", Business Development Centers (BDC), can provide information about the level of entrepreneurship in a province.

On the other hand, this imbalance in terms of entrepreneurial capacity is even greater in terms of innovation. Because, especially regions with insufficient entrepreneurial capacity face much greater difficulties in terms of developing innovation. Inadequacy of R&D opportunities and human capital power, problems in communication and transportation capacity, the predominantly agricultural structure of the sectoral structure and financial problems prevent the development of innovation opportunities in this respect. Today, entrepreneurship is considered as different "entrepreneurship schools of thought" (approaches). Focusing on environmental, financial, cultural, political and economic factors on the life of the potential entrepreneur, "macro" and the "micro" perspective focusing on the initiative and innovation development style from the idea to the conceptualization and implementation, the planning process of the enterprise-innovation and the leverage effect of every learning in the process entrepreneurship views can be encountered (Karabulut, 2009).

Macro Geography of Innovative Entrepreneurship in Turkey

The "macro innovation geography" of entrepreneurship emphasizes the factors that are determinants at the macro level for the emergence of innovative entrepreneurs. In this respect, "macro innovation geography" of entrepreneurship is determined by many factors such as R&D geography and branding problem, human resources, efficiency problem of education, especially entrepreneurship education, efficiency problem of regional innovation systems and clustering environment, effect of demographic factors, gender inequality (GE) problem, and population dependency ratio, the insufficient level of risk taking affected by cultural factors, and the effects of crises, the conditions of globalization and industrialization, economic growth, population structure, legal institutions, political and cultural environment, unexpected developments; public policies in the fields of education, taxation, technology, the level of development of economic freedoms, openness the density of small business / business ownership in the population, and the role of entrepreneurship in society.

R&D Geography and Branding Issue

The development of innovation-based entrepreneurship is closely related to the capacity of R&D and innovation infrastructure. As Kasımoğlu (2012). stated; innovation is an important weapon for businesses in the war of existence, brought by the global competitive environment. Innovation aims to bring solutions to the three most basic problems of the enterprise: its ability to survive, to become a leader in the market, and to increase its profitability. For innovation, "R&D" studies that are systematically managed and based on basic, applied and experimental research are required. Turkey is listed at the bottom in the Innovation World League list due to a small R & D budget which is a financial lag of the innovative economy (Arslanhan, 2015).

Among the G20 countries, the country that allocates the highest share to R&D among the gross domestic product (GDP) is South Korea with 4%, followed by Japan and Germany. South Korea has been the country with the highest increase in R&D expenditure in GDP in the last 10 years, after China. While China was at the bottom of this ranking in the early 2000s, it is now in 7th place. When the R&D expenditures are considered as expenditure per capita relative to the population, there are changes in this view. China again falls behind in the ranking among the G20 countries. The country with the highest R&D expenditure per capita is the USA with approximately $1,400, followed by South Korea and Germany. Turkey is located at the end of the list in terms of R&D spending. Turkey allocates only $5 of GDP of every $1000 to R&D (0.5%). There are approximately 900 engineers per 1 million population in Turkey. In South Korea, these figures are $30 (3% of every $1,000 of GDP) and 4 thousand engineers, respectively (Arslanhan, 2015: 6). Thus, for Turkey to gain competitive advantage, she must immediately focus on innovation and productivity.

R&D expenditures in Turkey exhibits high regional differences. Ministry of Development (MD) prepared a report in 2014. According to the research report, West Anatolia (28.4%), East Marmara (20.6%) and Istanbul (19.9%) are top three in the list in terms of total R&D expenditure. Eastern Black Sea, Northeastern Anatolia and Mideast Anatolia regions have the least shares with 1.4%, 1.6% and 2.1%, respectively. R&D expenditures and R&D personnel are concentrated in metropolitan cities and regions where industrial centers are located (KB, 2014). The effects of this distribution are also reflected in the R&D capacity and performance indicators of the regions. It is seen that there is a direct linear relationship between the innovation activities of enterprises and their size. In 2008-2010, 56% of enterprises with 250 and more employees, 44% of enterprises with 50-249 employees, and 33% of enterprises with 10-49 employees made technological innovations. Considering that large enterprises are also concentrated in the relatively developed regions of the country; it can be said that innovation activities are mainly carried out in these regions. Difficulties in financing R&D and innovation activities and in accessing qualified human resources to be used in these activities are the two main reasons why small businesses are less involved in innovation activities. On the other hand, It is seen that the relatively developed regions are in a superior position in terms of universities and research centers that have knowledge production infrastructure in the innovation process. Although each city has at least one university, it will take a certain period of time for these universities to institutionalize, have a qualified research infrastructure and sufficient research, engage in research activities, and turn research results into social benefits by cooperating with the industry (KB, 2014).

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The National Innovation Initiative (NII) (2008) highlights "democratization" and "participation" in science and innovation, which are defined as the basic requirement in the development and growth process. In the meantime, it should not be forgotten that an innovation that results in a commercially purposed "brand" will become more popular and sustainable. On the other hand, according to a study of the International Competition Research Council (ICRC), a serious "disintegration" situation stands out among the provinces. According to the variables used in the calculation, the least innovators - except for the so-called "Anatolian Tigers" - East and Southeastern Anatolia, the most innovators are clustered in Marmara, Aegean and Mediterranean. This difference in innovation in "branding" between provinces is reflected in the innovation rankings of state and foundation universities located and operating in those provinces, in a cross and indirect manner. There are various types of entrepreneurial universities at "novice" and "ideal" levels in the world (Yokoyama, 2006).

Today, theoretically, the cooperation between university and industry has been modeled from various angles. According to Kiper (2010b) these models are:

- National innovation system,
- New Model 2 approach in scientific knowledge production –based on university and industry segment,
- Triple Helix Model in university-industry cooperation, including state-supported and technological transfer interfaces.

Stakeholders in the university-industry relationship create patent and licensing opportunities for each other and opportunities for R&D governance. Since the university cooperates with the industry, it starts to gain the status of "entrepreneurial university".

Expectations and Findings

Economic and Trade Impact in Practice

Turkey has a certain innovative entrepreneurial capacity and climate under the influence of liberalism. Turkey, on the basis of sectoral and enterprise (micro) to focus on the production of patent and these patents economy (macro) is trying to convey. However, for the better, it should use the "European Union (EU) anchor", which attaches importance to R&D expenditures and foreign trade, in all sectors, especially industry. Because Turkey is a candidate member of the EU which is the most advanced integration in the world.

Impact on Public Policy

As innovative entrepreneurship is supported by joint projects of universities and businesses, sectoral and regional development differences can be eliminated. Because the agricultural sector has fallen far behind the industrial sector and the eastern regions are still much poorer than the western regions. For this reason, in the eastern regions, primarily R&D funding sources and of course the employment of educated young population should be increased.

Its Impact on Society and the Country

A qualified and sustainable innovative entrepreneurship is not only the target of private capital enterprises (micro) but also of the public economy (macro). Public-private models of cooperation can facilitate achieving this goal. Accordingly, the state can continue its preference to provide positive externalities for the private sector. But this choice should not lead to the exploitation of the state's financial resources and harming the people's equitable income distribution. Otherwise, it may reduce the public's trust in the state and expectation of welfare quality.

Conclusion

As scarce factors of entrepreneurs in Turkey, innovation capacity has remained low. In the list of most innovative countries, Turkey ranked as number 58 out of 141 countries in 2015. According to the innovation report of 2014, the crucial innovation capacity in terms of Turkey innovative entrepreneurship, available patents, scientific research institutions, private sector R&D expenditure, and university-industry collaboration components stays behind China. In development and industrialization of Turkey, "physical infrastructure", "education", "R&D transfer", "female entrepreneurship", "internal market dynamics," the government policies and programs "," social and cultural norms have been determinants of failure. But if Turkey fixes its deficiencies, then it can be among "innovation driven economies". Thus, for Turkey to gain competitive advantage, she must immediately focus on innovation and productivity.

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