JOEEP

Journal Homepage: http://dergipark.org.tr/joeep

Araştırma Makalesi ● Research Article

The Evolution Of Innovation Into Development: Income Distribution Balance

İnovasyonun Kalkınmaya Evrilme Süreci: Gelir Dağılımı Dengesi

Yunus Budak [a,*]

[a] Asst. Prof. Dr., Ağrı İbrahim Çeçen University, Department of Transportation Services, 04100, Ağrı / Turkey
ORCID: 0000-0003-3126-743X

MAKALE BİLGİSİ

Makale Geçmişi:
Başvuru tarihi: 24 Eylül 2022
Düzeltme tarihi: 26 Ekim 2022
Kabul tarihi: 26 Kasım 2022

Anahtar Kelimeler:
İnovasyon
Kalkınma
Gelir dağılımı

ÖZ

Sanayileşme ile birlikte teknolojinin kullanımı sahası genişlemiş ve teknoloji ile birlikte yeni kavramlar türemiştir. Beşeri sermaye zenginliği, Ar-Ge ve inovasyon gibi teknoloji odaklı sürekli gelişim içinde olan unsurlar varlığını iktisadi sistem içerisinde ciddi manada göstermektedir. İnovasyonun büyüme üzerindeki etkilerinin her geçen gün daha da arttığı gerçeğinin yanında, üretim şeklinin de inovasyon odaklı olduğu günümüz dünyasının önemli ekonomik çıktısıdır. Bu durumun yansıması olarak katma değerin büyüme üzerindeki etkisi daha da önem kazanmıştır. Büyümenin uygun politikalar ile kalkınmaya dönüşmesi bir ekonomi için en önemli çıktılardandır. Elde edilecek kalkınma ile birlikte adil gelir dağılımı dengesini yakalamak sosyo-ekonomik bir gösterge olarak vazgeçilmez unsurlar arasındadır. Bu çalışmada; inovasyon, kalkınma ve gelir dağılımı arasındaki ilişki ele alınmıştır. İnovasyon, kalkınma ve gelir dağılımı kavramları incelenerek bazı durum tespitleri yapılmıştır. Bu durumu tespiti yapılırken literatürde var olan uygulamalı sonuçlardan yararlanılmış, sayısal veriler üzerinde de bir sonuca ulaşılmaya çalışılmıştır. İnovasyonun büyümeye ciddi anlamda ivme kazandırdığı gözlemlenmiştir. Büyümenin de uygun politikalar içerisinde kalkınma üzerinde önemli etkilerinin olduğu sonucuna varılmıştır. Ayrıca inovasyon ile birlikte ülkelerin orta gelir tuzağından çıkarak yüksek gelirli ülkeler grubuna girmesi ve dengeli bir gelir dağılımını meydana getirmesi gözlemlenmiştir.

ARTICLE INFO

Article history:
Received: Sep 24, 2021
Received in revised form: Oct 26, 2022
Accepted: Nov 26, 2022

Keywords:
Innovation
Development
İncome distribution

ABSTRACT

With industrialization, the field of use of technology has expanded and new concepts have been derived with technology. Technology-oriented elements such as human capital wealth, R&D and innovation, which are in constant development, have a significant presence in the economic system. In addition to the fact that the effects of innovation on growth are increasing day by day, it is an important economic output of today's world where the way of production is also innovation-oriented. As a reflection of this situation, the impact of value added on growth has become more important. The transformation of growth into development with appropriate policies is one of the most important outputs for an economy. Achieving a fair income distribution balance with the development to be achieved is among the indispensable elements as a socio-economic indicator. This study examines the relationship between innovation, development and income distribution. The concepts of innovation, development and income distribution have been examined and some case studies have been made. While determining this situation, the applied results in the literature were used and a conclusion was formed using numerical data. It was observed that innovation significantly accelerates growth. It is also concluded that growth has significant effects on development within appropriate policies. It has also been observed that with innovation, countries leave the middle-income trap and enter the group of high-income countries and create a balanced income distribution.

1. Introduction

With globalization, today's economic structure continues to create new areas for itself in many different fields. Especially since the first foundations of industrialization were laid, new sectors and new production techniques have emerged and this process has been reduced to days rather than years. The necessity of needs has led society to take quick decisions and to meet those needs in some way. Innovation was first conceptualized by Schumpeter. Innovation encompasses all definitions such as "doing

* *Sorumlu yazar/Corresponding author*.
e-posta: *ynsbdk04@gmail.com*

Atıf/Cite as: Budak, Y. (2022). The Evolution Of Innovation Into Development: Income Distribution Balance. *Journal of Emerging Economies and Policy*, 7(2) 325-333.
e-ISSN: 2651-5318.

something new, innovation, transforming the old into a new product". With the added value it creates, it facilitates the transition to other production methods by preventing the vicious growth processes of economies and reshaping economic policies. The development of technology and the emergence of new economic fields have further accelerated this process. It is inevitable that R&D, human capital and ultimately innovation, together with the continuous increase in value added in production, will have a significant impact on growth. Whether this growth is sustainable or not depends on the size of investments in innovation. This area, which has received considerable support, yielded steady growth with exemplary countries around the world.

It is seen that the real effect of innovation on growth is shaped on development. While not all growth is reflected in development, it will be observed that in economies where innovation-oriented technological moves are made, development results in a balanced way. Along with development, the balance of income distribution is equally important. It is desirable that social welfare becomes stable at a balanced point with a fair distribution of income. In order to achieve this, the necessity of economic policies with an innovative approach comes to the fore. In this equation, growth through innovation, the reflection of growth on development, and the realization of fair income distribution with development are the most important desired outputs for an economy.

In this study; The relationship between innovation, development and income distribution is aimed to be discussed. Some situation determinations were made by examining the concepts of innovation, development and income distribution. While determining this situation, the applied results in the literature were used as the scope of the study, and a result was tried to be reached on the numerical data. In this study, the rules of qualitative research methods were taken into consideration.

In the study, innovation, development and income distribution are conceptually discussed. A general literature review about these three concepts was made and necessary numerical data were used. Finally, necessary results were tried to be obtained by comparing these concepts.

2. Innovation

The concept of innovation has found its place in the global system with the development of technology and industry and has increased the awareness of societies towards it by continuing its existence on a continuous transformation. This concept is almost synonymous with discovery, creativity, finding something new. Recently, the preferred term is innovation. Innovation is basically a situation where opportunities created to fulfil customer demands for commercial purposes are presented to the market economy with some capabilities. However, one of the most important indicators of whether a discovery can be presented as something new is whether it will be commercially useful. In other words, it is close to inevitable that a new invention can be used in a new process as part of a different mechanism. At the same time, the innovation process shows the same similarities as the creativity process. In today's world where technology is used so intensively, businesses need to act technology-oriented and hold on to the market with new product inventions in order to achieve success (Kaygısız, 2015).

The concept of innovation has come to the present day with many qualifications in the historical process. Joseph Schumpeter first described this concept, arguing that innovation supports, advances and triggers development at its inception. Schumpeter defined innovation in "The Theory of Development", which was translated into English in 1934. Accordingly, the emergence of new markets, the discovery of new resources to obtain raw materials and semi-finished products in order to achieve a new shape and organization of the industry can be described as "innovation" (Elçi et al., 2008). However, Schumpeter summarizes the concept of innovation under general headings (Schumpeter, 1934: 66);

. New products not previously used by consumers or new features added to older products,

. The creation of production techniques to be obtained for the survival of the product or products put forward scientifically and their use for the production of those products,

. Opening markets in a geography, country or region that did not exist before,

. The emergence of new products and raw materials that did not previously exist in the economic and industrial system, together with the market equation,

. It is defined as the collapse of monopolistic formations or the emergence of new ones.

When defining the concept of innovation, it would not be wrong to state that it consists of a mechanism in which multiple factors are seen as components. Therefore, the existence of a concept whose definitional expression contains multiple meanings involves a dynamic structure. In its most concrete form, innovation is the introduction of a new idea and its embodiment in a concrete structure with a commercial activity (Nafgizer, 2006: 393). At the same time, innovation can be defined as a situation where new products and services are developed in a knowledge-oriented framework in order to generate commercial income and supported at every stage of an output (Dulupçu and Sungur, 2007).

Innovation is the development of new products and ideas to be obtained from the equation of a country or region, and the contribution to be provided by the output to be obtained in the end. In addition, the combination of innovation with the dynamics of R&D and technology in the cluster created by this contribution enables the emergence of new entrepreneurial activities (Doğan ve Recepoğlu, 2014).

It was stated that the concept of innovation was first described by Schumpeter. With the development of technology and industry, new definitions and qualifications have been started to be made with globalization. In this framework, many authors have emerged to define the concept of innovation in this process (Martin De Costro, Verde, Lopez and Lopez, 2010: 48 - 50).

. Hidalgo and Albors (2008) define it as addressing the problems that arise in the relationships that exist between firms and other actors.

. Tushman and Nadler (1986) describe the emergence of products, services and related processes for new departments.

. Knight (1967), it is the acceptance of new and important differences by an organization.

. According to Escorsa and Valls (1997), it is the process of putting an idea into practice and finally implementing it.

. Adams et al. (2006) defines it as the success of utilizing the added value provided by a new idea.

According to Myers and Marquis (1969), it is the transfer of an invention that starts with an idea into practice and then into a commercial ecosystem.

In addition to the meanings of innovation itself, it is necessary to express some characteristics that can be attributed to these meanings. In this way, it will be possible to reveal the characteristics of innovation (Ahmed and Shepherd, 2010: 5):

"Innovation is an invention.

Innovation is diffusion and learning.

Innovation is a phenomenon (event).

Innovation is a trajectory.

Innovation is incremental or radical change.

Innovation is a process.

Innovation is a gradual process of contents such as regions, nations, etc.".

The concept of innovation can be confused with other concepts. It is commonly understood and confused as an invention or a new idea. When we concretize this situation; we can take Edison's invention. The invention of the light bulb is an invention, but can be confused with innovation. However, when this situation resulting from invention results in commercial gain, it can be defined as innovation. Ultimately, an invention must be commercialized if it is to result in innovation. However, although a new invention is not necessary for innovation, new products can be created through transfers between innovations (Saraç ve Tüylüoğlu, 2012: 2). Innovation and invention are different concepts and should not be confused. While the development of a new idea is called invention, innovation is the process of turning this idea into a commercial gain. The confusion between two such close concepts stems from the similarities in the field of concepts. The closest example is the field of biotechnology (Fagerberg, 2003: 3).

Although innovation has many purposes, in general terms, it is the entire process of generating, disseminating and incorporating knowledge into the economic system. With globalization, it has become a necessity for businesses to invest in innovation and to achieve a competitive structure. From this point of view, we can talk about the existence of a system. However, there are different actors within the system. Actors such as the state, universities, financial institutions are the elements that make up this structure (Grasselli, 2009: 1138). There are many benefit mechanisms that this structure will bring to the economic system in terms of added value. However, the added value to be obtained from innovative structures to be built on new industries will make a significant difference in economic terms.

Table 1. Innovation Matrix

	Innovation and growth	Innovation and competition	Innovation and Knowledge	Innovation in a changing system
Classical heritage	-Division of labor -Demand inflation -Incentives		-Learning -Collective information	-Industrial specialization -Diversity -Structural change
Schumpeterist inheritance	-Creative destruction	-Creative response -Schumpeterist hypothesis -Entrepreneurship -Monopolistic Competition Structure-management performance Dominant design Network externalities	-Innovation storm -R&D Technology support -New technological opportunities	-Dynamic efficiency (efficiency) -Sectoral models -Technological regimes -Creative adoption -General purpose technologies

Arrovian (arrow) heritage	-New growth theory	-Knowledge as a factor of production -Rant-like information -External economies	-Knowledge as a good economy -Overload of information -Industrial differences -Asymmetric information -Management knowledge	-Technological system -Technological introduction (start)
Evolution and complexity	-Learning as an engine of growth -Technological pathways	-Life cycle - Epidemic diffusions -Duplicative dynamics	Local technological knowledge -Dispersed knowledge -Innovation network -Information as output input -Mastery (competence	-Local technological changes -Past dependency -Positive feedback -Road dependency -Productive relationships

Source: Antonelli, 2009: 613In the innovation matrix above, some economic views define the concept under different headings. Here, we have made a case study on how the relationship between innovation and variables such as growth, competition and knowledge has developed.

According to the Oslo Guidelines, there are four types of innovation. These are product innovation, process innovation, marketing innovation and organizational innovation. Product innovation is the production of a tangible output by introducing an improved or new good or service. This output contains many innovations due to its technical features. Process innovation is the enrichment of existing ways of bringing ready-made products and services to market more efficiently. Marketing innovation is the situation of making physical changes such as design and packaging on products with the opening of new markets and opening up to new markets. Organizational innovation is one of the organizational methods that prioritize business relationships.

Table 2. Different Types of Innovation

The nature of innovation	Description	Examples by type of innovation		
		Product	Process	Organizational
Radical	A completely new product that creates new markets.	Computer	Pasteurization	Online insurance
Destructive	A new product that outdates and replaces another product.	Personal computer	Radiation	Airline budget offices and discounts (such as car rental and mileage earning)
Reassembling	Updating an old technology and applying it in a new market.	Smart card	Special purpose vehicle	Lean management
Supportive	Technology developed to support and sustain the efficiency of industry.	High definition television	Computer aided design and manufacturing technology	Customization and customer-defined features
Incremental/incremental (gradual)	A more step-by-step innovation process, most often associated with Kofis	3G mobile phones	Wind turbine energy	Call centers

Source: OECD, 2008: 51

The table shows that different results emerge in different economies based on the types of innovation. We can see new impacts emerging through radical, disruptive, reassembling, supportive, incremental innovations.

Many features can be listed under the sub-headings of innovation. From this perspective, we can list the principles of innovation from these sub-headings (Örtlek, 2015: 19-20).

- Vision is essential in innovation.
- Innovation should not be involved in unethical activities.
- Innovation by its very nature must take risks for granted.
- The customer is at the heart of innovation. Fulfilling the needs and demands of customers within a process.

Table 3. Types of Innovation by Characteristics

In terms of space and function	-Service innovation -Product innovation -Process innovation -Marketing innovation -Organizational innovation
In terms of technology intensity	-Radical innovations -Incremental innovations
In terms of whether it	-Technological innovations

contains technological features	-Non-technological innovations
According to the changes and differences caused	-Disruptive innovations -Disruptive innovations -Supportive innovations
According to whether it is internal or external to the organization	-Closed innovations -Open innovations
New innovations	-Social innovation -Environmental innovation -Business model innovation -Innovation

Source: Dinler Sakaryalı, 2016: 2-62

The table shows the types of innovation according to their characteristics. These are stated as in terms of field and function, in terms of the intensity of technology, in terms of whether it contains technological features, according to the changes and differences it causes, according to whether it is internal or external, and as new innovations.

3. Development

Although the concept of development is not a concept that can be defined in a fixed way, it can be kept up to date with multiple qualifications. Especially in the new world order to be established after the second world war, it came to the fore for the smooth functioning of the system again. In this sense, the need for capital mobility and trade to reach a certain level has emerged. In particular, it is desired to improve the economic conditions of underdeveloped countries and developing countries to a certain extent, and ultimately to advance development to this extent. However, after the war, the awareness that economic independence is equally important as political independence has become indispensable for nations (Kaynak, 2007: 29-30).

"Development is the act of creating societies or communities where everyone can easily access basic rights and basic health, justice, security, employment and education services and information resources, where market conditions function fairly, where participatory, gender-balanced, democratic and open to cultural transformations, with transparent/accountable governance structures, where all socially disadvantaged groups and strata are eliminated, where problem-solving skills are developed, where natural resources are protected and developed, and where people look to the future with confidence." (Açıkalın and Saltık, 2007). Development refers to the growth and development of a country's economy over a certain period of time and the raising of living standards in society to a certain level. At the same time, development aims to improve the qualitative living conditions of individuals as well as the quantitative improvement of national economies (Sevinç, 2011).

Although there are many views on development economics, Amarty Sen's perspective on the subject is particularly important (Sen, 2004):

"Development can be seen as a process of expanding the real freedoms enjoyed by people. Freedoms depend on other determinants such as civil and political rights as well as social and economic arrangements. Development requires the elimination of the main causes of the erosion of freedom: tyranny, poverty, inadequate economic opportunities combined with systematic social deprivation, intolerance or excesses of repressive states, as well as the contingency in public services.

To convey the development with its three basic features will contribute to the understanding of the subject and provide a wider framework. First of all, the basic needs of individuals come to the fore. These are the increasing ease with which individuals can obtain the most important human needs for survival, such as shelter, health, safety and access to basic food. The second key feature is the positive trend in economic statistics as a result of certain progress and improvements in the living standards of the population. Finally, in addition to all the improvements achieved, individuals' freedoms increase in all areas, and economic and social improvements are felt in all areas in certain criteria (Smith ve Todaro, 2011)

Table 4. Dimensions of Development

Dimensions	Definitions
Production and Technology Dimension	Controlling natural phenomena and producing higher value-added products to sustain life.
Human Dimension	Increasing living standards.
Employment Dimension	To improve working conditions and increase employment opportunities.
Environmental Dimension	The three dimensions mentioned above are to be achieved with the least damage to the environment.
Dominance Dimension	To be at the forefront of the race between countries or between societies.
Freedom Dimension	Increasing the level of freedom in terms of economic, political, social and international relations.

Source: Kaynak, 2011: 77-78

Development is not only a reflection of pure economic policy, but also goes hand in hand with the existence of appropriate economic growth. However, as can be seen in the table above, the dimensions of development are important. Among these, social dimensions are particularly important for development. If economic developments are not reflected in the social dimension in countries, it means that development does not achieve its purpose. When approached from this perspective, we can describe development as a part of more than one variable.

Table 5. Scope of the Concept of Development

Macro-scale developments	Social dimensional factors	Political dimensional factors	Human dimensional factors
- Economic infrastructure -Natural and physical capital - Productivity - GDP - Production inputs - National income per capita	- Population - Education - Cultural and social infrastructure	-Governance and political infrastructure - Support mechanism -With the support created for initiatives	- Science and technology - Economy

Source: Turhan, 2012: 10

The scope of the concept of development consists of four main headings. In addition to social, political and human factors, macro-scale developments are also within this scope. A macro-scale view of development is based on economic statistics. Likewise, within the social dimension, there are development issues that address social issues. In the political sphere, there are issues on different parameters, particularly on the governance and political infrastructure of development. Finally, science and technology and economy are included in the human dimensions of development.

We can consider development under several headings. These can be classified as economic development, social development and human development. Economic development is the access of individuals to the goods and services they need to sustain their lives, and the provision of supply with the necessary logistics network supports within an economic system. At the end of it all, individuals' lives will continue to be above a certain level of well-being. Social development; improving the social lives of individuals and societies with the existence of economic development is described as a transition to another stage in development. Finally, human development will be a result of the reflection of all this economic and social development on the human development phase through human development. Especially when the level of education is compared with other societies by making certain progress, obvious differences will be seen (Oakley and Gerforth, 1985).

4. The Relationship Between Innovation and Development

The relationship between innovation and development has recently been a topic of debate in the global economic system. In particular, the question of how effective the added values emerging with the development of technology are on development remains current. Approaching the issue from this perspective, while there is certainly a link between innovation and development, the question arises as to how deep this link is. In short, there is an absolute link between innovation, competitiveness and development. Exploring this link has been very popular among researchers recently. It has become inevitable to evaluate development together with innovations in economic development, and the concept of development has become more prominent with intellectual capital and human capital (Lopez, 2000:11).

Some studies have been conducted to reveal the relationship between economic development and innovation. As a result of these studies, there is a close relationship between these two concepts. According to the study conducted by Schacht (2000), it has been revealed that technology has a great contribution to the growth of the USA. Especially with globalization and neoliberal policies, firms have made significant investments in technology and made significant breakthroughs, especially in innovation. It is of utmost importance that the public sector, along with the private sector, provides serious support in the face of this projection. These supports can be listed as activities such as making investment environments suitable for the private sector, encouraging the private sector to increase its R&D activities, and protecting intellectual property rights. In addition, the financial system's support for R&D expenditures and the need to bring innovation to a higher level are important economic policies (Fan et al., 2009: 36).

Development should also be considered regionally. Growth and development are important parameters in today's economic system. Based on these concepts, it can be concluded that knowledge, learning and innovation affect each other. In order to increase regional developments, increasing innovative approaches and prioritizing knowledge is an extremely important activity (Albeni and Karaöz, 2003: 157-170). In another study examining the place of innovation in regional development, the size and place of the concept was investigated. In the research on traditional foods, it was emphasized that innovation activities should be increased absolutely (Kuşat, 2012: 261-275).

While examining the concepts of development and innovation, it has been investigated where the state is in this relationship. The existence of this relationship has been the subject of research on some countries. Taking China and East Asia-Pacific Regions into consideration, it is concluded that the relationship between innovation and competitiveness-development is based on a significant and high correlation. At the same time, it has been stated that the policies to be implemented by the states subject to the research in the fields of these concepts have positive reflections (Fan et al., 2009). Innovation, R&D and development have become concepts that states, societies and individuals are interested in and spend a lot of time on, especially with the global economic system. Development

and innovation have become mutually reinforcing factors. The progress of development has created new innovation areas and this new innovation has taken development one step further again (Işık and Kılınç, 2012).

A literature review on the concepts of development, innovation and R&D and the interactions of science, innovation, R&D and innovation on the historical process have been the subject of the research. Finally, technology, innovation and R&D are found to be important variables for growth. Based on this result, the importance of growth-inducing variables necessary for development has been revealed (Akbey, 2014: 1-16). Whether a country is a developed country or not is understood by the point where its technology has reached. In this respect, the size of technology means the size of the economy. This is of great importance for development (Uzun Kocamış and Güngör, 2014).

In another study investigating the relationship between innovation and development; it is aimed to reveal the effects of development and innovation on the country's economy in South Korea. In this respect, it is tried to explain how strict these two concepts are. South Korea lagged behind Turkey in per capita income and expenditures until the 1980s. After this date, this result has changed with the change in the country's economy. South Korea, which prefers an innovation-oriented economic policy, has achieved its development goals by putting knowledge as well as innovation at the forefront and has managed to take its place in the group of developed countries (Oğuztürk, 2011: 48-53).

In another study conducted to reveal the link between development and innovation, 27 countries of the European Union were examined in the light of chronic correlation to reveal the relationship between economic development, innovation and competitiveness. As an outcome of the study, it was observed that these three concepts have an intense relationship with each other.

5. Income Distribution

The sum of the amount to be paid to the factors of production in return for the final goods produced within the borders of a country in a year is called income (Ünsal, 2011: 57). Income distribution is defined as the distribution of national income among factors of production, groups or individuals in a given period of time and in a given country. When we think of the concept of income distribution, there are some essentials that must come to mind. These are the question of how income is generated by the national economy over a certain period of time and how this income is allocated by policy makers. With globalization, the income distribution balance of countries around the world has deteriorated further (Bükey and Akgül, 2019: 7). Creating this balance in an equal and fair manner is close to impossible in today's economic systems. From this point of view, it is close to impossible to achieve a fair income distribution (Eğilmez and Kumcu, 2004: 126).

In economics, there are a wide variety of distribution problems that arise when societies are divided into social groups, classes or regions. Economists focus their attention on these divisions on two grounds. The first of these is the functional distribution, which is the main distribution problem, and the second is the personal distribution (Emek, 2020: 36). In income distribution, if the distribution of income occurs between individuals, families and some consumer parties, it is called personal income distribution. However, if this distribution occurs between factors of production, this is called functional income distribution. Functional income distribution is called primary income distribution, while individual income distribution is called secondary income distribution (Yumuşak and Bilen, 2000: 77-96). When the concept of income distribution is expressed, it is a monetary indicator that shows how national income is shared. The concept of distribution should not be confused with income distribution. Distribution refers to the abstract dimension of how income should be distributed. However, income distribution and distribution are often used interchangeably (Yücel, 2011: 5).

Development, innovation and income distribution are interlinked concepts. Morevoer, there are studies in the literature that consider income distribution to be equivalent to development (Bükey and Çetin, 2017: 105). The result of the fact that countries that have achieved the speed of innovation have achieved the development process together with growth will reveal the existence of a fair income distribution that will spread to the bottom of the society. It is an easy economic outcome for low-income countries to achieve significant growth figures with their cheap labor force, and may be relatively positive for development, depending on the forward-looking strategies of policymakers. However, it will be seen that with the wrong decisions, the increases will end and the variables considered as advantages will lead to an imbalance in income distributions. In particular, countries that are unable to make a technological breakthrough and create new added value with science will inevitably face consequences where the results of growth will not reach the top income group. Ultimately, with the "middle income trap", incomes will remain stable within a certain range for many years (Karagöl and Karahan, 2014). It will be inevitable that all these developments will result in technological progress not being achieved, growth not being realized, development and income distribution being negatively affected.

The middle income trap is a concept generally used for developing countries. This concept refers to the situation in which a group of countries with middle income, as income is divided on a per capita basis, is stuck in a vicious circle and is unable to move beyond this level. Likewise, it fails to catch up with high-income country groups. In the economic system, growth first occurs with the production of agricultural societies. Then, with the concentration in the agricultural sector, there is an excess of labor force. The workforce is then channeled into the industrial sector, driving growth to higher levels. The growth rate will decline

as high profits carry growth to a certain point and then these profits decline, technology becomes obsolete and productivity decreases. In order to prevent this, it is necessary to aim to put R&D studies at the forefront by capturing an innovation-oriented production style (Alçın and Güner, 2015). The result of all this will be a fair distribution of income. With the transition from agricultural society to industrial society, a continuous increase in growth has been possible. However, if this growth is supported by technology, innovation and R&D, this situation will be sustained. However, with a development-oriented policy, it will be possible to achieve a fair distribution of income.

6. Conclusion

The formation of economic systems is a maturation process.

Over time, the failure to meet needs or the transition to a new world order results in the evolution to differentiated systems. In particular, the transition from agriculture to industry has led to a major shift in the labor force towards industry. Later on, the industry also differentiated itself and turned into a mechanism where technology-intensive production and value-added intensive outputs were created. Both the way of production has changed and the importance of added value has emerged.

With globalization, technology-intensive production has become increasingly widespread and new areas have emerged and the general lives of societies have changed, and the needs and demands have become differentiated. At the heart of these wants and needs are the new technological developments that exist within the new economic order. Individuals and societies are not indifferent in following these developments, and the desire to use technology unlimitedly with an ever-increasing demand is increasing day by day and a new world system is moving forward.

The absence of innovation in the new world order and economic system is unthinkable. However, it is inevitable that innovation activities are in constant development. The enrichment of human capital should go a step further to create permanent economic wealth. The division of this economic wealth is important for maintaining social balance. Innovation accelerates growth and growth translates into development, which is the most desirable outcome in terms of both human and social justice. However, a balanced distribution of income must be an indispensable element in development.

This study examines the relationship between innovation, development and income distribution. The concepts of innovation, development and income distribution have been examined and some case studies have been made. While determining this situation, the applied results in the literature were used and a conclusion was formed using numerical data. It was observed that innovation significantly accelerates growth. It is also concluded that growth has significant effects on development within appropriate policies. It has also been observed that with innovation, countries leave the middle-income trap and enter the group of high-income countries and create a balanced income distribution.

Within the scope of policy recommendation; especially developing countries should enrich their human capital, support R&D studies, make innovation-oriented investments and support the private sector with incentives in this sense. At the end of this process, policies for healthy growth and development should be supported and implemented. In order to achieve social balance, social equilibrium must be maintained by paying attention to fair income distribution.

References

Açıkalın, O. and Saltık, A. (2007). "New Concepts and Strategies in Development". *Journal of Sociology Studies, 2007/*1, 5-27.

Ahmed, P.K. ve Shepherd, C.D. (2010). *Innovation Management Context, Strategies, Systemsand Process*, Pearson Education: England.

Akbey, F., (2014). A Literature Review on the Relationship between R&D, Innovation and Development: Institutional Summary, Erciyes University, *Journal of Finance*: 166, 1-16.

Albeni, M. ve M. Karaöz (2003). "Learning, Knowledge and Innovation in Regional Development: A Perspective for Turkey", *Süleyman Demirel University, Journal of FEAS, 8(*2), 157 - 170.

Alçın, S., Güner, B., (2015). "The Middle Income Trap: An Evaluation of Turkey", *Marmara University Economics and Administrative Sciences Journal, XXXVII, I*, 27-45 doi no: 10.14780/iibd.66467, 27-45.

Antonelli, C. (2009). The economics of innovation: from the classical legacies to the economics of complexity. *Economics of Innovation and New Technology, 18*(7), 611-646.

Bükey, A.M. and Akgül, O. (2019). The Impact of Technology Transfer on Income Distribution: The Case of Turkey. *Research Journal of Politics, Economics And Management, 7,*1, 1-8.

Bükey, AM. and Çetin, B.I. (2017). The Analysis of the Factors Influencing Income Distribution by the Least Squares Method in Turkey. *Research Journal of Public Finance, 3,* 1, 103-117.

de Castro, G.M., Verde, M.D., Sáez, P.L., & López, J.E.N., (2010). *Technological innovation: An intellectual capital based view.* Palgrave Macmillan.

Dinler Sakaryalı, A. M. (2016), *Innovation House*, Bursa: Ekin Publishing, 2-62.

Dulupçu, M. A. & Sungur, O., (2007). Innovation, Cooperation and Entrepreneurship, Western Black Sea

Region. *Evaluation of the attitudes of small and medium-sized enterprises,* 8.

Eğilmez, M. ve Kumcu, E., (2004), *Economic Policy, Theory and Practice in Turkey*. Istanbul: Remzi Bookstore, 126.

Elçi, Ş., Karataylı, İ. ve Karaata, S., (2008). Regional Innovation Centers: *A Model Proposal for Turkey*, 25-40.

Emek, Ö. F., (2020). *The Importance of Inflation in the Formation of Income Distribution Policies*, Ankara: İksad Publishing House.

Fagerberg, J. (2003), "*Innovation: A Guide to Literature" Centre for Technology,* Innovation and Culture" University of Oslo.

Fan, Q., K. Li, D. Z. Zeng, Y. Dong, R. Peng (2009). *"Innovatıon for Development and the Role of Government: A Perspective from the East Asia and Pacific Region*", Washington: The World Bank.

Grasselli, N. (2009). Regional Innovation Systems: A Case Study. *4th aspects and visions of applied economics and informatics*, 1135(1140), 26-27.

Işık, N. & Kılınç, E.C., (2012). Innovation-Driven Development: A Study on European Union Countries and Turkey. *Journal of Entrepreneurship and Innovation Management,1*, 1, 31–68.

Karagöl, E.T. ve Karahan, H., (2014). "New Economy: R&D and Innovation",82, Seta, İstanbul, 10-12.

Kaygısız, B. (2015). "Innovation", Ministry of Science, *Industry and Technology, 324*, 9-13.

Kaynak, M. (2007). *Development Economics*, Ankara: Gazi Publishing House.

Kaynak, M., (2011). *Development Economics*, Ankara: Gazi Publishing House ,77-78.

Kuşat, N., (2012). A Study on the Role of Traditional Food Products in Regional Development and Determinants of Innovation in Traditional Foods; Afyon Example, Manisa, *Celal Bayar University İ.İ.B.F Management and Economics 19*, 2, 261-275.

Lopez, M. R (2000). "*Innovation, Competitiveness and Development: Searching for the Linkages to Economic Development"*, IKE Internal Seminar, October 25, 2000, Aalborg University – Denmark.

Nafgizer, E. W., (2006). *Economic Development,* New York: Cambridge University Press.

Oakley, P. ve Garforth, C., (1985). Guide to extension training, *FAO Training Series, 11*

Oğuztürk, B.S., (2011). "The Role of Innovation in South Korea's Development", *Suleyman Demirel University Visionary Journal, 3*,5. 48-53.

Örtlek, Z., (2015). *Turkey from the Perspective of Innovation and Regional Development.* Master Thesis, Aksaray: Aksaray University.

Recepoğlu, M. ve Doğan, K. C. (2014). "The Role of Entrepreneurship and Technology in Regional Development: TR 83 Regional Analysis", Gümüşhane University, *Electronic Journal of Social Sciences:10*.63.

Schact, H. W. (2000). *"Industrial Competitiveness and Technological Advancement: Debate over Government Policy",* Congressional Research Service Report to the U.S. Congress.

Schumpeter, J., (1934). *The Theory Of Economic Development,* New York: Oxford University Press.

Sen, A (2004). *Development with Freedom*. İstanbul: Details Publishing House.

Sevinç, H. (2011). "The Problem of Regional Development: Regional Development Policies Implemented in Turkey", *Journal of Entrepreneurship and Development, (6:* 2). 40.

Todaro, M. ve Smith, S.C. (2011). *Economic Development*, Person Education and Addison-Wesley.

Turhan, G.Ç., (2012). "*The Effect of Trade with Land Border Neighbors on Turkey's Development -Attraction Model Approach*". PhD Thesis. İstanbul: Kadir Has University.

Tüylüoğlu, Ş. ve Saraç Ş., (2012). Determinants of Innovation in Developed and Developing Countries and An Empirical Analysis, *Eskişehir Osmangazi University Journal of İİBF, 7(*1), 39-74.

Uzun Kocamış, T. ve Güngör, A. (2014). "R&D Expenditures in Turkey and the Effect of R&D Expenses on Profitability in the Technology Sector: Borsa Istanbul Practice", *Finance Journal:166*.

Ünsal, E. M. (2011). *Macroeconomics,* 9th Edition, Ankara, Imaj Publishing House.

Yumuşak, İ. G. ve Bilen, M. (2000). Income distribution-human capital relationship and an evaluation on Turkey. *Kütahya University Journal of Social Sciences, (1*), 77-96.

Yücel, D. (2011*). Income distribution theories and policies: Income distribution and poverty problem in Turkey* (Unpublished doctoral thesis). İstanbul: Istanbul University.