The Relationship Between Education Economy And Growth in Turkey (2000-2018)

Türkiye’de Eğitim Harcamalarının Ekonomik Büyüme Üzerine Etkileri (2000-2018)

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Abstract: Many variables determine economic growth performance. One of those related variables is education expenditures. Education is defined as the process of creating changes in the behavior and thinking structure and skill of the individual. Education, which concerns all members of the community socially, is also among the most important spending areas in terms of public services. In the early 1900s, classical economists such as Adam Smith, Alfred Marshall and John Stuart Mill talked about the importance of public investment in education. Economists highlighted the issues such as the relationship between educational financing, distribution of income and education with the relationship between economic growth and education in the 1950s. The issue has improved since the 1960s in terms of research and publications. Education in many developing countries such as Turkey remained in the background in terms of both its position in budget and its characteristics. Societies need to make remarkable investments and spend a lot in the educational area to remove the related negative table from the point of economic, political, social and cultural development. In this study, it was endeavored to analyze the relationship between education expenditures and growth via graphics for the period of 2000-2018 in Turkey. As a result of studies on the effect of educational growth in Turkey it stands out statistically insignificant. In this context, it is necessary to make investments to improve the quality of education and training in Turkey. For this, unproductive resources devoted to education should be used and should support economic development by increasing education expenditures.

Structured Abstract: Education is one of the most important factors that determine the political, social and economic development level of the countries. Education is concerned with the development of “individuals”, including intellectual, character and psychomotor development. At the same time, human resources of any nation are important instead of physical capital and material resources that provide economic and social development. Education is defined as the process of creating changes in the behavior and thinking structure and skill of the individual. Education also determines the skills available in the field of labor and the cost of these skills, and the value of countries in the global market. Education plays an important role in the economic growth and development processes of the countries both due to the special benefits it provides to individuals and the positive externalities it creates socially. Education has two effects of including indirect and direct. Firstly, the indirect effect of education can be evaluated in terms of individuals being better educated and

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raising healthier individuals. Secondly, the direct effect is that with the education, the productivity of individuals will increase and accordingly, the income of individuals will increase, there will be an increase in labor force participation and will accelerate economic growth. Therefore, while the direct effect of education is important in terms of economic growth, indirect effect is important both in terms of increase in production and increase in individual welfare.

The first economic movement that defines the relationship between economic events and education is Mercantilism. From the 1980s, economists have significantly contributed to economic growth by education investments and human capital accumulation. At the beginning of the 1900s, classical economists like A. Smith, A. Marshall and J.S. Mill mentioned on the importance of government investment in education. Opinions of these economists did not create a remarkable effect on modern humane theory. Again, economists such as Denison, Schultz, and Becker developed the theory of human capital concerning Smith's thoughts. Theory of neoclassical economics that won a seat in economics literature until the 1980s has worked on the quantitative side of the growth. Lucas's study called "endogenous growth model" in 1988 is one of the most important studies to understand the economic growth among the countries. Romer conducted a study in 1990 and expressed that education capital can also be defined as formal training in situations when education expenditures are defined as a training type of human capital. Keynesian economists evaluated education as a semi-public property and focused on the issue that education services should be rendered by the government as a natural result of the social welfare state mentality.

Being accepted education as a public service of the government in Turkey was brought to the agenda after the 1839 Kingdom Political Reforms Decree (Kraliyet Tanzimat Kararnamesi) in the Ottoman period. It was explained in 1869 dated Statute on General Education that primary education is mandatory and free for all citizens. Much as this development did not come true as historical, it was still a remarkable attempt for the government to accept the responsibility of raising the citizens. There have been many changes in the educational level and structure of education as from the beginning of the modern Turkish Republic under the leadership of Mustafa Kemal Atatürk in 1923. The most significant advantage of developing countries such as Turkey is the well-educated and qualified manpower capacity which is useful to keep in step with high technology production. Developments at the educational level positively affect economic growth by increasing both labor productivity and information production capacity.

Developments of Turkey on education in the period of 2000-2018 were scrutinized in this research. It is seen when the schooling rate by gender in Turkey that schooling rate of girls are higher than the boys. Increasing education time to 12 years has a huge effect on this situation. We can also say when we analyze the shares for educational investments by MNE budget that Turkey falls behind the OECD countries. However, education expenditures have a characteristics of investment spending in the long term if the positive externalities of education is considered. Consequently, investments in education accelerate the economic development.

Turkey that is in the group of developing countries has not made enough effort for education and quality of education. First of all, more resources should be allocated to increase the quality of education; related resources need to be protected from being unproductive by using for the original purpose. It will be to the point to deduct a large part of educational contributions from the tax for increasing the resources allocated for education. Moreover, Turkey ought to improve the market mechanism towards economic development; entrepreneurial individuals should be raised. It can also be thought that increasing educational expenditures within the frame of EU harmonization policies can positively contribute to the economic development of country. In this direction, the development of education in the historical process is discussed in the first chapter of this study. About the second part, the economic movements which mentioned about the importance of education are given. It was endeavored to analyze the effect on education expenditures on the growth in Turkey by graphics.

Keywords: Education, Investment, Economic Growth, Education Expenditures

Öz: İktisadi büyüme performansını belirleyen birçok değişken söz konusudur. Bu değişkenlerden biri de eğitime yapılan harcamalardır. Eğitim, bireyin davranış ve düşünce yapısında ve becerisinde değişiklik yaratma süreci olarak tanımlanır. Sosyal açıdan toplumun bütün bireylerini ilgilendiren eğitim, kamu hizmetleri açısından da en önemli harcama alanları arasında yer almaktadır. 1900'lerin başlarında, Adam Smith, Alfred

Marshall ve John Stuart Mill gibi klasik ekonomistler, eğitimde kamu yatırımının öneminden bahsetmişlerdir. 1950'lerde, ekonomistler eğitimin finansmanı, gelir dağılımı ve eğitim arasındaki ilişki ile ekonomik büyüme ve eğitim arasındaki ilişki gibi konulara dikkat çekmişlerdir. 1960'lı yıllardan itibaren, konu araştırma ve yayınlar açısından hızlı bir şekilde gelişmiştir. Türkiye gibi gelişmekte olan birçok ülkede eğitim, hem bütçedeki yeri hem de niteliği açısından yıllarca geri planda kalmıştır. Toplumların ekonomik, politik, sosyal ve kültürel gelişim açısından söz konusu olumsuz tabloyu ortadan kaldırabilmesi için eğitim alanında önemli yatırımlar ve harcamalar yapması gerekmektedir. Bu çalışmada Türkiye'nin 2000-2018 dönemi boyunca eğitim harcamaları ile büyüme arasındaki ilişki grafiklerle analiz edilmeye çalışılmıştır. Yapılan çalışma sonucunda Türkiye'de eğitimin büyüme üzerindeki etkisi istatistiksel olarak anlamsız çıkmaktadır. Bu kapsamda Türkiye'nin eğitime ve eğitimin kalitesini arttırmaya yönelik yatırımlar yapması gerekmektedir. Bunun için de eğitime ayrılan atıl kaynaklar kullanılmalı ve eğitim harcamalarını arttırarak ekonomik kalkınmaya destek sağlanmalıdır.

Anahtar Kelimeler: Eğitim, Yatırım, Ekonomik Büyüme, Eğitim Harcamaları

Introduction

Education that is defined as the process in which a person creates change in his behavior, thought and skills come from the verb stem of “bend”. Education significantly contributes to the development of countries in both producing and spreading information and also providing qualitative and quantitative labor during the progress phase. Accordingly, education can be seen as a process that increases the production capacity of political, social, economic and scientific organizations of a country.

The first economic movement that defines the relationship between economic events and education is Mercantilism. From the 1980s, economists have significantly contributed to economic growth by education investments and human capital accumulation. At the beginning of the 1900s, classical economists like A. Smith, A. Marshall and J.S. Mill mentioned on the importance of government investment in education. Opinions of these economists did not create a remarkable effect on modern humane theory. Again, economists such as Denison, Schultz, and Becker developed the theory of human capital concerning Smith's thoughts. Theory of neoclassical economics that won a seat in economics literature until the 1980s has worked on the quantitative side of the growth. Classical production function and classical growth theory gave place to “endogenous growth theory” in time.

Education is accepted as a sustainable way for economic welfare; it also struggles with unemployment and underlies social equity, awareness, and cultural liveliness. In light of all this information, a strong relationship between education and growth can be easily seen. The chief goal of this paper was to scrutinize whether education expenditures in Turkey affect economic growth.

The development of education in the historical process is discussed in the first chapter of this study. About the second part, the economic movements which mentioned about the importance of education are given. It was endeavored to analyze the effect on education expenditures on the growth in Turkey by graphics.

1. Development of Education in Historical Process in Turkey

Education is the basis for the development of human capital. Education is about the development of “individuals” including intellectual, character and psychomotor progress. Moreover, human resources of any nation become important instead of physical capital and physical resources which provide the economic and social development (Grimaccia & Lima, 2013). Education is identified as the human's process in which he creates change in behavior and mentality. Education, at the same time, determines the skills in the labor area and the values of countries in the global marketplace by the cost of related skills (Karaçor, Güvenek, Ekinici & Konya, 2017).

The word of “education” comes from the verb stem of “bend”; it means “to bend” and “to give shape”. We can define education as the process of changing behavior and reshaping the human. Undesired acts of person are changed by education by bringing him in the desired ones (Kızılloluk, 2007: 22).

Education has a crucial role in the economic development process of countries. Education provides to perform qualitative and quantitative labor which requires the development process while it also encourages countries to follow and transfer the modern technologies by producing and spreading the information function. As the educational level in a country increases, there will occur an increase in labor productivity; this situation will positively affect the competitiveness of countries (Mercan & Sezer, 2013). Education and development are the keys of increasing the competitiveness of a country. The system of education provides being produced innovative, productive and skilled labor besides meeting the needs of trade and industry. Forming human capital via education contributes to the economic growth of a nation (Rambeli, Ramli, Hashim & Marikan, 2016).

Development of human capital byways like science, politics, and economy becomes reality via education. Education as academic informs on functional skills (reading, arithmetic, and writing, ie), high-level cognitive skills (including abstract reasoning, problem-solving and thinking) and essential issues to live in the modern world as qualified. Education as political provides society to socialize by providing a strong commitment to having a common national identity instead of dependence to local or religious groups. Education as economic expands the awareness of opinion and applications besides knowledge, skills and close experiences of people. Learning in this way helps individuals to have new information; creates a modern person uses new technologies. As education increases, its effects increase at the same time (Owings, 2012).

It is seen when the efforts of Turkey toward being a more modern society that education underlies the development movement. Educational institutions and teachers have a special place in the westernization movement that has continued for about a century and a half. Moreover, education is accepted as a dynamic social force that changes the structure of society and provides a life standard with higher quality (Çakmak, 2008: 34).

Being accepted education as a public service of the government in Turkey was brought to the agenda after the 1839 Kingdom Political Reforms Decree (Kraliyet Tanzimat Kararnamesi) in the Ottoman period. It was explained in 1869 dated Statute on General Education that primary education is mandatory and free for all citizens. Much as this development did not come true as historical, it was still a remarkable attempt for the government to accept the responsibility of raising the citizens (Gök, 2007).

There have been many changes in the educational level and structure of education as from the beginning of the modern Turkish Republic under the leadership of Mustafa Kemal Atatürk in 1923. School enrollment rates significantly increased in those periods; however, there was seen a decrease in regional and social gender inequalities although they existed. Structural changes such as increasing compulsory education from five to eight years and changing the national curriculum were started. Turkish economy showed an alteration besides the changes in the Turkish education system and an increase in the level of education of Turkish citizens (Gumus & Kayhan, 2012). Turkey closed the religious schools by centralizing the education via the Ministry of Education (MNE) in 1924; a modern education system started by new secular schools. At the same time, there was provided equal rights for women and civil rights by the legal system. Turkish adult literacy rate increased to 89% (96% among men; 81% among women) by the year of 2010 while the same rate was less than 10% in the first years of the republic (Owings, Kaplan & Pırım, 2012). For the information of Turkey Statistical Institute (TSI), Regional Directorate of Izmir, the literacy rate is 96,74% at present.

In Turkey, as from the midst of the 1990s, there have been conducted many studies to increase schooling rate and time. 15-year Education Master Plan (EMP) including multi-faceted

reforms in the education system was prepared in 1996. In spite of these attempts and efforts, envisaged reforms could not be transferred into practice at the targeted level. As of 2002, transformations were started to be seen in the education system by several international projects which came into effect at the same time. The date of being performed innovations in education by the World Bank, the European Union, United Nations Education Science and Culture Organization (UNESCO), United Nations International Children Emergency Fund (UNICEF) and Organization for Economic Co-Operation and Development (OECD) goes long way back. However, there have been related to all these institutions by the rulership of the Justice and Development Party (AK Party) as of 2002. Turkish Education System has reorganized within the frame of the project, report and other works that are prepared by the suggestions of experts and the financial support of related institutions (Gür, 2011:18).

As of 2016, it has not been heard about any student who goes to school by the police force. Since the expression of “eight-year continuous education” was removed from the law by the name of “Law related to making amendments in primary education and educational act with some provisions in official gazette”, compulsory education was increased to “discontinuous” 12 years on April 11, 2012. 4+4+4 Educational Act allowed for open high school besides imposing compulsory attendance to the secondary school and high school after the first four years. After the related law, there was seen a remarkable decrease in schooling rates at primary and secondary school levels as from the years of 2015-2018 (Gökçe, 2018: 385).

Table 1: Schooling Rates in Turkey by Gender (2012-2019)

Years	Male				Female			
	Primary School	Secondary School	Secondary Education	Higher Education	Primary School	Secondary School	Secondary Education	Higher Education
2012-13	98,81	93,19	70,77	38,40	98,92	92,98	69,31	38,61
2013-14	99,53	94,57	77,22	38,90	99,61	94,47	76,05	40,93
2014-15	96,04	94,39	79,46	37,95	96,57	94,30	79,26	41,10
2015-16	94,54	94,36	79,36	39,21	95,22	94,43	80,24	42,62
2016-17	91,08	95,60	82,69	39,62	91,24	95,76	82,38	43,90
2017-18	91,42	94,26	83,77	43,99	91,68	94,69	83,39	47,36
2018-19	91,78	92,94	84,51	41,93	92,08	93,64	83,88	46,37

Source: The Ministry of National Education (MNE), 2019. National Education Statistics, Formal Training, 2018-2019, p:1.

Table 1 shows the schooling rates by gender in Turkey. As is seen in the related table, entire schooling rate in primary schools in the 2017-2018 academic year was 91.54% while the same entire schooling rate increased to 91.92% in the 2018-2019 academic year. The entire schooling rate in secondary schools was 94.26% in the 2017-2018 academic year while the same rate decreased to 93.28% in the 2018-2019 academic year. While the schooling rate of the girls was 91.24% in the 2016-2017 academic year; the same rate increased to 91.68% in 2017-2018 and right after 92.08% in the 2018-2019 academic year. The increase in the schooling rate of girls proves the contribution of 12-years compulsory education to the country.

Education invests in the future of individuals, companies, and societies; this is the key feature of education. So, it can be said that education has a crucial role in increasing wealth level and life quality in economic and social life. Education, in an economic sense, is at the core of growth, national competitiveness, and productivity growth. Again, education, in a social sense, is at the core of

participation, poverty, socialization, and protection of the environment. The person can discipline himself, broaden his horizon and create new opportunities. As a consequence of these all, society can provide a more qualified development compared to the previous version. Moreover, education plays an important role in developing the main achievements below (Özsoy, 2009);

- It provides progress by directly affecting labor productivity with the working capacity.
- It opens up an opportunity for technological advancements; so, the capital efficiency is indirectly affected.
- A decent education helps to ensure consistency and order in employment opportunities.
- The ability to adapt to changes in business conditions provides to gain prestige and social standing.

Education can serve various purposes. It also provides people to join the society and be independent citizens. It can encourage self-consciousness and establish common values and social cohesion. Health awareness can be increased by education; criminal behaviors can be avoided as well. In addition to all these, education can only serve to the “consumption” goal at the same time (Woessmann, 2014). In the light of all explanations above, the chief goal of the education is to raise individuals who loyal to democratic values and Atatürk’s principles and reforms; have advanced level of thinking, perceiving and problem-solving skills; are productive, creative and extreme skillful at knowledge era. The chief goal is to raise individuals who are open to new ideas; have personal liability; assimilate national culture; can interpret different cultures and contribute to the modern civilization (UNESCO, 2010).

2. Importance of Education in History of Schools of Economic Thought

The concept of human capital that is a remarkable indicator in providing economic growth is used for expressing all the concepts such as information, skills, abilities, state of health, position in social relations and educational level of a person or the society. Adam Smith, J. Stuart Mill and Alfred Marshall are the economists who discussed the concept of human capital first. Thoughts of these economists could not create a huge effect on the theory of modern human capital. Afterward, economists like Denison, Schultz, and Becker developed the theory of human capital concerning Smith’s comments. It was emphasized in Denison’s research that education develops the skill and reproductivity capacity of the labor; this significantly contributes to the national income (Ak & Ak, 2010:153).

The history of the education economy has a short history. Classical economists like Adam Smith, Alfred Marshall and John Stuart Mill, at the beginning of the 1900s, mentioned the importance of public investment in education. Economists highlighted the issues such as the relationship between educational financing, distribution of income and education with the relationship between economic growth and education in the 1950s. The issue has improved since the 1960s in terms of research and publications. Boundless demands related to education and the diminishing economic returns have paved the way for economists to interest in education in recent years. Indeed, the general run of the crises in education is economic or financial-based all over the world. Accordingly, the economic environment directly affects education. In conclusion, education performers find conducting an economic analysis necessary while answering educational questions (Babalola, 2015).

All the schools of economic thought from mercantilism to neoclassical schools have researched the source of wealth and development and searched for an answer to the question of which section contributes to the economic growth maximum. The first economic movement that determined the close relationship between economic events and education is Mercantilism. Mercantilists attach great importance to human capital as a factor of the national income increase. In mercantilist thought; the status of a well-educated merchant is the position of blood for a body (Öztürk, 2005:28-29).

Adam Smith banded about the fact that education contributes to economic growth by increasing reproductivity capacity in author's book called "Wealth of Nations" in 1776 (Machin, 2008). It is accepted that education is a crucial determinant of economic growth from Adam Smith. Several models and theories of economic growth about education and economic growth have been developed in time. The belief that education supports growth has caused many governments to invest in the education sector (Grimsccia & Lima, 2013)

Thomas Malthus, in 1820, touched on the subject that education can contribute to population control and eliminate social unrest (Çağlar, 2017:320). Moreover, John Stuart argued that everybody needs to receive primary education and wunderkinds should receive advanced training because of being education for public welfare (Kılıç, 2001: 4). Mill, just as Malthus, argued that education lowers the speed of population growth rate; the ratio of population to capital and employment decrease in time (Serin, 1979:13).

In the 1950s, Solow scrutinized the relationships among various factors (labor and physical capital, ie.) of growth via economic models. Author did not consider the effect of different levels of education or quality of labor on economic growth in the beginning. However, this situation changed step by step; the importance of skills, knowledge, and competencies of people in terms of economic growth have been understood as from the beginning of the 1960s. In other words, the concept of human capital has started to come into prominence (Keeley, 2007).

In 1954, for Schumpeter, education provides the innovation process and increases economic growth. Author also defined the transmission channels as creating new products, discovering new markets, designing new production methods and organizations during this process (Bouhari & Soussi, 2017)

A remarkable development in the theory of economic growth in the late 1980s accompanied the acceptance that determinants of long-term economic growth are the central macroeconomic problems. This period involved improving "endogenous growth" models in which long-term growth models are specified. The key feature of these models is the theory of technological progress that is accepted as a process causes being adopted advanced technologies in the other country and sectors. One of the greatest contributors in this field is Romer (1990) (Barro, 2013). Romer conducted a study in 1990 and expressed that education capital can also be defined as formal training in situations when education expenditures are defined as a training type of human capital. Moreover, for related study findings, the increase in human capital supply causes growth in the economy (Kaur, Baharom & Habibullah, 2014).

Lucas's study called "endogenous growth model" in 1988 is one of the most important studies to understand the economic growth among the countries. Author highlighted the human capital as one of the principal factors of economic growth. Accordingly, human capital becomes important in comprehending the human capital accumulation process and its effect on the economic growth in countries. To invest in education is the prime and vital goal for many countries for establishing better human resources that can provide economic development of the nation by providing qualified manpower. In this sense, it is concluded that investments in education have a direct effect on economic growth (Mallick, Das & Pradhan, 2016).

David Ricardo focused on the role of education on the purpose of population planning (Kılıç, 2001: 4). Accordingly, author accepted that the increase in economic welfare is based on the increase of capital sum and decrease of the population. At one and the same time, concerning his expressions, only the education channel can provide forming required habits about population planning or limiting the number of families (Öztürk, 2005:29).

Alfred Marshall touched on the importance of education; characterized efforts toward this area as a national capital; he also expressed that the most valuable capital is the capital investment

for a human being. For Marshall, the distribution of education expenditures between family and government indirectly calls the attention of economists. Moreover, Marshall argues that both the working class who leave much to be desired in terms of education and labor and the bourgeoisie who are raised based on the primary education system need to be raised by being subjected to technical education (Serin, 1979:13).

Keynesian economists evaluated education as a semi-public property. Thus, they focused on the issue that education services should be rendered by the government as a natural result of the social welfare state mentality. For the Keynesian ecole; the government has liabilities in areas like education, health, housing, child allowance, old-age pension, unemployment coverage. Protecting economically weak segments of society and performing the social justice principle are the primary concerns of the social welfare state that is suggested by Keynesian ecole. The share of education expenditures in total public expenditures has started to increase based on these developments (Öztürk, 2005:29).

For Galbraith, characteristics of new industrial state springs from the importance of education and research activities. Continuous development of technology has caused the technical structure to cover many specialties and education to come into prominence. Technostructure towards providing consistency prioritizes to be replaced labor with the machine. Because the wages show instability because of trade unions while machine prices become stable. However, becoming mechanized obliges to enhance the quality of labor. Thus, the unemployment ratio of unskilled labor will increase when the employment opportunities of skilled labor increase at the same time (Savaş, 2007:919).

3. Relationship Between Education Expenditures and Growth in Turkey

Education acts an important part in human capital development that is the key of the scientific and technological progress. Education, at the same time, is accepted as a sustainable way for economic welfare; it struggles with unemployment and underlies social equity, awareness, and cultural liveliness. It increases productivity and provides a talented workforce who direct the economy to economic development to be raised (Mekdad, Dahmani & Louaj, 2014).

Education is crucial for societies because of the added-values which are created as direct and indirect by education. Namely, the contribution of education to cultural and social development is discussed as much as its contribution to economic development (Yenisu, 2018:28). Investments in education are among the factors which specify the development of the education sector. This situation is especially valid for developing countries. Since education expenditures can help in obtaining better training outputs, it represents human capital development. The role of education in increasing the human capital stock and providing economic growth has been accepted in the literature (Kouton, 2018).

Investments in education, nutrition, health and family planning of people form one of the touchstones in terms of economic growth and social development. Such an investment produces knowledge; enlarges the experiences and improves health. Human capital is obligatory in terms of sustainable economic development, increasing the living standards and enriching the lives. On the other hand, the poor have less wealth; there should be made investments in their human capital to increase their wealth level. Such investments provide benefits for society besides the benefits for individuals. That is to say, the democracy of non-governmental organizations and the regime will be strengthened by increasing the rate of literacy (Baş, 2004:24-25).

The cost of education means the total resource reserved for education. It contains the direct expenditures and indirect financial loads; namely, it contains the opportunity costs which are measured as the income loss which the society is exposed as a result of a person or a school. The opportunity cost of deserving a wage in the labor market is the real cost of the decision to enroll in a

full-time or part-time training course for a student. Loss of the output (GNP) that a student can produce for the economy is a part of the resource cost of education. In general, the cost of education is a thing that a person or government relinquishes due to the school's decision. Just as every investment, investments in education necessitate a cost (Babalola, 2015).

Government expenditures in the education sector are divided into two as operational expenses and development expenses. Operational expenses are the expenses for financing the repetitive and continuous daily activities. Operational expenses can be aligned as salary payment, allowances, public service and paying other services. Development expenses mean nonrecurrent capital expenditure that is expected to return in the long run. Therefore, it has a great capital and provision that necessitates audit and care. It is aimed at development expenditures to provide infrastructure and facilities in higher education institutions and schools. This is because, since development expenditures necessitate attentive planning and are complex, they differ from operating expenses. Development expenditures involve capital expenditure projects which increase the socioeconomic level besides encouraging economic growth (Rambeli, Ramli, Hashim & Marikan, 2016).

Table 2: Budget Size and Distribution of the Ministry of Education (2018-2019)

Allowance type	2018 Budget (TL)	2019 Budget (TL)	Increase Rate of 2019 Compared to 2018 (%)
The Ministry of National Education	92.528.652.000	113.813.013.000	23,00
01 Personnel Expenses	63.503.243.000	81.622.485.000	28,53
02 Social Security Institution Government Premium Expenses	9.785.948.000	13.299.983.000	35,91
03 Round Trip Transactions Costs	8.693.097.000	10.038.497.000	15,48
05 Current Transfers	2.784.739.000	3.265.157.000	17,25
06 Financial Expenses	7.737.121.000	5.558.886.000	-28,15
07 Capital Transfers	24.504.000	28.005.000	14,29
Central Administration Budget	762.753.000.000	960.976.000.000	25,98
GDP	3.445.782.000.000	4.450.000.000.000	29,14
MNE/Central Administration Budget (%)	12,13	11,84	-2,39
MNE/GDP (%)	2,69	2,56	-4,83

Source: MNE, 2019. National Education Statistics, Formal Education 2018-2019, p:246

Data for the year of 2018-2019 is shown in Table 2 including the budget sizes of the Ministry of National Education. Accordingly, a large part of the budget of MNE consists of the personnel expenses (72%) and the government premium expenses (11%). Much as the budget for education looks like increasing in time, being the personnel expenses 72% is a significant factor that limits reaching equal education opportunities. We can see when looking at the rate of increase of the budget in 2019 compared to 2018 that the biggest share is reserved by the social security state premium (35,91%). It is possible to talk about that financial expenses have a-28,15% share; the related share is utilized instead of allocation resource for the financial expenses.

Management gains a more democratic characteristic in societies that invest in education. Moreover, providing economic and political stability get easy; the rate of perpetration decreases at the same time. Education expenditures accelerate economic growth and development due to the incremental revenue that is created as capital expenditure in the long run when we consider the positive externalities of education. In addition to all these, education significantly contributes to social structure and human capital. Rendering the education service and being undertaken the expenses by the government become an obligation by considering the direct beneficial effects of education on economic growth. Therefore, public expenditures for education consistently increase (Akıncı, 2017:389).

Table 3: MNE's Budget For Education (2000-2019)

Years	MNE Budget (TL)	MNE Investment Budget (TL)	Share for Investment from MNE Budget (%)	The Ratio of MNE Budget to GDP (%)
2000	3.350.330.000	666.782.000	19,9	2,01
2001	4.046.305.625	779.855.000	19,27	1,68
2002	7.460.991.000	1.281.690.000	17,18	2,13
2003	10.179.997.000	1.479.050.000	14,53	2,24
2004	12.854.642.000	1.244.150.000	9,68	2,21
2005	14.882.259.500	1.230.306.000	8,27	2,29
2006	16.568.145.500	1.241.498.000	7,49	2,18
2007	21.355.634.000	1.490.000.000	6,98	2,53
2008	22.915.565.000	1.296.704.000	5,66	2,41
2009	27.446.778.095	1.754.417.000	6,39	2,88
2010	28.237.412.000	1.785.327.000	6,32	2,57
2011	34.112.163.000	1.995.625.000	5,85	2,63
2012	39.169.379.190	2.600.000.000	6,64	2,76
2013	47.496.378.650	3.955.000.000	8,33	3,03
2014	55.704.817.610	5.192.300.000	9,32	3,19
2015	62.000.248.000	5.494.000.000	8,86	2,65
2016	76.354.306.000	6.284.628.000	8,23	2,93
2017	85.048.584.000	7.237.121.000	8,51	2,8
2018	92.528.652.000	7.737.121.000	8,36	2,69
2019	113.813.013.000	5.558.886.000	4,88	2,56

Source: MNE, 2019. National Education Statistics, Formal Education 2018-2019, p:254

Table 3 shows the share for investments from the budget of the Ministry of National Education between the years of 2000 and 2019. Accordingly, the share for education investments was 17,18% in 2002 while this ratio regressed to 6,32% in 2010. The share in 2012 increased to 6,64% by 4+4+4 system that inured into force on February 20, 2012. The same ratio regressed from 8,36% to 4,88% by decreasing almost by fifty-fifty in 2019 compared to 2018. Regarding the GDP ratio of the MNE budget, it has shown a decrease as from 2016; it decreased to 2,56% in 2019. Turkey falls behind the OECD countries in terms of the budget for education when it is considered that 6% of the national income is shared for education in OECD countries.

Education is the key tool in increasing the skill of human and reaching desired goals of socio-economic development. Education provides individuals to make conscious choices, broaden the opportunities and have a voice in making public decisions. Education at the macro level means a strong and sustainable development due to productive and qualified manpower. Moreover, education at the micro-level can be defined as a system that generates higher income, creates opportunities and raises conscious individuals (Mekdad, Dahmani & Louaj, 2014). We can analyze the literature towards the relationship between education and growth as the groups as micro and macro;

1. Microeconomic literature established a relationship between different ways of measuring the educational success of a person and his achievements. Many studies show consistent results for the thing that can be called private and personal payment. For individuals, this situation means that they increase their gains almost by 10% in every academic year.
2. Macroeconomic literature scrutinizes the relationship between the standard economic growth criterion in terms of GDP and the different criterions of the total educational

achievement level of a country. For several study findings, there is higher GDP growth in countries where the population gets higher scores in cognitive success tests.

Figure 1: The Relationship Between Education Expenditure and Economic Growth

Source: Eriçok, R. E. & Yılancı, V. 2013. Relationship Between Education Expenditures and Growth: Bound Testing Approach. Journal of Economy of Knowledge and Management, Volume: VIII, Issue: I, pp: 87-101.

The Figure shows the relationship between education expenditure and economic growth. Education expenditure involves human capital including skills measured by standardized test scores, information, and investment for each school. Thus, productivity level increases and personal economic benefit is ensured in society via human that is evaluated within the scope of the human capital. Moreover, the increased productivity significantly contributes to social-economic benefits including competition and growth.

Education is known as the most important determinant of economic growth. Again, education increases the human capital in labor; this factor increases labor productivity at the same time. This is because investment in education is crucial for economic growth and society. Education expenditures as a percentage of GDP represent the share that is reserved for schools, universities, public and private enterprises compared to the general resource allocation of a country (Kaur, Baharom & Habibullah, 2014). High earnings for well-educated individuals cause tax revenues to increase; demands to state finance get easy. As the degree of learning increases, population increase is controlled; technology improves and management gains strength. Moreover, it provides consumption to increase by advantaging for producers during education (Erdem & Tuğcu, 2010).

The contribution of education to economic growth enhances labor productivity in several ways. Education that is one of the various factors which affect economic growth contributes to economic growth in four ways. First of all, education opens a road to improve skills such as computer engineering that is beneficial in processes like writing, accounting, training, medicine, engineering, and productive areas. Secondly, education provides logical reasoning information that can contribute to the most important sides of economic growth such as economy, policy, science, art, geography, philosophy, history, mathematics, innovation, adaptation, and entrepreneurship. Thirdly, again, education ensures occupational ethics and attitudes for goods and services production. Finally, education services as a research tool to define and select abilities efficiently. Therefore, education causes goods and services to be improved and produced with higher quality by providing the business world to have skilled labor (Babalola, 2015).

Figure 2: Connection Cycle Between Economic Growth, Physical Capital and Human Capital

Source: Zivengwa, T. At all. 2013. Investigating The Causal Relationship Between Education and Economic Growth in Zimbabwe. Asian Journal of Humanities and Social Studies, Vol: 01, Issue: 05, ISSN: 2321-2799.

Figure 2 shows the cycle between economic growth, physical capital and human capital. Accordingly, education and economic growth strengthen each other; they cannot be thought of as separate. As the economy grows, there occurs an increase in employment by productivity growth. Increase in employment causes the income that a household spends to increase; so, more people can reach education. As the number of educated people increases, productivity will increase and the economic growth will be positively affected. This related cycle continues until the economy develops; a regress in poverty becomes unavoidable.

The most significant advantage of developing countries such as Turkey is the well-educated and qualified manpower capacity which is useful to keep in step with high technology production. Developments at the educational level positively affect economic growth by increasing both labor productivity and information production capacity. The performance of a country during the developmental process is closely associated with the efficiency of the education system. An effective education system triggers competition and contributes to economic growth by economically increasing qualified manpower and productivity growth besides the positive contributions in social, cultural and political areas (Mercan & Sezer, 2013).

The process of the Turkish economy has not displayed a consistent economic growth performance for a long time. The key reason for this situation is the increase in inputs, not the productivity growth of production and output increase. Short term total factor and productivity growth in labor have not reflected in the long term. There are reasons arising from the structure of the labor markets such as lowness of skill, educational level, and manpower; unsatisfactoriness of job shadowing in the manufacturing industry. However, the changes in education based on continuous system search; system and quality problems of higher education; lack of structuring of the labor market and the integration problems in the industry sector have always been discussed (Turan, 2016:8).

There are experienced a transformation in education service type just as being experienced almost in every service type by globalization. The financing of education that has a huge effect on human capital growth has constituted a problem in developing countries such as Turkey. Education is not considered important in Turkey when we review the education system and applications in developed countries like the members of the EU and OECD. It is emphasized by the Vision 2023

project in the 100th year of the Republic that there needs to be taken important steps in education. Following evaluation on the educational financing within the scope of Vision 2023 is performed (Güngör & Göksu: 2013: 63);

“Tendencies to change in education structure change and shape the educational financing sources. Increasing the ratio of education expenditures in GNP; increasing international fluidity of education expenditures; rendering primary education as a public service and privatizing education are the primary tendencies which are the indicators of this change and diversification”.

Figure 3: Ratio (%) of Total Education Expenditures in GDP in Turkey

Source: MNE, 2019. National Education Statistics, Formal Education 2018-2019, p:254

The figure shows the ratio of the total education expenditures to GDP between the years of 2000 and 2019 in Turkey. The ratio of the total education expenditures to GDP gradually increased from 2001 to 2015; the related ratio increased from 2,64% to 4,16%. However, for observations, this increase has shown the opposite direction as from 2016. Reflections of the 2008 financial crisis to Turkey are the reason for the regress of related ratio after 2007 as well. Education expenditures move as parallel to economic developments. In addition to all these, rigid fiscal policies during crisis negatively affect the sources that are allocated for education.

Figure 4: GDP and Share for Education From MNE Budget in Turkey (%)

Source: The World Bank, 2019. (online) <https://databank.worldbank.org/reports.aspx?source=2&country=TUR#>, Date of Access: 29.09.2019, MNE, 2019. National Education Statistics, Formal Education 2018-2019, p:254.

Figure 4 shows the GDP ratio and shares for education from the Ministry of National Education in Turkey. Investments from the MNE budget were at a 19,27% level; the GDP level was at -5,96% by 2001 crisis. There is observed a decrease in education share because of the effect of crisis while there was an increase in GDP in 2002. The period when the education budget of MNE (despite the decline) was the years 2000-2003 in Turkey; it was lower in the next years. In the same way, there can be observed a decrease in GDP (5,03%) and education investment ration (6,98%) of MNE by the effect of the 2007 global financial crisis. There occurred a growth in the investment ratio of MNE for education by 4+4+4 educational system and applying a full-time schooling system in all the schools in 2012. However, there is a decrease in the investment ratio of 2018 compared to the previous year. We can talk about negative progress in the long run if the investment for education in a country is insufficient. Namely, since the unskilled labor will increase in such a situation, there will be a regress in welfare and so, the related country will not be able to become a self-sufficient nation. Thus, education investments need to be performed by making long-term evaluations and calculations.

Figure 5: The Relationship Between Education Expenditures and Growth in Turkey (%)

Source: The World Bank, 2019. (online)
<https://databank.worldbank.org/reports.aspx?source=2&country=TUR#>, Date of Access: 29,09,2019.

Figure 5 shows the relationship between the share of education expenditures in the period of 2000-2018 in Turkey and the growth. Concerning observations, education share in the budget has increased by the actions of the Justice and Development Party (AKP) that came into power in 2002. The share of education expenditures in GDP was 2,2 in 2000 while this ratio increased to 2,63% in 2001. Reflections of the 2001 global financial crisis were not at a threatening level to education and health expenses. As is also seen in Figure, there occurred an increase in education expenditures in the period after the 2001 crisis. The share for education in GDP has continuously increased after 2007 while there was a share of only 2,85% in 2007. The related share has remained at 3,8% as of 2015. So, the effect of education on economic growth is found as statistically insignificant because of the insufficiency of resources allocated for education.

Conclusion

Effects of education on the economic development was analyzed for a long period that goes back Mercantilism movement. Importance of economic progress and education was endeavored to measure with economists such as A. Smith, A. Marshall and J. S. Mill. Despite the studies conducted, it was accepted for a long time that the economic progress is based on the relationship between the number of wage earners and the physical capital amount. For the study results in 1990s, investments in manpower can contribute to economic development more than several resources.

Developments of Turkey on education in the period of 2000-2018 were scrutinized in this research. It is seen when the schooling rate by gender in Turkey that schooling rate of girls are higher than the boys. Increasing education time to 12 years has a huge effect on this situation. We can also say when we analyze the shares for educational investments by MNE budget that Turkey falls behind the OECD countries. However, education expenditures have a characteristics of investment spending in the long term if the positive externalities of education is considered. Consequently, investments in education accelerate the economic development.

Finally, it is observed when the share of total of education expenditures in GDP in Turkey is analyzed that there was an increase till 2016; next years were on the decline. Education expenditures move as parallel to the economic developments; rigid fiscal policies negatively affect the sources that are allocated for education. So, the effect of education on the economic growth is found as statistically insignificant.

In the end, Turkey that is in the group of developing countries has not made enough effort for education and quality of education. First of all, more resources should be allocated to increase the quality of education; related resources need to be protected from being unproductive by using for the original purpose. It will be to the point to deduct a large part of educational contributions from the tax for increasing the resources allocated for education. Moreover, Turkey ought to improve the market mechanism towards economic development; entrepreneurial individuals should be raised. It can also be thought that increasing educational expenditures within the frame of EU harmonization policies can positively contribute to the economic development of country.

References

- Ak, R., & Ak, B. B. 2010. Eğitim-Büyüme İlişkisi Yazını Üzere Bir Değerlendirme. 8. Uluslararası Bilgi Ekonomi ve Yönetim Kongresi, İstanbul Üniversitesi, ss:153-165.
- Akıncı, A. 2017. Türkiye’de Eğitim Harcamalarının Ekonomik Büyüme Üzerine Etkisi. Maliye Dergisi, 173, ss:387-397.
- Babalola, J. B. 2015. Fundamentals of Economics of Education. Basic Text in Educational Planning, Ibadan: Department of Educational Management, University of Ibadan, pp:127-191.
- Barro, R. J. 2013. Education and Economic Growth. Annals of Economics and Finance, 14(2), 301-328.
- Baş, K. 2004. Türkiye’de Zorunlu Eğitim Süresinin Arttırılmasının Sağlayacağı Kazançlar. Ankara Üniversitesi SBF Dergisi, Cilt: 59, Sayı: 03, ss:21-43.
- Bouhari, M. & Soussi, M. 2017. About Relationship Between Education, Investment and Growth: Identification and Causality for 5 MENA Countries – (Algeria-Egypt-Morocco-Tunisia and Turkey). Business and Economics Journal, Vol: 8, Issue: 2, pp:1-13.
- Çağlar, A. 2017. Eğitimin Toplumsal Fayda Üzerine Etkisi. Akademik Sosyal Araştırmalar Dergisi, Yıl: 5, Sayı: 52, Eylül 2017, s. 317-339.
- Çakmak, Ö. 2008. Eğitimin Ekonomiye ve Kalkınmaya Etkisi. D. Ü. Ziya Gökalp Eğitim Fakültesi Dergisi 11, ss: 33-41.
- Erdem, E. & Tuğcu, C. T. 2010. Higher Education and Economic Growth: An Empirical Investigation of Cointegration and Casulaty for Turkish Economy. Erciyes Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi, Sayı: 36, pp:1-14.
- Eriçok, R. E. & Yılandı, V. 2013. Eğitim Harcamaları ve Ekonomik Büyüme İlişkisi: Sınır Testi Yaklaşımı. Bilgi Ekonomisi ve Yönetim Dergisi, Cilt: VIII, Sayı: I, ss: 87-101.

- Gök, F. 2007. The History and Development of Turkish Education. (online) <http://www.srii.org/content/upload/documents/68cee78c-6f0a-4d49-843e-c573d9847eb5.pdf>, Date of Access: 11.09.2019.
- Gökçe, A. T. 2018. Türk Eğitim Sisteminde 2000’li Yıllarda Gerçekleşen Yapısal Değişimler. (çevrimiçi) <https://www.academia.edu/36398691/> , Erişim Tarihi: 11.09.2019.
- Grimaccia, E & Lima, R. 2013. Public Expenditure on Education, Education attainment and Employment: A Comparison Among European Countries. XXVIII Conference of the Italian Association of Labour Economists (AIEL) Rome, pp:1-18.
- Gumus, S. & Kayhan, S. 2012. The Relationship Between Economic Growth and School Enrollment Rates: Time Series Evidence From Turkey. Educational Policy Analysis and Strategic Research, Vol: 7, No: 1, pp:25-38.
- Güngör, G. & Göksu, A. 2013. Türkiye’de Eğitimin Finansmanı ve Ülkelerarası Bir Karşılaştırma. Yönetim ve Ekonomi, Cilt:20, Sayı: 1, 59-72.
- Gür, B. S. 2011. 2000’li Yıllar: Türkiye’de Eğitim. Meydan Yayıncılık, ISBN:978-605-5952-25-9, İstanbul, (çevrimiçi) https://www.researchgate.net/publication/318495073_2000'li_yillar_Turkiye'de_egitim, Erişim Tarihi: 11.09.2019.
- Karaçor, Z., Güvenek, B., Ekinci, E. & Konya, S. 2017. Relationship With Education Expenditure and Economic Growth in OECD Countries: A Panel Data Analysis. Macroeconomics, 255-270.
- Kaur, H., Baharom, A. H. & Habibullah, M. S. 2014. Linkages Between Education Expenditure and Economic Growth: Evidence From ‘CHINDIA’. E3 Journal of Business Management and Economics, Vol: 5(5), pp:109-119, ISSN:2141-7482.
- Keeley, B. 2007. Human Capital: How What You Know Shapes Your Life. OECD Insights, (online) <https://www.oecd-ilibrary.org/docserver/9789264029095-en.pdf?expires=1568378720&id=id&accname=oid015662&checksum=9F87D7447B78E39DEEE669C50B5C0D66>, Date of Access: 13.09.2019.
- Kılıç, R. 2001. İktisadi Açından Eğitim. Dumlupınar Üniversitesi Sosyal Bilimler Dergisi, 5, 1-15.
- Kızılloluk, H. 2007. Ekonominin Eğitimin Amaçları ve İçeriği Üzerindeki etkileri. C. Ü. İktisadi ve İdari Bilimler Dergisi, Cilt 8, Sayı 1.
- Kouton, J. 2018. Education Expenditure and Economic Growth: Some Empirical Evidence From Cote d’Ivoire. Journal of Economics and Sustainable Development, 9(14), 22-36.
- Machin, S. 2008. The New Economics of Education: Methods, Evidence and Policy. Journal of Population Economics, 2,1-19.
- Mallick, L., Das, P. K. & Pradhan, K. C. 2016. Impact of Educational Expenditure on Economic Growth in Major Asian Countries: Evidence From Econometric Analysis, Theoretical and Applied Economics, Vol: XXIII, No: 2(607), 173-186.
- Mekdad, Y., Dahmani, A. & Louaj, M. 2014. Public Spending on Education and Economic Growth in Algeria: Causality Test. International Journal of Business and Management, II (3),55-71.
- Mercan, M. & Sezer, S. 2013. The Effect of Education Expenditure on Economic Growth: The Case of Turkey. 2nd World Conference on Business, Economics and Management-WCBEM2013, procedia-Social and Behavioral Sciences 109 pp:925-930.
- MEB, 2019. Milli Eğitim İstatistikleri, Örgün Eğitim 2018-2019.

- Miller, R. 2008. Education and Economic Growth: From the 19 th to the 21st Century, Cisco Public, (Online)
https://www.cisco.com/c/dam/en_us/solutions/industries/docs/education/Education-and-Economic-Growth.pdf, Date of Access: 26.08.2019.
- Owings, W. A., Kaplan, L. S. & Pırım, Z. 2012. Education As A Investment in Turkey's Human Capital: A Work in Progress. *Eurasian Journal of Business and Economics*, 5(10), pp:45-70.
- Özsoy, C. 2009. Türkiye'de Eğitim ve İktisadi Büyüme Arasındaki İlişkinin Var Modeli İle Analizi. *The Journal of Knowledge Economy & Knowledge Management* 2009, Vol: IV Spring.
- Öztürk, N. 2005. İktisadi kalkınmada Eğitimin Rolü. *Sosyoekonomi*, 2005-1.
- Rambeli, N., Ramli, B., Hashim, E. & Marikan, D. A. A. 2016. Relationship Between Education Expenditure, Capital, Labor Force and Economic Growth in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, Vol: 6, No:12, 459-469.
- Savaş, V. F. 2007. İktisadın Tarihi. Siyasal Yayınevi, Ankara, 5. Baskı.
- Serin, N. 1979. Eğitim Ekonomisi. Ankara Üniversitesi Eğitim Fakültesi Yayınları, No: 77.
- The World Bank, 2019. (online)
<https://databank.worldbank.org/reports.aspx?source=2&country=TUR#>, Date of Access: 29.09.2019.
- Turan, G. 2016. Türkiye'de Yüksek Öğretim ve Ekonomik Büyüme. *Çimento İşveren Dergisi*, Cilt. 30, No. 1, ss. 8-17.
- UNESCO, 2010. World Data on Education. (online)
<http://www.ibe.unesco.org/sites/default/files/Turkey.pdf>, Date of Access: 11.09.2019
- Yenisu, E. 2018. Türkiye'de Eğitim Düzeylerinin Ekonomik Büyümeye Etkisi. *Doğu Anadolu Sosyal Bilimlerde Eğitimler Dergisi*, 2/1.
- Zivengwa, T. at all. 2013. Investigating The Causal Relationship Between Education and Economic Growth in Zimbabwe. *Asian Journal of Humanities and Social Studies*, Vol: 01, Issue: 05
- Woessmann, L. 2014. The Economic Case for Education. EENEE Analytical Report No:20, Prepared for the European Commission.