

## The main determinants affecting economic growth

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**Abstract:** *Growth theories highlight the evolution and trends in economic thought that shaped the way economic growth is perceived. From the early works of Adam Smith and Malthus to the present day researchers have tried to find the most important determinates that influence growth by formulating new and improved theories and models. In this article we try to offer our point of view in the evolution of the main factors that have an impact on economic growth. There is still not a consensus on the key determinants of growth and an all-encompassing model that includes all the influences has not yet been elaborated.*

**Key-words:** *economic growth, public expenditure, growth theory*

### 1. Introduction

Economic growth theories and models highlight the different ways in which the present economic activity can have an influence on future economic developments and can also identify sources that may lead to continued economic growth. Researchers and economists reaffirm the need for economic growth for the evolution and well being of the human race. The economic growth theories have evolved over time depending on the period and on the dynamics of economy. Also improvements in mathematical and statistical tools have had a significant impact in formulating new concepts.

Why do we need economic growth? What are the main factors that foster growth? Many researchers, economists and Nobel Prize winners tried to answer these questions. Economic growth can be considered a main factor in the well being and prosperity of billions of people. Industrialization and advances in technology has left a gap between developed countries and poorer ones. For example now, in the 21<sup>st</sup> century the GDP/capita of many poorer countries is lower than the GDP per capita of Europe in the 19<sup>th</sup> century. Economic growth was a pinnacle of the 20<sup>th</sup> century that insured the development of the Western World and improved for many people the leaving standards.

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## **2. The economic growth concept**

Denison (1962) affirmed that economic growth is the increase of real GDP or GDP per capita, an increase of national product that is measured in constant prices.

Economic growth is influenced by direct factors like for example human resources (increasing the active population, investing in human capital), natural resources (land, underground resources), the increase in capital employed or technological advancements. Economic growth is also influenced by indirect factors such as institutions (financial institutions, private administrations etc.), the size of the aggregate demand, saving rates and investment rates, the efficiency of the financial system, budgetary and fiscal policies, migration of labour and capital and the efficiency of the government.

There are four major determinants of economic growth: human resources, natural resources, capital formation and technology, but the importance that researchers had given each determinant was always different. Renowned economists provided, over time, the most basic ingredients which appear in modern theories of economic growth.

## **3. Determinants of economic growth**

The determinants of economic growth are inter-related factors influencing the growth rate of an economy. There are six major factors that determine growth with four of them being grouped under supply determinants and the other two are efficiency and demand.

The four supply factors are natural resources, capital goods, human resources and technology and they have a direct effect on the value of goods and services supplied.

Economic growth measured by GDP means the increase of the growth rate of GDP, but what determines the increase of each component is very different. Public expenditure, capital formation, private or public investment, employment rates, exchange rates etc. have different impacts on economic growth and we should take into account that these determinants have different implications if the states are developed or not. There are also socio-political factors and events that have a major influence on the economic advancement of a country.

There are also differences between economic and non-economic determinants. “Proximate” or economic determinants refers to factors like capital accumulation, technological progress, labour and “ultimate” or non-economic sources refers to factors like government efficiency, institutions, political and administrative systems, cultural and social factors, geography and demography (Acemoglu, 2009).

### 3.1. Public expenditure

There are many conflicting views regarding the effects of public expenditure on economic growth. Ghosh and Gregoriou (2008) and Benos (2009) had different outcomes even if they used the same methodology (the generalized method of moments). Ghosh and Gregoriou (2008) showed that the current component of public spending had a significant and positive effect on growth for a sample of 15 developing countries. Meanwhile, Benos (2009) affirmed that infrastructure and human capital had a significant effect on long-run growth for a group of 14 EU states.

Lamartina and Zaghini (2008), Arpaia and Turini (2008), Szarowská (2012), tested the link between public spending and economic growth using the Wagner's law. For example the results of the analysis made by Lamartina and Zaghini (2008) confirmed Wagner's theory, because the public expenditure elasticity coefficient compared to GDP takes values above par. The analysis also concludes that the expected long-term elasticity coefficient values are higher in countries with lower GDP per capita, suggesting an attempt to realize economic development funded by the state.

Szarowská (2012) analyzed the direct link between public spending and output (GDP) in short and long-term for Bulgaria, Czech Republic, Hungary, Romania and Slovakia and also investigated if public spending is countercyclical. Her results reject the countercyclical effect of the two variables. Many recent papers for OECD, developing countries, Latin America showed that contrary to the theory, public spending is pro cyclical (Alesina et al. 2008; Abbott and Jones, 2011).

The literature also emphasized the importance of education on growth. We consider that a grate contribution to this subject was made by researchers like Barro (1991), Sala-i-Martin et al. (2004). Also education is a key measurement tool and proxy for the quality of human capital in the sense that educated and skilled workers can have an important contribution to production and growth.

Benoit (1978), Pieroni (2009), Ho and Chen (2014) investigated the influence of military spending on economic growth. Many researchers concluded that defence spending has a negative effect on growth. Benoit (1798) was the pioneer in his field and found that for less developed states military spending had a positive effect on economic growth. The assumption that this component of public spending can have a positive effect depends on the samples, the different theoretical specifications and the time period. McDonald and Eger (2010) affirmed that defence expenditure had a small or rather insignificant effect on economic growth. On the other hand Pieroni (2009), Ho and Chen (2014) concluded that military expenditure has a negative influence on economic growth.

Boldeanu and Tache (2015) analysed for 30 European countries the correlation between public spending and growth using the COFOG methodology. They disaggregated each component of public expenditure into their sub-classification and used 3 statistical methods for analysis the impact of public

spending on growth. The results showed that most of the government expenditures had a negative impact on economic growth.

### **3.2. Trade components and FDI**

There are numerous research papers that analyzed the link between FDI and trade components (exports, imports openness, trade restrictions) and growth. A big number of papers have shown that states that have economies open to trade have higher per capita GDP and grow much faster (Romer, 1990; Barro, 2003).

Tekin (2012) found that a raise in exports has a positive effect on growth. Sultan and Haque (2011) and Simuț and Meșter (2014) determined a long-term and direct influence between some trade determinants on economic growth. Simuț and Meșter (2014) identified a direct correlation and causality between exports, openness and economic growth for 10 East European states and Sultan and Haque (2011) found that there is a long-run relationship between exports and growth for India.

The influence of trade on economic growth in the Middle East has been analysed by many researchers. AL- Raimony (2011) investigated the relationship between real export and real import growth and economic growth in Jordan. He concludes that real export growth positively affects growth, while real import growth negatively affects economic growth. In 2014 Abu-Eideh analyzed real domestic exports and imports of goods and services and how they affect real gross domestic product in Palestine (Abu-Eideh 2014). He stated that real domestic exports have a positive impact on growth in Palestine while real domestic imports a negative one.

Openness can have an important influence on economic growth through a multitude of different channels like through technological transfers, competitiveness advantage and increase in economies of scale (Chang et al. 2009). Edward (1992) showed that trade openness has a favourable effect on real GDP and that trade liberalization will accelerate economic growth and countries will be capable to enter more easily foreign markets. Ynikkaya (2003) also analyzed the influence of trade openness on growth for 120 countries between 1970 and 1997. He used several variables to measure openness like for example volume of exports, volume of imports, the sum exports and import and the volume of trade with developed countries. He also used trade policy variables for measuring restriction or openness of trade. The result concluded that for developed and developing states the indicators that measure the volume of trade have a positive effect on growth. An interesting result in our opinion is that trade restrictions have the effect of accelerating growth of GDP for developing countries.

Malešević-Perović et al. (2014) investigated the correlation between trade openness and financial openness and economic growth. The results confirm that trade openness and financial openness (FDI) have a significant impact on growth and also that institutional openness is affecting indirectly the economy via trade and

FDI. Mihuț and Luțaș (2014) also found that for the 12 new EU member state, the degree of openness and human capital are positively correlated with economic growth.

In the literature there are also contradictions with the above results regarding openness (Rodriguez and Rodrik, 1999). Singh (2011) concluded that for Australia he obtained a negative impact of imports on economic growth and Ahmad and Kwan (1991) found that for 47 African states there is no link between trade and growth.

Li and Liu (2005) investigated the role of FDI on economic growth for a large sample of countries that are both developing and developed. The results conclude that FDI directly and positively influences growth. The findings of other researchers in the beginning of the 2000s demonstrated that FDI may have a positive link between it and economic growth (Lensink and Morrissey, 2006).

FDI inflows have a positive impact on the economy and can accelerate the rhythm of economic growth especially in developing countries (Johnson 2006). By enabling positive externalities like the diffusion of know-how and new technology, FDI can have a direct impact in the sectors in which these funds were allocated, but also an indirect impact on the whole productivity in the economy (de Vita and Kyaw, 2009).

### 3.3. Non-economic determinants

We mentioned at the beginning of the chapter that “ultimate” determinants refer to factors like government efficiency, institutions, political and administrative systems, cultural and social factors, geography and demography.

Arusha (2009) tested the role of governance on economic growth for 71 developed, developing and transition countries between 1996 and 2003. He demonstrated that countries with high governance grow faster compared with those with weak governance.

An important determinant in the literature is the state institutional framework. The role of institutions was starting to be acknowledged with the seminal work of Lewis (1955) and afterwards by Ayres (1962) and after the beginning of the 90s with research done by Mauro (1995), Rodrik (1999), Acemoglu et al. (2002).

Rodrik (2000) stated that five kind of institutional frameworks (property rights, regulatory institutions, institutions for macroeconomic stabilization, institutions for social insurance and institutions of conflict management) can have a direct outcome on growth and on other determinants of economic growth.

Murphy et al. (1993), Mauro (1995) state that corruption tends to have a negative effect on growth by affecting innovation and other start up activities and may reduce productivity. In the case of innovation, corruption can limit the new entrepreneurs to enter the market. The enterprises that have to pay a big amount of money for bribes tend to reduce their production and also distort their figures (Svensson, 2003).

Shera et al. (2014) determined the impact of corruption on economic growth for 22 developing countries, former socialist states in the Balkans, East and Central Europe and Asia. The results of their study demonstrated that corruption had statistical significance and a negative influence on economic growth.

In contrast to studies in which corruption is viewed as an inhabitant to economic growth, there are papers that consider that corruption can be beneficiary because it can make the economy more efficient and facilitate for investors a way to pass more restrictive and established rules (Acemoglu and Verdier, 2000; Kaufman and Wei, 2000) considered that in certain circumstances corruption can have a lubrication effect on growth.

Political factors like political regimes, political instability, civil freedom, the perception of politics play also an important role in fostering economic growth and (Lensink et al., 1999). Political instability has a negative effect on companies and their wiliness to invest, can create violence and anarchy in the society and in the end can have serious consequences on economic growth.

Aisen and Veiga (2013) investigated the negative effects of higher degrees of political instability on economic growth for 169 countries from 1960 to 2004. The channels of transmission through which political instability affects economic growth are productivity, physical and human capital accumulation. Also democracy may have a small negative effect on economic growth. Empirical literature is still ambiguous relating the significance of democracy in foster economic growth. It may have a negative or not a significant influence on growth.

Socio-cultural factors also have an important role on economic growth. Ethic diversity and fragmentation, language, religion, civic norms, beliefs are among the socio-cultural determinants that may have an effect on economic growth (Acemoglu, 2009).

Ethnic diversity may have a negative impact on growth by reducing trust. It can have a negative effect on education (low schooling), political instability, underdeveloped financial system, high public deficit, underdeveloped infrastructure.

The importance of geography on growth has been well researched. After World War II there was a surge in the empirical analysis of geography. Braudel (1981-1984), Crosby (1986) and Diamond (1997) analyzed the impact of geography and climate change in Europe and its dominance over the colonies. North-Atlantic and Mediterranean Europe were the creative centres of the world after the Middle Ages ended.

Acemoglu (2009) affirmed that geography can affect in many ways economic growth. Soil quality can have an influence on agricultural productivity. Natural resources directly contribute to the industrialization of a country by essential components for production. Climate has a direct impact on production and attitudes regarding consumption. The topography of a region or state can have a positive or negative impact on transport costs and on communication. And not least, diseases can affect health care, production and the accumulation of human and physical capital.

#### 4. Conclusions

The study of the economic growth theory is a very complex process that evolved in many decades and centuries. We highlighted the main factors that can determine the economy ranging from public expenditure, openness and foreign direct investment or non-economic. We have to mention that there are many more determinants that are refined and disaggregated to be used into new and advanced models of economic growth. Also as mathematical and statistical models and tests are produced, the old assumptions have to be retested and if differences occur the theory has to be modified.

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