Volume 14, Issue 9 [September 2025] PP: 144-147

# The Contribution of Investments to Economic Development

# Christos I. Karnavas

BSc Mathematics, MSc Entrepreneurship, Innovation and Development, MSc Applied Mathematics,
PhD in Planning and Regional Development
Department of Planning and Regional Development Engineering
University of Thessaly, Volos, Greece

**ABSTRACT**. This paper will present the concepts of development, economic development and economic growth and how investments contribute to economic development.

KEY WORDS: Investment, Economic Development, Economic growth, Gross Domestic Product

Date of Submission: 15-09-2025 Date of acceptance: 30-09-2025

#### I. INTRODUCTION

#### 1.1 The concept of development

The concept of development often follows other concepts, such as economic, social, cultural, technological, etc. Most often, the references concern economic development, which is linked to or mutually influenced by other forms of development, and any change in economic development can "lead" them to a similar change. Businesses, as they operate in an intense competitive environment, especially as the market has developed today, are forced to make investments, of smaller or larger scale, thus contributing to the economic development of the country.

### II. LITERATURE REVIEW

# 2.1 The concept of economic growth and economic development

The two main terms that are usually used in the literature to define the concept of development are "economic development" and "economic growth". According to common perception, economic development is often identified with economic growth and for this reason the following distinction is made: Economic growth shows a positive change in the economic figures of a region and mainly an increase in the product produced. Economic growth is usually determined by the change in the product produced or the income of a regional or national economy. Usually, the identified variable used for the quantitative expression of growth is the Gross Domestic Product (GDP), while the real value of GDP is used to calculate growth, which results if inflation is subtracted from the nominal value.

If Y is the real GDP of a region and t is the time, then the annual growth rate can be calculated from the relationship (Polyzos, 2017):

$$g = \frac{Y_t - Y_{t-1}}{Y_{t-1}} \tag{2.1}$$

The rate of economic growth of an economy has a very important long-term significance for the well-being of its residents and their income.

Economic growth does not necessarily mean ensuring social well-being. Usually, economic progress and the consequent increase in income and individual wealth improve the level of well-being. On the other hand, increasing income can lead to overconsumption, waste of natural resources, environmental pollution and ultimately to a deterioration in the real standard of living. In addition to income, there are other, mainly qualitative, factors that should be considered to determine the level of well-being. Economic development differs from economic growth, because it is not only the production of more output. It is a complex process, which in addition to increasing production, includes structural economic changes of a more permanent nature as well as changes in the institutional, technological, social and political framework within which the product is produced and distributed. Such changes include the relative decrease in the participation of the agricultural sector with a parallel relative increase in the participation of the processing and service sectors in the national product, the introduction of more efficient production techniques and methods, the improvement of the quality of life, the improvement of the conditions of income distribution, the participation of the population in the processes of economic development, etc.

These changes lead to an improvement in the efficiency of the economy, and a cumulative and self-sustaining increase in real income per capita. Furthermore, economic development refers to the creation of economic and social conditions that allow the integration of the individual's personality and the collective activities of a society (Polyzos, 2017). The intended economic development, in addition to its overall quantitative size, must include as its basic the term "balanced development". "Balanced development" is defined as that development that does not direct developed regions to develop at a faster rate than those of less developed ones. On the contrary, it helps regions that are in a relatively more difficult position to improve their relevant indicators at a rate greater than that of developed ones.

## 2.2 Investment and Economic Development

Given that the increase in product production comes from the expansion of investments, in conclusion economic development and investments are concepts inextricably linked to each other. The benefits of increased output through investment, over time, spread throughout the economy, creating jobs and increasing incomes for the poorest segments of the population. The impact of investment on economic growth depends largely on human resources, the volume and quality of circulating capital, existing natural resources, technology, economic and scientific progress, the level of organization of production and labor, as well as foreign trade. Public investment also contributes to economic growth by providing the public goods that are necessary for it. These expenditures complement private investment and tend to have a positive effect on economic growth. In the long run, investment is important for improving productivity and increasing the competitiveness of the economy.

According to neoclassical theory and the theory of endogenous growth, investment is the most basic factor of economic growth. The importance that these theories attach to investment has led to a huge number of empirical studies examining the relationship between investment and economic growth (Kormendi & Meguire, 1985; De Long & Summers, 1991; Lenive & Renelt 1992; Mankiw, 1992; Auerbach et al., 1994; Barro & Sala i Martin 1995; Sala i Martin, 1997; Easterly, 1998; Bond et al., 2001; Podrecca & Carmeci, 2001). However, the findings are not conclusive (Artelaris et al., 2007). A key factor in long-term economic growth is technological progress. Research by Romer (1986) and Lucas (1988) shows that the main sources of economic growth are new knowledge (Romer, 1990; Grossman & Helpman, 1991), innovation (Aghion & Howitt, 1992) and public infrastructure (Barro, 1990).

Theories of endogenous growth emphasize the importance of investments in innovation and activities related to research and development (R&D), as they increase productivity, contribute to the creation of new products and lead to economic growth. Research has shown a strong correlation between innovation/R&D and economic growth (Lichtenberg, 1992; Ulku, 2004). Investments in human resource training produce specialized and more productive labor and are a key cause of economic growth in the various endogenous growth models. Studies demonstrate a correlation between human capital and educational variables (e.g., school enrollment rates, mathematics and science test scores, etc.) (Barro, 1991; Mankiw et al., 1992; Barro & Sala i Martin 1995; Brunetti et al., 1998; Hanushek & Kimko, 2000). Other studies dispute these results (Topel, 1999; Krueger & Lindahl, 2001; Pritchett, 2001).

Development policies through investments in human capital and infrastructure affect various aspects of the economy. Various studies have studied the relationship between development policies and economic growth (Barro, 1991,1997; Fischer, 1993; Easterly and Rebelo, 1993; Barro & Sala i Martin 1995), however, there is no consensus on which policies lead to economic growth. The impact of foreign direct investment on economic growth depends on the level of technology of the domestic economy, economic stability, government investment policy and the degree of openness of the economy (Borensztein et al, 1998; Hermes & Lensink, 2000; Lensink & Morrissey, 2006).

Foreign direct investment (FDI) contributes significantly to the internationalization of the economy and plays a key role in economic growth. (Borenstein et al., 1998; Hermes & Lensnik, 2000; Lensink & Morrissey, 2006). They also increase the productivity of the domestic economy, change its comparative advantage and contribute to the economic development of a country because they tend to be more productive than domestic investments (Dritsakis, et al., 2014). "Kok & Acikgoz Ersoy (2009), in their research, state that the interaction of foreign direct investments (Foreign Direct Investments, FDI) with the economic progress of developing countries is significantly positive, while the interaction of FDI with total debt service / GDP and inflation is negative."

At an empirical level, however, most macroeconomic studies conclude that there is a positive and statistically significant relationship between foreign investment and economic growth (Findlay, 1978, De Gregorio, 1992, Blomstrom et al., 1994, Sanchez & Robles, 1998, Baldwin et al., 1999, Zhang, 2001, Bende-Nabende & Ford, 1998, Vu & Noy, 2009). While Borenstein, De Gregorio & Lee (1998), "point out the positive relationship between foreign direct investment inflows and economic growth, which is associated with the achievement of a minimum level of human capital development". Also noteworthy are the studies by Kyrkilis, et al, (2012a, 2012b) on the determinants of FDI in the Eurozone and Greece in particular, but also on the relationship between economic growth and FDI in Europe and Asia, by Moudatsou & Kyrkilis (2011).

Theoretically, gross investments affect economic growth directly, by increasing the stock of physical capital in the economy (Plosser, 1992), and indirectly, by promoting technology (Levine & Renelt, 1992). Tyler (1981) examined a sample of 55 middle-income developing countries and concluded that exports and gross investment are the most important determinants of economic growth. Khan & Kumar (1997) showed that the effects of private and public investment on growth differ significantly, with private investment being more productive than public investment. Knight, et al (1993) and Nelson & Singh (1994) showed that public investment had a significant effect on growth in the 1980s. Easterly and Rebelo (1993) estimated a positive correlation between public investment in transport and telecommunications and growth. Dritsakis (2004) studied the existence of a relationship between exports, investments and economic growth for Greece during the period 1960-2002. The tests showed the existence of a causal relationship between exports and investments as well as between foreign direct investments and the rate of change of economic growth.

## III. CONCLUSIONS

In conclusion, investments under one perspective expand and improve the economic performance of private capital, therefore improve the productivity of the regional and national economy and to a small or large extent contribute to economic growth.

#### REFERENCES

- [1] Aghion, P., Howitt P., (1992) "A model of Growth Creative Destruction", Econometrica, 60(2), 323-351
- [2] Artelaris, P., Arvanitidis, P., Petrakos, G., (2007) "Theoretical and methodological study on dynamic growth regions and factors explaining their growth performance", Paper presented at the 2nd Workshop of DYNREG in Athens, 9-10 Mach.
- [3] Auerbach, A., Hassett, K., Oliner, S., (1994) "Reassessing the social returns to equipment investment", Quarterly Journal of Economics, 109, 789-802.
- [4] Barro, R., Sala-i-Martin, X., (1995) Economic Growth, New York, McGraw-Hill.
- [5] Barro, R., (1990) "Government Spending in a Simple Model of Endogenous Growth", Journal of Political Economy, 98, S103-S125
- [6] Barro, R., (1991) "Economic Growth in a Cross Section of Countries", Quarterly Journal of Economics, 106(2), 407-443.
- [7] Bende-Nabende, A., Ford, J.L., (1998) "FDI, policy adjustment and endogenous growth: Multiplier effects from a small dynamic model for Taiwan", 1959–1995. World Development, 26(7), 1315-1330
- [8] Blomstrom, M., Lipsey, R.E., Zejan, M., (1994) "What explains the growth of developing countries?", Convergence of productivity: Cross-national studies and historical evidence, 243-59
- [9] Borensztein, E., De Gregorio, J., Lee, J., (1998) "How does foreign direct investment affect economic growth?", Journal of International Economics, 45, 115-135
- [10] Brunetti, A., Kisunko G., Weder, B., (1998) "Credibility of Ruler and Economic Growth: Evidence from a Worldwide Survey of the Private Sector", The World Bank Economic Review, 12(3), 353-384.
- [12] Fisher, A., (1939), "Production, Primary, secondary and Tertiary", The Economic Record, 15(10), 24 38
- [13] Dritsakis, N., (2004) "A causal relationship between trade, foreign direct investment and economic growth of Greece", American Journal of Applied Sciences 1: 230-235
- [14] Easterly, W., Rebelo, S., (1993) "Fiscal policy and economic growth: an empirical investigation", Journal of Monetary Economics, 32(3), 417-458
- [15] Easterly, W., Rebelo, S., (1993) "Fiscal policy and economic growth: an empirical investigation", Journal of Monetary Economics, 32(3), 417-458.
- [16] Findlay, R., (1978) "Relative backwardness, direct foreign investment, and the transfer of technology: a simple dynamic model", The Quarterly Journal of Economics, 1-16
- [17] Grossman, G., Helpman, E., (1991) Innovation and Growth in the Global Economy, MIT Press, Cambridge, Mass
- [18] Hanushek, E., Kimko, D., (2000) "Schooling, Labor-Force Quality and the Growth of Nations", American Economic, 90, 1184-1200
- [19] Hermes, N., Lensink, R. (2000) "Foreign direct Investment, financial development and economic growth", Journal of Development Studies, 40(1), 142-163
- [20] Khan, M., Kumar, M., (1997) "Public and private investment and the growth process in developing countries", Oxford Bulletin of Economics and Statistics, 59, 69-88
- [21] Knight, M., Loyaza, N., Villanueva, D., (1993) "Testing the neoclassical theory of economic growth", IMF Staff Papers, 40, 512-541
- [22] Kok, R., Acikgoz Ersoy, B., (2009) "Analyses of FDI determinants in developing countries", International Journal of Social Economics, 36(1/2), 105-123
- [23] Kormendi, R., Meguire, P., (1985) "Macroeconomic determinants of growth: cross-country evidence", Journal of Monetar Economics, 16(4), 141-163.
- [24] Krueger, A., Lindhal, M., (2001) "Education for Growth: Why and for Whom?", Journal of Economic Literature, 39(4), 1101-1136
- [25] Kyrkilis, D., Pantelidis, P. & Nikolopoulos, E., (2012b) "Inward FDI flows to Greece: Evidence and determinants", Journal of International Business & Finance, 4(2), 185-195
- [26] Lensink, W., Morrissey, O., (2006) "Foreign Direct Investment: Flows, Volatility and the Impact on Growth", Review of International Economics, 14(3), 478-493.
- [27] Levine, R., Renelt, D., (1992) "A sensitivity analysis of cross-country growth regressions", The American Economic Review, 942-963.
- [28] Lichtenberg, F., (1992) "R&D Investment and International Productivity Differences", NBER Working Paper, No 4161
- [29] Mankiw, N., Romeo, D., Weil, D., (1992) "A Contribution to the Empirics of Economic Growth", Quarterly Journal of Economics 107(2), 407-437
- [30] Moudatsou, A., Kyrkilis, D., (2011) "FDI and Economic Growth: Causality for the EU and ASEAN", Journal of Economic Integration, 554-577
- [31] Nelson, M., Singh, R., (1994) "The deficit growth connection: Some recent evidence from developing countries", Economic Development and Cultural Change, 43, 167-191
- [32] Plosser, C. I., (1992) "The search for growth", In A Symposium Sponsored by The Federal Reserve Bank of Kansas City, Policies for Long-Run Economic Growth (pp. 57-86).

- [33] Podreca, E., Carmeci, G., (2011) "Fixed Investment and Economic Growth: New results on Causality", Applied Economics, 33, 177-182
- [34] Pritchett, L., (2001) "Where has all the education gone?", World Bank Economic Review, 15, 367-391
- [35] Romer, P., (1986) "Increasing Returns and Long Run Growth", Journal of Political Economy, 94(2), 1002-1037.
- [36] Romer, P., (1990) "Endogenous Technological Change", Journal of political Economy, 98(5), S71-S102.
- [37] Sala-i-Martin, X., (1997) "I Just Ran Two Million Regressions", American Economic Review, Papers and Proceedings, 87(2), 178-183.
- [38] Sanchez & Robles, B., (1998) "Infrastructure investment and growth: some empirical evidence", Contemporary Economic Policy, 16(1), 98-108.
- [39] Πολύζος, Σ., (2017) Περιφερειακή Ανάπτυξη, Εκδόσεις Κριτική, Αθήνα
- [40] Topel, R., (1999) "Labor Markets and Economic Growth", in Ashenfelter O. & Card D. (eds). Handbook of Labor Economics, Elsevier, Amsterdam, 2943-2984
- [41] Tyler, W., (1981) "Growth and export expansion in developing countries: Some empirical evidence", Journal of Development Economics, 9, 121-310
- [42] Ulku, H., (2004) "R&D Innovation and Economic Growth: An Empirical Analysis", IMF Working Paper 185.
- [43] Vu, T. B. & Noy, I., (2009) "Sectoral analysis of foreign direct investment and growth in the developed countries", Journal of International Financial Markets, Institutions and Money, 19(2), 402-413
- [44] Zhang, K.H., (2001) "Does Foreign Direct Investment Promote Economic Growth? Evidence from East Asia and Latin America", Contemporary Economic Policy