

## DEVELOPMENT ECONOMICS AND MONEY-CAPITAL RELATIONSHIP

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### ABSTRACT

**Purpose-** In our days, the major problem of developping and/or underdevelopped countries concerning economic development may be stated as insufficient capital accumulation, the limited possibilities of savings and the difficulty of accessing foreign financing channels. In order to realize the production process which is the basic element of economic development, the main factor needed is capital. In this study; some supportive opinions have been proposed for developping and/or underdevelopped countries to attain a satisfactory level of economic development in today's World conditions.

**Methodology-** Based on literature review, especially by the means of increasing savings and using internal channels, some theoretical findings and solutions are proposed for developping and/or underdevelopped countries in the process of capital accumulation and economic development.

**Findings-** The question of why countries differ with respect to income is the major focus for development economics subfield. The answer of that question may be found in the ability to accumulate capital in different countries. Obviously; the rise and fall of capital as a key factor for economic development, depend primarily on technological changes observed after Industrial Revolution and Technological Revolution. In our days; more attention should be given to education, governance, technological advances for developping and/or underdevelopped countries in the content of economic development and growth.

**Conclusion-** In our World which is completely globalized in economic terms; staying underdeveloped for a considerable number of countries should be seen as a problem for developed countries as well. In conclusion; it may be stated that capital accumulation has lost its importance while some other factors including educated human resources, good governance, technological changes have gained priority in the process of economic development. And finally, it may be concluded that sole capital accumulation could not be enough efficient to access these features mentioned above.

**Keywords:** Development economics, capital accumulation, savings, financing channels, production.

**Jel Codes:** O10, O20

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## 1. INTRODUCTION

In our days, the major problem of developing and/or underdeveloped countries concerning economic development may be stated as insufficient capital accumulation, the limited possibilities of savings and the difficulty of accessing foreign financing channels. In order to realize the production process which is the basic element of economic development, the main factor needed is capital. How capital is to be accumulated by the means of internal and external channels and in which areas it is to be spent are critical questions for development economics field. Public savings and private savings are two major sources for internal fund raising. While public savings come mainly from taxes; private savings go parallel with the willingness and capability of people to allocate funds from their income and revenues. In the first part of the article; internal channels are analyzed and then after foreign financing is investigated in the process of economic development especially for developing and/or underdeveloped countries. As high level income is lacking at the starting point, poor countries could not catch up with rich countries because of financing problems. They could not raise funds from private sector by the means of taxation; people could not earn enough money and make sufficient savings. Moreover, because of credibility problems they don't have any access to foreign financing channels.

The main purpose of this study is to contribute on how developing and/or underdeveloped countries may catch up with developed countries in the process of capital accumulation. Especially by the means of increasing savings and using internal channels, some theoretical findings and solutions are proposed for developping and/or underdevelopped countries for fund raising. And finally this study, based on literature review, tries to answer the question of why countries with similar capital accumulation differ in terms of economic development? It tries to focus on other factors apart from capital for economic development.

## 2. LITERATURE REVIEW

After the Industrial Revolution, for a long period of time, there was a conviction that capital accumulation was the most effective and required means for the economic development. However, by the 1980's this idea has been changed and with the lack of technology and appropriate human resources; the accumulated capital could not be effective enough to ensure economic development. In the history; the major factors for production were labor force and land. Together; they have formed the biggest subparts of wealth for a long period of time. This view has been supported by classical economists such as David Ricardo (1772-1823) and Thomas Malthus (1766-1834). After the Industrial Revolution; capital has been evaluated as the primary means for economic growth and development. The fraction of total wealth held in the form of land has declined dramatically in the United Kingdom over the last three centuries. (Deane and Cole, 1969). It was observed a growing importance of capital as a factor of production. (Revell, 1967). Why did capital take the place of land into the production process?

The answer could be found in technological changes such as steam engine by 1760's during Industrial Revolution. This thought reached its peak after World War II. W. Arthur Lewis- Nobel Prize Winner- shared the idea that "the central fact of economic development is rapid capital accumulation". However; some experiences have demonstrated that the view of capital hegemonia for economic development failed. These examples have come mainly from capital injections made to developing countries which could not be able to attain economic development within this stage. For example; by 1980's funds borrowed by Ethiopia from abroad to built factories were spent to purchase arms. Later on, Solow put emphasis on technology instead of capital accumulation for economic growth. He focuses on different technology options that change capital/labor and capital/output ratios for companies. The basic equation of Harrod-Domar emphasizes the savings and investments i.e. capital accumulation requirements for economic development. In other words; capital accumulation is the key factor to reach economic growth. The equation states that there is a fixed and constant relationship between the capital invested (K) and the output obtained (Y) using that capital. After 1990's with the significant advances in technology; the classical view of capital accumulation necessity for economic development has lost importance.

In our days; more attention has been given to educated human resources, technological advances, entrepreneurial skills and corporate institutions for economic development.

## 3. CONTRIBUTION

The question of why countries differ with respect to income is the major focus for development economics subfield. The answer of that question may be found in the ability to accumulate capital in different countries. Although there is a consensus about the need of funds for income generation and economic development; capital should have some characteristics. First of all; it should be productive enough meaning that when it is used; the related output should be more. Secondly; capital should be produced by itself as well. This characteristic is specific to capital while comparing other factors of production. For example; a machinery may be defined as a factor of production but it could not be recreated by itself. However; capital may be invested in some areas and it can be accumulated by the means of different investments. One of the major principle of macroeconomics states that there is a correspondance between investment and saving. If the citizens of a country choose to save in order to generate extra capital in coming times; they give up the satisfaction of current consumption. Another feature of capital may be stated as it can earn a return. If people encounter the opportunity cost of current consumption; then they hope to get a return from their savings in future times. If not; there will be no incentive for people to give up the satisfaction obtained from today's consumption.

One major remedy to increase private savings may be seen as to increase interest rates for bank deposits. For example; The Japanese governments have encouraged citizens to increase their savings voluntarily. However; high interest rates to deposits will cause an increase in the interest rates for loans as well which discourage investors to use them and make investments. While looking at in historical aspect; some countries had tried to solve this financing problem by foreign borrowing in 1970's and 1980's. However; while they could not reach satisfactory economic progress, it is observed that they had encountered high debt and interest burden and paybacks. As a result; two ways were proposed for debt burden reduction for poor countries: 1) to give incentives for capital inflows and 2) to make general macroeconomics environment more stable by trying to encourage economic growth. (Addison, 2008). The observed facts state that borrowed funds should be used in productive investments rather than consumption. The main characteristic of productive investment relies on the income generation in future times. Foreign direct investment is superior to other types of capital inflows in stimulating economic growth. (Nunenkamp and Spatz, 2003). If not, countries may encounter considerable losses during the payback period of loans and could not ensure additional debt to finance future projects. (Krugman, 1988).

On the other hand, if taxation is chosen as the primarily means for fund raising; the economic efficiency and equity should be taken into consideration. The second criteria for tax system should include cost minimization. An economically efficient tax system should be simple, easy to be administrated and controlled. It is observed that rich countries' tax collection rates are higher than developing and/or underdeveloped countries. The reason for that phenomenon may be based on the incapability of controlling and the existence of informal sectors. Foreign direct investment, another source for investment funding especially for developing and/or underdeveloped countries, is very sensitive to tax systems. As multinational fund owners and international companies have a variety of choices for investment locations; they prefer to invest in countries having low rate of tax. However; the rate of taxation could not be taken as a sole criteria for investment decision. Its efficiency and simplicity should be taken into account as well. Moreover, the existence of informal sectors may cause unfair competition in a sector, discouraging multinational firms and fund owners to invest in this type of countries. Another critical issue for taxation is where it is to be spent. If collected taxes are spent in unproductive areas; we encounter two negative aspects: 1) Scarce funds could not be used effectively, creating high opportunity costs for societies and 2) Tax burden may discourage private sector to invest as well. Brazil could be seen an exemple for that fact; although the existence of high tax rates; as funds collected by government were not used in income generating areas; private and public sectors faced with deadweight losses in economic terms.

As it is said before; in the production function, it is observed a direct relationship between capital put into a production process and output obtained at the end of process. The direct relationship between capital and output has constant return to scale. In other words; if capital is tripled, output is also tripled. Within this perspective; it is expected that if capital per worker is increased; the output per worker should be increased by the same amount as well. As it is valid for all other factors of production; the marginal product obtained from an additional unit of capital is decreasing, meaning that capital has also diminishing marginal product. At this point; a new question arises for firms. How much capital should be used for the economic efficiency? Just like in the case of labor; the optimal quantity of capital has to be found where marginal product of capital is equal to rental rate of capital. The rental rate of capital may be defined as the cost of capital per unit. In the Cobb-Douglas production function; a parameter determines how much capital and labor should be used for the production optimization. It is also interesting to note that there is no systematic relationship between capital's share of national income and the level of GDP per capita (Bernanke and Gürkaynak, 2002). On the other hand; the Solow model emphasizes on the determination of capital per worker.

In our days; apart from capital accumulation, more attention has been given to educated human resources, technological advances, entrepreneurial skills and corporate institutions for economic development. The Solow model states that if two countries similar to each other with respect to other factors, make different amounts of spending on education, the country with higher spending will obtain higher economic growth. (Mankiw, Romer and Weil, 1992). In 1960's, a typical employee had to work with intense machinery and equipment; in our days a worker can be more productive with a laptop computer. The problem now is about to be able to produce this computer and to have appropriate labor force to use it in effective ways. Even if; there is a technology transfer from rich countries to poor countries which are not appropriate to use it because of the lack of knowledge or availability of other factors. Today, a new economy has been formed by developments in technology and globalization creating higher levels of productivity compared to traditional economy. Although opposites to globalization focus on its negative effects on developing countries or environment, this process could not be stopped or reversed after this point. Globalization has a positive impact on the international diffusion of knowledge and technology. (Source: IMF, World Economic Outlook, April 2018; "Cyclical Upswing, Structural Change" p: 190).

The question should be as "how globalization should be handled" for the benefit of world economy as Stanley Fisher pointed out (2003). Together with political support, advances in technology has developed a new economy. This process may be used to ensure growth and economic development for developing countries as well. Economic development may be attained by deliberate investment in technology, R&D and human capital.

Paralel to Lucas view (1988); if markets and private sectors underinvest into these fields, governments should undertake the responsibility. Now we encounter a new problem of "governance" i.e. the quality of government. For economic development; especially for developing countries governments should avoid policy distortion such as subsidies, restrictions; struggle against corruption and invest in R&D and human capital.

Creating new technologies requires investment. Developed countries allocate massive resources to research & development (R&D) in a systematic manner. Apart from government; most R&D is realized by private sector which aims to get competitive advantage and maximize profit in global markets.

However; in the field of R&D; governments should primarily provide appropriate legislation to protect R&D studies against copying and imitation. The governments' role may be limited to establish necessary institutions, regulations, infrastructure (human and physical), information access and some compensation for externalities.

If not; as it is observed in the case of Soviet Union, complete governmental entrepreneurship and central planning for economic activities are deemed to collapse. Between 1960 and 1989, huge accumulation of capital (29% of GDP) did not result in productivity growth in Soviet Union. (Easterly and Fischer, 1995). On the other hand, with less capital accumulation (21% of GDP); the United States reached a higher level of productivity.

#### 4. CONCLUSION AND DISCUSSION

In our World which is completely globalized in economic terms; staying underdeveloped for a considerable number of countries should be seen as a problem for developed countries as well. The rise and fall of capital as a key factor for economic development, depend primarily on technological changes observed after Industrial Revolution and Technological Revolution. The issue of technology transfer from rich to poor countries and making them to be able to use it, is crucial in today's economic world because the majority of R&D takes place in developed countries. Obviously; the fall of capital accumulation for economic development and even for economic growth does not show us that it loses totally importance. It may be concluded that today's economical conjuncture values capital accumulation as just one factor of economic development but not the only required one.

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