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The Relationship between Human Development, Exports and Foreign Direct Investments in Emerging Europe

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1 Human development and internationalization of the economy

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1.1 Introduction

Over the past two decades since the collapse of the communist system in the countries of Central and Eastern Europe (CEEC) deep social and economic changes have taken place.[1] Most of the countries in this group can now be considered as advanced economies fully open to international trade and foreign direct investment. The countries that joined the European Union have demonstrated long-term convergence with Western European countries. Although, their development so far has not been uniform, the new EU member states can be described as successful fast-growing economies, especially in comparison with the countries of the former Soviet Union that liberalized and opened their economies to a smaller extent. The uneven pace of transition in Central and Eastern Europe, reflected in the different rates of economic growth and the different strategies with respect to the internationalization of their economies, led to differences in the pace of human development between countries in this region.

The main objective of this book is to analyze the interactions between various aspects of human development and the internationalization of the economy. In particular, we have studied the potential impact of human development on international trade and foreign direct investment (FDI), which in turn may stimulate economic growth and result in an improved quality of life. In our analysis of the relationship between human development and country position in terms of trade and Foreign Direct Investments (FDI) we had to deal with many challenges

The concept of human development goes far beyond the material standards of living as measured by GDP per capita or quantity of consumption per capita. It also includes a number of other elements of quality of life, such as the

1 CEE countries include: Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Mongolia, Poland, Romania, Russian Fed., Slovakia, Slovenia, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan. Several countries were excluded from the analysis because of "instability": Bosnia and Herzegovina, Macedonia, Montenegro, Serbia and Kosovo.

availability and quality of education, inequality of income, access to health care, the scope of civil liberties and issues of gender equality. From the point of view of an economist examining the economic consequences, human development is inextricably linked to investments in human capital. The main difficulty stems from the fact that there is no precise common definition of human development and it is difficult to quantify this phenomenon.

Human development is about creating an environment in which people can develop to their full potential and lead productive, creative lives in accordance with their needs and interests, and thus improving the usage of human capital. This definition of human development is accepted by both liberal and socio-democratic economists and politicians because it is akin to postulating the "equality of chances" for everybody.

In attempting to quantify the economic implications of human development, we utilized a frequently-used measure, the Human Development Index (HDI). We assumed, following the *Human Development Report*, that a prerequisite for a society to be considered as highly-developed is to achieve not only a high level of income but also a high level of education and health. In addition, we assumed that an important element of human development is also a low level of income inequalities and discrimination on gender grounds. Moreover, a highly-developed society should also guarantee its members a high level of civil rights.

The countries of Central and Eastern Europe (CEE) that underwent the transition witnessed multidimensional changes in their levels of human development. These changes were progressive, although in the initial period of transformation there was a clear setback in income level, and in some countries also in the level of education.

The economic transition led to a decline in GDP in all of the countries of the region, ranging from 20 to over 50 percent, depending on the country. The decrease in income was most visible in two groups of transition countries: Southern Europe and the newly independent states arising after the dissolution of the Soviet Union. In the first of these groups of countries, the income indicator used for the construction of the HDI fell in the years 1990-1995, by more than 10%, while in the second group it fell by almost 20%. In the countries of southern Europe, a drop in the education index of about 10 percent was reported. At the same time in the post-Soviet States, a slight decline in life expectancy was also observed.

At the same time, income differences within countries increased and a completely new phenomenon - unemployment - emerged. In the non-market economy job security was guaranteed to all persons of working age, while subsidies for basic goods and social transfers, primarily aimed at retirees, contributed to income equalization and poverty elimination within the society.

Both the education and health care systems were organized and financed by the state and universal access to the healthcare system was without a doubt one of the major achievements of the CEE countries. The state had full control over educational policy and guaranteed universal access to primary and secondary education, however, access to tertiary higher education, was limited due to ideological and financial constraints.

The accumulation of human capital slowed down as a result of a reduction in government spending on social policies. The initial phase of the transformation forced some people to seek access to private health care systems and private tertiary education. However, access to private health care systems and private tertiary education was limited by rising income inequalities. As a result, the erosion of human capital occurred across the region.

The socio-economic situation among the 11 EU new member states (NMS) was slightly better in comparison with other CEE countries.[2] However, even in those countries, spending for social purposes declined as a percentage of GDP. These negative trends were reversed in the late 90s, which coincided with a clear economic recovery in most transition countries. Increasing GDP was accompanied by an increasing share of the state budget being devoted to social spending. With the improving economic situation, the level of human capital in the past 10 years has begun to grow. This has been supported by the stabilization of income distribution and inequality at the levels close to those observed in OECD countries (see ILO 2008).

The starting point for our analysis is that, in the case of transition economy countries, human development is a factor affecting foreign trade and FDI. Certainly, there is a question on the direction of the causal relationship between the openness of the economy and human development. One could argue that the liberalization of international trade and capital flows may affect human development. The opening up to international trade and capital flows from the rest of the world, especially from developed countries, combined with price liberalization and privatization, was one of the foundations of the transition. Therefore, because the integration of the economies of the region into the global economy was relatively recent, while the accumulation of social capital began long before the period of transition, we will examine the impact of human development on trade and FDI and not the other way round.

Moreover, both the accumulation of human capital in the form of a higher quality of education and health and increasing wealth are processes taking place

2 The new member states of the EU include: the Czech Rep., Estonia, Lithuania, Latvia, Poland, Slovakia, Slovenia and Hungary, which joined the EU in 2004, Bulgaria and Romania which joined the EU in 2007, and Croatia which joined the EU in 2013.

slowly and to a smaller extent are shaped in the CEE countries by the current inflow of FDI or trade flows. It should be emphasized that the existence of causality running from the openness of the economy to human development should not cast doubt on our results. The transition countries, in terms of the level of human development, differed from their new foreign partners significantly less than in terms of the internationalization of their economies. Therefore, it can be argued that in the CEE countries human development preceded the opening of their economies.

1.2 The impact of human development on trade and FDI: Literature review

The analysis of the relationship between human development and economic openness is important and no previous studies for transition countries have been made. We attempt to fill the gap existing in the literature by postulating that human indicators may have an impact on international trade and FDI. Before presenting the results of our empirical research for the CEE countries, it is worth reviewing the existing literature on other countries. This will allow us to take a broader perspective on the role of human development in the internationalization processes of the economies of the CEE countries.

1.2.1 Human development and international trade

According to some theoretical models of international trade, human capital is an important factor in determining the pattern of trade flows. Human capital usually refers to the stock of skills and knowledge embodied in the ability to perform labour so as to produce economic value. It includes the skills and knowledge gained by a worker through education and experience. According to Gary Becker (1964), human capital is similar to “physical means of production", such as factories and machines. One can invest in human capital (via education, training, medical treatment) and one's output depends partly on the rate of return on the human capital one owns. Human capital, therefore, directly affects the size of production and, like physical capital, depreciates over time and sometimes specifically, i.e. related to a specific job.

The human capital literature often distinguishes between "specific" and "general" human capital. Specific human capital refers to skills or knowledge that are useful only to a single employer or industry, whereas general human capital (such as literacy), is useful to all employers. Our study is related to the

analysis of general human capital, important for all companies, although in the broader context of human development. In the case of an open economy, on the one hand, human capital can be transferred from abroad by international trade, and on the other, domestic human capital accumulation can encourage exports.

The importance of human capital, usually interpreted in the narrow sense of the level of education and skills, is included in both traditional and new trade theories. A higher level of human capital has a positive effect on the productivity of labour, and thus, also on the competitiveness of firms and sectors, and consequently their ability to export.

The latter relationship is particularly clearly shown in the classical trade theory. According to the theory of David Ricardo, comparative advantage is determined by differences in the productivity of a homogeneous workforce in different sectors of the economy. Differences in productivity – which are exogenously given in the Ricardian theory – may result from the differences in the endowments of physical and human capital. According to this theory, countries export products produced in those sectors of the economy where the relative productivity compared to other countries is higher and import goods produced in sectors with relatively low levels of productivity.

Dornbusch, Fischer and Samuelson (1977) in a more formal model in the Ricardian tradition, extended to many goods, analyzed the relative importance of average levels of labour productivity at a national level for international trade flows. In their model, a higher average level of labour productivity in the country, resulting from physical capital and / or human abundance, leads to lower prices and export growth. Consequently, it leads through the trade balance to relatively higher real wages in the country with the higher level of labour productivity. Thus, labour productivity is the main determinant of both sectorial and bilateral trade flows in the Ricardian model.

Many economists tested the importance of the productivity differences in the Ricardian model as the main determinant of international trade flows. Examples of the early studies include the work of Balassa (1963, 1986) and Horiba (1979). Most of them have shown that in the classical model, sectorial labour productivity has some influence on the export specialization of countries. This result was confirmed by Golub and Hsieh (2000), who conducted a detailed econometric analysis of sectorial and bilateral trade flows between countries.

However, the importance of human capital in the development of international trade cannot be analyzed in a direct way in the Ricardian model because the only variable that is included in this model is the exogenously determined level of sectorial labour productivity. The importance of human capital, as a direct factor determining the size of trade flows, has been included in extensions of the neoclassical trade theory that take into account a larger

number of factors of production. According to the factor abundance theory, the differences in relative factor endowments determine the structure of comparative advantages and affect trade flows. In other words, a country that is relatively rich in one factor should specialize in the production and export of goods that require relatively large amounts of this factor.

In a pioneering study, the empirical validity of the predictions of the Heckscher-Ohlin (HO) model in its most basic form with two factors of production: physical capital and labour, Leontief (1954), obtained a result that contradicted predictions of the theory known in the economic literature as the Leontief paradox. Since then, a number of empirical studies, which verified the importance of the extended neoclassical model by Vanek (1968), took into account a larger number of factors of production, including the role of human capital.

In particular, Leamer (1984) shows that in addition to other factors such as capital, land and raw materials, the supply of skilled labour has a significant impact on the size and structure of international trade in the selected OECD countries. A later study by Bowen, Leamer and Sveikauskas (1987) provided a weak support of the neoclassical trade theory. Trefler (1995) made an alternative test of the Hecksher-Ohlin-Vanek theory, taking into account differences in factors' productivity between countries. His results were more in line with the predictions of the theory in comparison with the results of Bowen, Leamer and Sveikauskas (1987).

In the latest strand of the theory of international trade, mainly represented by the Melitz (2003) model, firms differ in terms of their labour productivity which determines their export decisions. The level of labour productivity may in turn depend on the resources of human and social capital. It can therefore be expected that a higher level of human development is positively associated with higher productivity of human capital and thus can have a positive impact on the productivity of companies and their export decisions. This means that the greater resources of skilled labour may be factors contributing to the increase in exports of heterogeneous firms.

Since the publication of the Melitz (2003) model, numerous empirical studies have been made using firm-level data. In particular, they studied whether higher productivity of labour increases the likelihood of a decision to start exporting. Most of the empirical research confirmed this prediction. The examples include studies by Bernard and Wagner (1997) for Germany, Bernard and Jensen (1999) for the U.S., Clerides and others (1998) for Colombia, Mexico and Morocco, and Castellani (2002) for Italy.

Similar studies for the countries of the Visegrad Group: the Czech Republic, Slovakia, Poland and Hungary, and separately for Poland were made by Cieslik,

Michalek and Michalek (2012 a, b). Their analysis showed that labour productivity was positively related to the probability of exporting.

On the other hand, empirical studies also looked at other factors that could influence the export decisions of companies. They also analyzed other factors affecting export performance. For example, they showed that a higher proportion of skilled workers, as well as a higher percentage of college graduates among the total number of employees increases the probability of exporting, regardless of the sector in which the company operated (EFIGE 2010; Cieslik, Michalek and Michalek 2012 a, b). Therefore, it might be interesting to analyze whether or not a higher stock of human capital in the country can positively affect the export performance of individual companies and entire economies.

1.2.2 Human development and FDI

The recent strand in the literature on FDI brings human capital into the fore. In the international trade theory which endogenizes multinational firms under assumptions of imperfect competition and scale economies in production, the importance of human capital is stressed in vertical FDI models. Zhang and Markusen (1999) focused on skilled labour as one of the main determinants of costs of investing abroad. Although unskilled labour in the assembly process is employed by multinationals, minimal levels of skilled labour must be drawn from the host economy in order to set up a plant abroad. If the relative endowments in skilled and unskilled labour diverge significantly, the scarcity of the skilled labour required to establish a plant in the host economy becomes prohibitive and no FDI takes place.

The results of empirical research are far from clear-cut, which is partly due to the difficulties in gauging, without a measurement error, the level of human capital.[3] Nunnenkamp and Spatz (2003) compiled data from US FDI stocks in 166 countries and found the positive and statistically significant impact of the average years of schooling in both 1995 and 2000. The regression analysis of FDI in 165 countries between 1980 and 1999 in Akin and Vlad (2011) revealed that the relationship between educational attainment and FDI seems to be negative for high income countries but it switches to positive in the middle income group.

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3 For a comprehensive review of the early literature, Miyamoto (2003) is strongly recommended.