

Educational and social preconditions of competitiveness

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HUMAN CAPITAL WITHIN GLOBALIZATION

Introduction

Over the past few years the globalization has become a very popular topic among the economic development practitioners. Despite the fact that in many cases we do not even know what the people mean by the globalization, it is often combined with all economic disasters that the nations and individuals experience on the globe. Among the practitioners, opinion leaders and politicians there is a lively debate over the potential factors and conditions that could make the today globalization process more socially acceptable.

The recent economic literature emphasizes that human capital is crucial factor for high and permanent economic growth and stimulates at the same time positive changes of very areas of an economy. On the basis of recent economic growth theory, human capital theory and debate over globalization the article aims at presenting the human capital acquisition as a source of improving the image of the today globalization from the perspective of the single economy and world economy as a whole.

1. Globalization debate

The nowadays debate over internalization among countries of the world has led to many different interpretations of the globalization. The informal approach identifies it as issues that are universal or typical for the world as a whole¹. The definitions of the globalization in theoretical and empirical studies depend on the scope of analysis. Its economic, social, cultural and political dimensions correspond with different attitudes (issues). In general, the globalization is considered as the ongoing process of diffusion the same standards (economic, political, social, cultural, etc.)² among different countries that throughout the feed-back and inter- relations create the image of the world and well-being of all the people on the globe. Thus, the globalization is complex and multifaceted, and relates to the greater interdependence among the countries and societies of the world³.

Apart from the controversies that evolve around the defining of the economic globalization, it is essential factor that stimulates the rapid changes of the world economy.⁴ Overview of the most representatives definition of the economic globalization allows us to define it as the ongoing process of greater economic interdependence among countries and citizens of the world. It is reflected in the increasing: amount of cross-border trade in goods and services, volume of international financial flows, and flows of labor⁵.

However, any definition of the globalization – that corresponds with turbulent changes

¹ F. Piontek, Sektorowość i integralność kapitału ludzkiego i przyrodniczego w procesie globalizacji a w rozwoju zrównoważonym i trwałym, Kapitał ludzki w procesie globalizacji a w zrównoważonym rozwoju, (edit.) F. Piontek, Akademia Techniczno-Humanistyczna w Bielsku-Białej, Katedra Teorii i Programowania Rozwoju, Wyższa Szkoła Ekonomii i Administracji w Bytomiu, Wisła, 2002, pp. 9-32.

² M. G. Woźniak, Wzrost gospodarczy w Polsce w latach dziewięćdziesiątych. Czynniki. Bariery. Perspektywy, Wydawnictwo AE w Krakowie, Kraków 2002.

³ S. Fisher, Globalization and its challenges, The American economic review, vol. 93, no. 2, 2003, pp. 1-30

⁴ K. Stępień, Konsolidacja a efektywność banków w Polsce, CeDeWu Sp. z o.o., Warszawa 2004, pp. 12.

⁵ S. Fisher, Globalization and its challenges, The American economic review, vol. 93, no. 2, 2003, pp. 1-30; R. Piasecki, Rozwój gospodarczy a globalizacja, PWE, Warszawa 2003.

of the economies, societies and cultures of the nations – does not express the complexity of that process. It is difficult to identify the borderline between the phenomena that are directly connected with greater interdependence among countries and these that are consequences of other development processes. Many threats and opportunities, criticisms and glorifications of the internationalization process of the world economy that are emphasized by the participants of the debate over globalization are true. Many problems of the world corresponds directly with economic dimension of globalization. Many of them relate to non-economic issues⁶ but are not less important aspects of lives of million of people on the globe.

The recent economic literature formalizes two different approaches to the economic globalization⁷.

First approach considers the economic globalization as the next phase of internalization process of the economic activities that was ignited as the result of the geographical discoveries in the 14th century⁸. In effect, it is multidimensional (economy, policy, culture), complex and reflects number of aspects (financial market development, challenges of the international enterprises, etc) and number of different levels (vary scales: world, sector, market).

Second approach perceives the globalization as a new phenomena that has never happened before. Thus, it is difficult to define⁹. According to this approach, the present globalization covers few dimensions, as like financial globalization, globalization of markets and strategies, especially globalization of competition, globalization of technologies, culture, policy decisions making processes, and globalization as the political standardization of the world¹⁰.

The economic development experience from the last few decades provide evidence that both approaches to the globalization process can be accepted.

The nowadays globalization is ongoing process of increasing the interdependence among countries of the world in flows of people, goods and services, financial assets and ideas. It thrived not only after the World War II but in the period before 1914 as well. International trade as the percentage of world GDP rose from less than 5% in 1800 to a peak of 20% at the start of the World War I. The new international economic order that was established after the World War II sought to restore the volume of international trade that was set back by the two world wars and the Great Depression of the 1930's. In effect, the volume of international trade as the percentage of the world GDP in 1973 was back to its 1913 level and has continued to grow almost every year since¹¹.

Although the Bretton Woods system created the background for restoration of international trade in goods and services, its founders did not have the same benign view about intensifying the financial flows¹². Nonetheless, financial flows among the industrial

⁶ P. Ekins, L. Newby, Sustainable wealth creation at the local level in an age of globalization, *Debates and Reviews*, (edit.) W. Danson, Regional Studies, vol. 32, no. 9, 1998, pp. 863 – 877.

⁷ K. Stepień, *Konsolidacja a efektywność banków w Polsce*, CeDeWu Sp. z o.o., Warszawa 2004, pp. 12.

⁸ See e.g.: G. W. Kołodko, 2025: dwie historie gospodarczego rozwoju, article presented at the conference organised by the TIGER ent.: 'Uwarunkowania i perspektyw długofalowego rozwoju społeczno – gospodarczego Polski', WSPiZ, Warszawa, May the 31st 2001.

⁹ See e.g.: R. Piasecki, *Rozwój gospodarczy a globalizacja*, PWE, Warszawa 2003, pp. 73.

¹⁰ A. Farazmand, Innovation in strategic human resource management: building capacity in the age of the globalization, *Public Organization Review*, vol. 4, no. 1, 2004, pp. 3-24.

¹¹ Between 1947 and the first oil shock in 1973, world exports grew at an average annual rate of 8.8 % per year. Between 1973 and 1990 they grew at an annual rate of 4.4%; the growth rate in the 1990's was 7 percent. As a result, the world's market for goods and services are more integrated than ever before, though the pattern is different, with a rise in intra-industry trade, compared with the predominance of inter-industry trade in the earlier period of globalization. [S. Fisher, *Globalization and its challenges*, *The American economic review*, vol. 93, no. 2, 2003, pp. 1-30].

¹² While the founders of the Bretton Woods system saw the restoration of trade in goods and services as essential

countries recovered in the 1950's and continued to grow till the 1970's. International financial flows consisted mainly of bank loans in the 1970's and 1980's but in 1990's they took the form mainly of foreign direct investment. In the 1970's and 1980's they rapidly became too powerful for the pegged exchange-rate system to survive. While the cross-country financial and capital flows increased, more developing countries experienced financial crises. In effect, the Bretton Woods system had to give way for flexible exchange rate system. As the result of impossible trinity, major of countries introduced the flexible exchange rates system by the 1973¹³.

The volume of international trade in products and volume of financial and capital flows have achieved their highest level then ever before. However, considering the migration movements as the third dimension of the globalization phenomena, today world is less globalized then it was a century before¹⁴. 15% of United States population was born on foreign soils in 1911, today it is app. 10%. Emigration rate in the Europe, especially in Italy and Ireland was enormous: 14% of Irish citizens emigrated in the 1880s, and over 10% of Italians left the continent at the beginning of the 20th century¹⁵. It is worth however to emphasize that today migration takes different form then a century ago. Cross-country and cross-continent migration consists mainly of intellectual drainage from the developing countries to high developed countries.

The debate over globalization has become more lively since 1980's and 1990's. Apart from the real economic aspects of globalization related to the increasing volume and number of trade, migration and financial flows, it gained the media dimension¹⁶.

Among the opinion leaders and commentators of the today globalization, the opinions are divergent. There are number of individuals who are pro-globalization and number of representatives who are against it. Apart from the divergence of the opinions between the both sides of discussion, the debate over the image of today and future economic interdependence concentrates on few key issues¹⁷: (a) whether the poverty and inequality increase or decrease,

to recovery of the global economy, they did not have the same benign view of capital flows.

¹³ See e.g.: P. Lubecki, Wzrost gospodarczy a poziom rozwoju rynków finansowych na przykładzie wybranych krajów Europy Środkowej i Unii Europejskiej, *Ekonomista*, no. 5, 2004, pp. 656-657; R. Levine, S. Zervos, Stock market, banks, and economic growth, *The American Economic Review*, vol. 88, no. 3, 1998; R. Levine, Financial Development and Economic Growth: Views and Agenda, *Journal of Economic Literature*, vol. 35, no. 2, 1997; G. W. Kołodko, Globalizacja a perspektywy rozwoju krajów posocjalistycznych, TNOIK, „Dom Organizatora”, Toruń 2001.

¹⁴ J. Williams, Winners and losers over two centuries of globalization, NBER, Working Paper no. 9161, 2002.

¹⁵ See: R. J. Schoenberg, Al Capone, Amber Sp.z.o.o., Warszawa 1994.

¹⁶ During the 1970's the world 'globalization' was never mentioned in the pages of *The New York Times*. In the 1980's the word cropped up less than once a week; in the first half of the 1990's, less than twice a week; and in the latter half of the decade, no more than three times a week. In 2000 there were 514 stories in the paper that made reference to 'globalization'; there were 364 stories in 2001, and 393 references in 2002. Based on *The New York Times*, the idea of being 'anti-globalization' was not one that existed before about 1999. in the Internet www.google.com search engine, 'globalization' brings up 1.6 million links. Typing 'anti-globalization' brings up 80.000 links; 'globalization' and 'inequality' – 500.000 references; 'globalization' and 'environment' – 700.000 links; 'globalization' and 'labor standards' – 200.000 links. [S. Fisher, Globalization and its challenges, *The American economic review*, vol. 93, no. 2, 2003, pp. 1-30].

¹⁷ See e.g.: S. Fisher, Globalization and its challenges, *The American economic review*, vol. 93, no. 2, 2003, pp. 1-30; L. Putterman, J. E. Romer, J. Silvestre, Does egalitarianism have a future?, *Journal of political literature*, vol. 36, 1998, pp. 891-902; J. Gates, Humanizing capitalism, *Peace Review*, vol. 12, no. 2, 2000, pp. 183-188; M. G. Woźniak, Wzrost gospodarczy w Polsce w latach dziewięćdziesiątych. Czynniki. Bariery. Perspektywy, Wydawnictwo AE w Krakowie, Kraków 2002; M. G. Woźniak, Priorytety i mechanizmy skutecznej strategii gospodarczej, article presented at the conference organized by the Department for Economic Theory, The University of Rzeszów, ent.: 'Kapitał ludzki i intelektualny jako czynnik wzrostu gospodarczego i ograniczania nierówności społecznych', Rzeszów, 24-25 September 2004; H. McRea, Świat w roku 2020 – potęga, kultura i dobrobyt – wizja przyszłości, Dom Wydawniczy ABC, 1996; H. P. Martin, H. Schuman, Pułapka globalizacji. Atak na demokrację i dobrobyt, Wydawnictwo Dolnośląskie, Wrocław 2000.

(b) whether economic integration fosters economic growth or not, (c) whether international financial system development causes crises, and if financial deepening should be more regulated or/and limited, (d) unfairness of global trade and inadequacy of aid system, and (e) what is the role of the IMF in creation the desired image of the globalization.

2. Some *failures* of today globalization

Among number of key economic issues that are discussed in relation with globalization, it is worth to focus on the two of them¹⁸. The economic growth divergence phenomena, poverty and inequality among countries and citizens seem to be the most essential issues that correspond with the real economic dimension of the globalized economies¹⁹.

The empirical studies that analyzed: (a) the economies with similar (comparable) levels of macroeconomic aggregates²⁰ and (b) the regions within the same countries²¹ provide some evidence for conditional convergence²² among countries that corresponds with findings of the neoclassical economic growth theory. In that respect the appropriate groups of countries (comparable and local economies with the country) establish the clubs of convergence.

The large sample of studies do not confirm that the economic growth convergence exists among the countries of the world²³.

Having analyzed the large samples of countries, Plosser²⁴ proved that only few low income countries in 1960 were able to increase significantly their level of development till the 1990. Large sample of underdeveloped countries in 1960, were stocking in the underdevelopment trap as well in 1990. Countries of the upper quartile of the economic growth in 1960-89, were growing at average 4,1% annually. In the period concerned they increased their mean p.c. income from 2,000 USD up till 6,000 USD. The group of countries from the lower quartile of economic growth in period 1960-89 were growing at different rate of growth with average 0,0% annually.

Studies of world economic growth convergence²⁵ provide facts that the development

¹⁸ Because of the limits of the article's size, it concentrates only on the two (potentially) negative aspects of globalization.

¹⁹ However, the today challenges of the world economy, as like, development gaps, poverty, inequality, instability of financial systems do not arise only from the globalization. The empirical studies do not provide strong enough evidence that globalization is the only and essential factor that stimulates the failures of development process. [X. Sala-i-Martin, The world distribution of income (estimated from individual country distribution), Working Paper No. 8933, NBER, 2002.]

²⁰ R. J. Barro, Human capital and economic growth, in: Policies for long-run economic growth, A symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 27-29, 1992, pp. 199-216.

²¹ E. Andrade, M. Laurini, R. Madalozzo, P. Valls, Testing convergence across municipalities in Brazil using quantile regression, Ibme Working Paper, WPE, 14, 2002.

²² See more about the conditional convergence and the unconditional convergence in: R. Barro, X. Sala-i-Martin, Economic growth, The MIT Press, Cambridge, Massachusetts, London, England, 2004, pp. 44-45; M. G. Woźniak, Wzrost gospodarczy. Podstawy teoretyczne, Wydawnictwo AE w Krakowie, Kraków 2004.

²³ See: D. Romer, Makroekonomia dla zaawansowanych, PWN, Warszawa 2000.

²⁴ C. I. Plosser, The search for growth, in: Policies for long-run economic growth, A symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 27-29, 1992, pp. 57-86.

²⁵ D. Romer, Makroekonomia dla zaawansowanych, PWN, Warszawa 2000. Economic growth convergence research studies conducted by e.g.: R. J. Barro, Human capital and economic growth, in: Policies for long-run economic growth, A symposium sponsored by the Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 27-29, 1992, pp. 199-216; E. Andrade, M. Laurini, R. Madalozzo, P. Valls, Testing convergence across municipalities in Brazil using quantile regression, Ibme Working Paper, WPE, 14, 2002; C. I. Plosser, The search for growth, in: Policies for long-run economic growth, A symposium sponsored by the

gap between rich countries and poor countries of the world does not decrease but enlarges²⁶. The world economy instead of being more coherent divides into clubs of growth or clubs of convergence²⁷. There are developed countries and countries that are ‘convicted’ for long-run underdevelopment.

Apart from the inequality among countries (rate of growth and level of product and income among countries), the inequality (and income inequality) within countries has more significant political consequences for development.

Inequality among national average incomes appears to have been increasing for at least 400 years, since before the rapid interdependence among countries that took place in the 19th century²⁸. Parallel with ongoing interdependence, the mean income inequality within developing and developed countries increased especially in the 1970s.²⁹ However, this long-run growth in inequality seems to slow down during last 20 years.³⁰ While the global inequality rises, the gap between the richest and poorest citizens of the globe has increased. The mean income ratio between the 20% richest and 20% poorest people of the world was like 30:1 in 1960, in 1990 like 60:1, and at the end of 1990s (1998) the ratio increased to level of 74:1³¹.

Permanent economic growth of the world throughout last centuries and especially during few last decades (1,2% annual average rate of growth of GDP p.c. in 1990-2000³²) has resulted in decrease number of poverty on the globe. There is considerable evidence that in average the income condition of an average citizen of the world has been improving in the developing countries (Table 1). But not everyone in the developing countries is going better. In particular, in Sub-Saharan Africa where per capita growth has been negative in nearly half the countries in the last quarter century, have been deteriorating, and Latin America has not done well in the last decade³³.

Table 1

Regional breakdown of poverty in developing countries

Region	Number of people living on less than \$1 per day (millions)			\$1 per day headcount index (percent)		
	1987	1990	1999	1987	1990	1999
East Asia and Pacific	418	486	279	26,6	30,5	15,6
Excluding China	114	110	57	23,9	24,2	10,6
Europe and Central Asia	1	6	24	0,2	1,4	5,1

Federal Reserve Bank of Kansas City, Jackson Hole, Wyoming, August 27-29, 1992, pp. 57-86; K. A. Chrystal, S. Price, *Controversies in macroeconomics*, 3rd edition, Harvester/Wheatsheaf, 1994, pp. 226.

²⁶ N. Islam, What have we learned from the convergence debate?, *Journal of Economic Surveys*, Vol. 17, No. 3, 2003, pp. 309 – 362.

²⁷ A. Wojtyna, Podstawy trwałego wzrostu gospodarczego i służące temu polityki, in: RSSG przy RM, Raport nr 13, 1997, pp. 92; The clubs of convergence was first defined by: W. J. Baumol, Productivity growth, convergence and welfare: What the long-run data show?, *American Review*, vol. 76, 1986, pp. 1072 – 1085.

²⁸ S. Fisher, Globalization and its challenges, *The American economic review*, vol. 93, no. 2, 2003, pp. 10.

²⁹ See e.g.: M. Keane, E. Prasad, Consumption, income inequality in Poland during the economic transition, Working Paper no. 14, IMF, 1999; M. Suhrcke, Preferences for inequality: East vs. West, Innocenti WP No. 89, UNICEF Innocenti Research Centre, October 2001; X. Sala-i-Martin, The world distribution of income (estimated from individual country distribution), Working Paper No. 8933, NBER, 2002; G. J. Borjas, V. A. Ramey, Foreign competition, market power and wage inequality: theory and evidence, Working Paper No. 4556, NBER, 1993.

³⁰ X. Sala-i-Martin, The disturbing ‘rise’ of global income inequality, NBER Working Paper, no. 8904, 2002.

³¹ J. Gates, Humanizing capitalism, *Peace Review*, vol. 12, no. 2, 2000, pp. 183-188.

³² *Global Economic Prospects and the Developing Countries*, IBRD/WB, Washington, 2003, Table A3.2, pp. 216.

³³ S. Fisher, Globalization and its challenges, *The American economic review*, vol. 93, no. 2, 2003, pp. 9.

Latin America and the Caribbean	64	48	57	15,3	11,0	11,1
Middle East and North Africa	9	5	6	4,3	2,1	2,2
South Asia	474	506	488	44,9	45,0	36,6
Sub-Saharan Africa	217	241	315	46,6	47,4	49,0
Total:	1.183	1.292	1.169	28,3	29,6	23,2
Excluding China	880	917	945	28,5	28,5	25,0

Source: S. Fisher, *Globalization and its challenges*, The American economic review, vol. 93, no. 2, may 2003, s. 8.

In regards to avoid siding with any of group of the discussion over globalization, it is worth to emphasize that pro- and anti-globalization' opinion leaders are in common in one argument. The globalization brings many negative effects that should be mitigated or eliminated from the today world economy³⁴.

3. Can the human capital acquisition better the image of today globalization?

Although the globalization refers to deepening internalization between different countries of the world, the local (national) economies become more and more important under these conditions. The challenge of the nowadays global market and economic conditions is that world economy will never involve everyone. Global competition creates global winners and global losers. Without active local economies with appropriate policies, the losers become unable to participate in any kind of economic activity and a disadvantaged, unemployed, marginalized and alienated underclass emerges. There are plenty of examples of this phenomenon in the old industrial countries. It is socially destabilizing as well as being, for many people, morally unacceptable. Local economic development can provide opportunities for people who have been excluded from the global market either to re-enter it or to be productive outside it³⁵.

Considering the disadvantages of the today globalization and challenges of the national economy within the international environment, it is worth to question, whether it is possible to highlight some development mechanisms that can be ignited by an economy in regards to limit or mitigate the failures of the globalization process.

The new growth theory (endogenous growth theory) provides evidence that currently, under the conditions of information and technology revolution and thus, expansion the Knowledge-Based-Economy (KBE), the human capital is the main engine for permanent economic growth and development, and catching-up process. Additionally, it (endogenous growth theory) allows to predict that limitation the divergence phenomena between poorer and richer countries and closing the income gap between the richest and the poorest of the world is impossible without supporting the autonomic market decisions with priorities for expansion the KBE in lower income economies. In that respect the human capital can be considered as the mechanism that establish more humanitarian globalization.

Considering the recent development of the human capital theory, the endogenous economic growth theory and interpretation of globalization, the both categories, i.e.: human capital and globalization, can be easily combined together. The generally considered technology (communications and transport systems, improvement and diffusion of

³⁴ See: J. E. Stiglitz, *Globalizacja*, Wydawnictwo Naukowe PWN, Warszawa 2004; A. Łukasiewicz, *Dylematy ekonomiczne przełomu stuleci*, Wydawnictwo Key Text, Warszawa 2001.

³⁵ P. Ekins, L. Newby, Sustainable wealth creation at the local level in an age of globalization, *Regional Studies*, vol. 32, no. 9, 1998, pp. 867.

information transfer) accelerates the pace of globalization. The human capital theory and the endogenous growth theory emphasize that stock of human capital speeding-up the economic growth is fostered by the technology progress as well³⁶. On that basis it can be predicted that supporting the human capital acquisition within national economies can better the image of today globalization.

The human capital impact on economic growth process is built around the hypothesis that knowledge and skills embodied in humans raise productivity and increase the economy's ability to develop and to adopt new technologies³⁷. It is formalized in two effects.

Firstly, the *level effect* involves introducing the stock of human capital as the additional input in to the standard production function linking aggregate output to the stock of the productive inputs (generally employment and physical capital) and to an index of total factor productivity. Thus, human capital change is positive correlated with product increase³⁸.

Secondly, the *scale effect* considers the introduction the human capital as the determinant of technological progress (i.e. the rate of growth of the total factor productivity). This effect impact the output growth throughout accumulation of other factors in the frames of the TFP – knowledge and technology³⁹ and physical capital acquisition⁴⁰.

Nowadays attainment of the endogenous growth theory has produced number of economic growth models that throughout analyzing the vary determinants of growth, different assumptions and range of surveys emphasized the importance of the human capital acquisition for two essential issues of globalization critics: convergence of single economy to the individual steady state and convergence of incomes of the individuals⁴¹.

The human capital which represents the knowledge and skills accumulated by workers and whole society (know-how) is the economic and demographic condition of economic growth (Fig. 1). Thus, it is considered as the source and result of vary growth and development mechanisms that can make the globalisation more acceptable.

³⁶ M. G. Woźniak, *Wzrost gospodarczy. Podstawy teoretyczne*, Wydawnictwo AE w Krakowie, Kraków 2004.

³⁷ A. de la Fuente, A. Ciccione, *Human capital in a global and knowledge-based economy*. Final report, Instituto de Analisis Economico (CSIC), Universitat Pompeu Fabra, 2002, pp. 23.

³⁸ M. Rogers, *A survey of economic growth*, *The economic record*, vol. 79, no. 244, 2003, pp. 112-135.

³⁹ P. Romer, *Endogenous technological change*, *Journal of Political Economy*, no. 98, 1990, pp. 71-102, see as well: M. G. Woźniak, *Wzrost gospodarczy. Podstawy teoretyczne*, Wydawnictwo AE w Krakowie, Kraków 2004, pp. 123-125.

⁴⁰ R. Nelson, E. Phelps, *Investment in humans, technological diffusion and economic growth*, *American Economic Review*, no. 56, 1966, pp. 69-75.

⁴¹ S. Rebelo, *Long-run policy analysis and long run growth*, *Journal of Political Economy*, vol. 99, no. 31, 1991; C. Azariadis, A. Drazen, *Threshold externalities in economic development*, *The Quarterly Journal of Economics*, Vol. CV, Issue 2, 1990; R. J. Barro, X. Sala-i-Martin, *Economic growth*, The MIT Press, Cambridge, Massachusetts, London, England, 2004; R. Tamura, *Income convergence in an endogenous growth model*, *Journal of Political Economy*, vol. 99, no. 31, 1991; G. S. Becker, K. M. Murphy, R. Tamura, *Human capital, fertility, and economic growth*, *Journal of political economy*, Vol. 98, no. 5, part 2, October 1990; Romer P., *Endogenous technological change*, *Journal of Political Economy*, no. 98, 1990, M.G. Woźniak, *Wzrost gospodarczy. Podstawy teoretyczne*, Wydawnictwo AE w Krakowie, Kraków 2004.

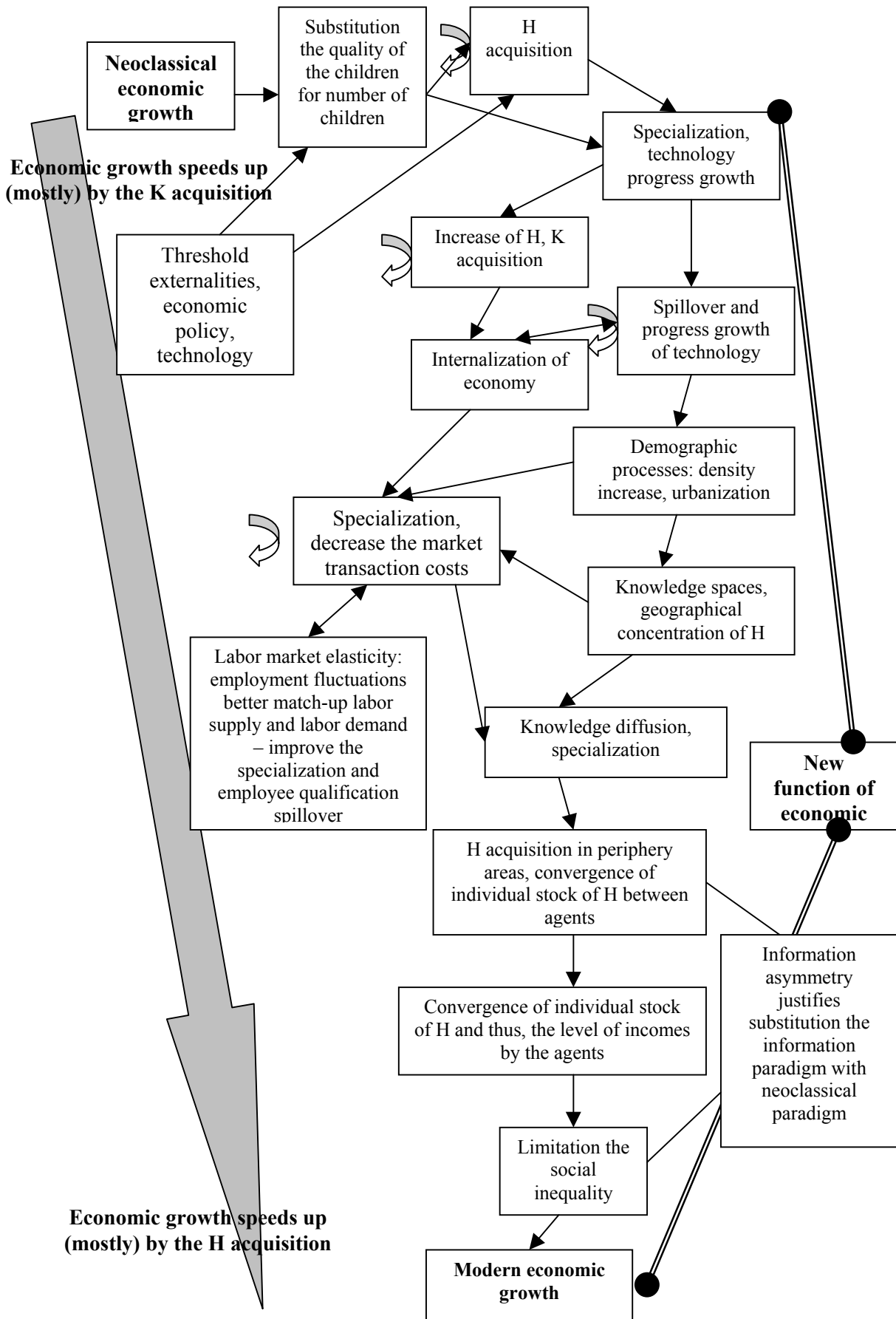


Fig. 1. Human capital and economic development, (H – human capital, K – physical capital)
 Source: Author's own elaboration.

The developing countries substitute the number of children on the investment in the children's human capital (quality of the children). The substitution effect can arise from the technology change or specialization, which increase the rate of return from human capital stock accumulation and thus, the economic growth. In effect, the rate of technology growth increases. Higher population density influences the urbanization. Thus, the demographic change causes the specialization improvement; more over it declines the cost of transport, betters the mobility of the labour and speeds up the diffusion of knowledge. The human capital is related with labour market change. Well-developed labour market which expressed the high employment fluctuations, facilitates more optimal 'matching-up' of the labour supply to the labour demand, that empowers the *spillover* effect, which improves more over the human capital acquisition. Thus, the human capital is considered as the engine of the structural change within the economy. It determines that reaching the (higher) steady state that guaranties the catching-up process is impossible without faster development of the human capital in low-income countries then in high-income countries. Otherwise, the developing country will stuck in development trap (Fig. 1).

The feedback relation between the human capital acquisition and speed of convergence of economic rate of growth and individual incomes that arise from solving the endogenous growth models enable to draw more detailed findings for economic policy. The human capital accumulation influence the speed the economic development process and corresponds with number of economy's dimensions, i.e.: income inequality⁴², financial and credit market deepening, and FDI accumulation⁴³, technology progress on the micro- and macroeconomic level⁴⁴, fiscal and monetary policy (through the tax system, public spending and its structure)⁴⁵, level of openness the economy on international trade, and structure of generating the added value within the economy (traditional and innovative sector trade-off).

According to the endogenous growth theory, the human capital accumulation fosters the process of growth and development. While the knowledge embodied in the worker is used, the *spillover*⁴⁶ effect increases. It 'pushes' the economy towards the higher steady states with higher p.c. income according to the Rostow's stages of growth concept⁴⁷. The endogenous approach and interrelation between human capital and economic phenomenon, explain the substitution in the economy the neoclassical growth based on the physical capital accumulation with modern economic growth based on the accumulation of human capital. The substitution effect fosters economic growth, and growth convergence, and enables economy to develop with higher rate of growth and higher level of p.c. income level. More over, introduction the modern economic growth (Fig. 1) is more acceptable for the each income groups within the society. While the economy as whole grows faster, the 'distribution' effect that is facilitated by the individual human capital convergence fosters more equal share of national product.

⁴² R. Tamura, Income convergence in an endogenous growth model, "Journal of Political Economy", vol. 99, no. 31, 1991.

⁴³ R. J. Barro, X. Sala-i-Martin, Economic growth, The MIT Press, Cambridge, Massachusetts, London, England, 2004.

⁴⁴ A. de la Fuente, A. Ciccione, Human capital in a global and knowledge-based economy. Final report, Instituto de Analisis Economico (CSIC), Universitat Pompeu Fabra, May 2002; J. Czekaj, M. Jabłoński, Metodyczne aspekty analizy kapitału intelektualnego organizacji, „Przegląd Organizacji”, no. 10, 2004, pp. 11-14.

⁴⁵ S. Rebelo, Long-run policy analysis and long run growth, "Journal of Political Economy", vol. 99, no. 31, 1991.

⁴⁶ Introduction the spillover effect into the economic growth models and its implications for human capital acquisition and the economic growth discussed in: R. Tamura, Income convergence in an endogenous growth model, Journal of Political Economy, vol. 99, no. 31, 1991, pp. 523-540.

⁴⁷ W. Rostow, The stages of economic growth, Cambridge University Press, Cambridge 1971.

3. Conclusions for economic policy

The interrelations between the human capital acquisition in a economy and the rate of economic growth and its convergence, and income inequality change, that are often identified as the negative aspects of the globalization suggest that human capital is an essential factor of economic development. The endogenous growth theory and development experiences of some countries of the world provide evidence that human capital acquisition is an efficient source of improving the image of today globalization. Apart from the technology progress, its acquisition is important stimulator of high rate of economic growth and thus, the speed of economic growth convergence. Additionally, the human capital acquisition limits or/and mitigates the income inequality increase between the representatives of a single economy⁴⁸.

On the basis of the feed-back relations between the human capital acquisition and speed of the economic growth convergence and the income inequality, few suggestions towards the economic policy can be made.

The general finding is that in regards to eliminate the (potentially) negative aspects of globalization the new functions of economic policy should be defined⁴⁹. The new economic policy should not be related to the increase of government interventionism but its limitation that is coherent with logic of efficient markets. Because of that reasons, it is suggested to replace the strategies enhancing economic growth with strategic instruments that is aimed at productivity growth, human capital acquisition and income inequality that are acceptable by the society⁵⁰.

Analysing in general the causes of structural and system changes throughout human capital acquisition and on that basis pointing some guidelines for single economy is little risky. Although human capital acquisition stimulates positive changes within number of economy's areas, i.e.: income equality, financial and credit market deepening, and FDI accumulation, technology progress on the micro- and macroeconomic level, level of openness the economy on international trade, and structure of generating the added value within the economy, the failures in designing the instruments of economic policy can move the economy away from the equilibrium and push it to the underdevelopment trap in the long run.

For example, essential factors of the economic development for Far-East countries were self-discipline, hard work and cultural and national uniformity⁵¹. However, one of the development indicators for the USA economy is lack of cultural and national uniformity. On the other hand, the recent Polish economic literature emphasizes that mental inheritance of the central planned economy that impressed the stamp on the awareness of today generations is major barrier for current and future high rate of economic growth in Poland⁵².

This conclusion is coherent with Domar who stated that findings from the economic theory should be selectively addressed to the single economy. He suggested that at first they

⁴⁸ Empirical studies conducted in the second half of the 20th century provide evidence that inequality in global product share are mainly reflected by differences in levels of education in high income countries and low income countries [A. Maddison, *Dynamic forces in capitalist development. A long run comparative view*, Oxford University Press, New York Oxford, 1991, pp. 65]

⁴⁹ Globalization – or, more precisely, the increase mobility of individuals – reduces the national governments' ability to tax. In result, only the immobile individuals are subject to redistribute taxation. [F. Andersson, K. A. Konrad, *Globalization and risky human-capital investment*, *International Tax and Public Finance*, vol. 10, no. 3, 2003, pp.212].

⁵⁰ See: M. G. Woźniak, *Priorytety i mechanizmy skutecznej strategii gospodarczej*, referat wygłoszony na konferencji organizowanej przez Katedrę Teorii Ekonomii UR w Rzeszowie, pt.: „Kapitał ludzki i intelektualny jako czynnik wzrostu gospodarczego i ograniczania nierówności społecznych”, Rzeszów 24-25 wrzesień 2004r.

⁵¹ See: H. McRea, *Świat w roku 2020 – potęga, kultura i dobrobyt – wizja przyszłości*, Dom Wydawniczy ABC, 1996.

⁵² A. Brzeski, *Transformacja systemu jako problem metaekonomiczny*, in: *Polscy ekonomiści w świecie*, (edit.) T. Kowalik, J. Hausner, Wydawnictwo Naukowe PWN, Warszawa–Kraków 2000, pp. 128-134.

should be enforced with detailed analysis of the barriers and challenges of economic development of individual economy.

Thus, the chance for improving the potentially disadvantages of today globalisation from the single economy's perspective is to implement the particular tools of economic policy that are coherent with strategy enhancing the productivity growth, human capital acquisition and just inequality. However before implementing the appropriate macroeconomic policy instruments, the detailed survey of the economy should be conducted.

Taking under consideration the following paper one general finding is significant. The human capital acquisition is efficient mechanism source for bettering the today and future image of the world economy, which will be accepted by the all people one the globe.

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