ABSTRACT. This article analyzes the views of eminent analysts on the driving forces of and explanations for economic globalization today. It examines the main characteristics of this process, such as the growth of world trade, the increased mobility of financial capital, the growing role of transnational corporations and the development of network technologies and the internet. The author analyzes the positive impact of globalization on the development of productive forces and human development. Problems arising from the growing interdependence of a globalized world, such as environmental issues, security, increased worldwide disparity of socio-economic development of countries and regions, are also examined. In conclusion, the author voices the need for establishing a system of global management.

KEY WORDS. Economic globalization, internationalization, world trade, financial capital, transnational corporations, information economy, economics of knowledge, competitiveness, intellectual capital, international organizations.

The Global Economy: Sources, Driving Forces and Dynamics

During the past two decades globalization has become one of the central issues of studies by world analysts engaged in social sciences, economics, philosophy, history, sociology and political science. Thus, it is simultaneously the most discussed and yet insufficiently studied trend in the modern world. In this respect, the process of globalization can be argued to have a variable impact on the development of productive forces, human society, and the countries and regions of the world. Thus, a theoretical study of globalization and consideration of its possible consequences is especially timely. It is not only especially important to study the impact of globalization on all aspects of human life, but also to devise mechanisms for man-
aging it at the national and global levels in order to prevent the contradictions of the modern world from becoming more acute. This article is devoted to these issues as it analyzes the views of eminent world scholars on the driving forces, specific features and trends of development of economic globalization today.

In the development of human civilization, the turn of the twenty-first century witnessed a noticeable trend of a convergence of countries and nations and the formation of a single economic and informational environment, which earned the term globalization. Issues of globalization were studied by a number of scholars and specialists from many different disciplines. Among the first to launch a comprehensive study of the mechanisms of globalization were international political economists, such as S. Strange, E. Helleiner, G. Underhill, P. Cerny, L. Weiss, T. J. Pempel, P. Evans, D. Held and P. Katzenstein. To date while these studies have made a valuable contribution and many books have been written on globalization, consensus on many issues remains elusive. For instance, even outstanding scholars as well as intellectual and cultural leaders of today describe globalization in different ways. Z. Brzezinski, for instance, associates it with the onset of a global turmoil, S. Huntington with the future clash of civilizations, K. Santoro with the threat of a planetary chaos, Pope John Paul II with the movement of society toward a new totalitarianism, I. Wallerstein with the end of liberalism, and George Soros with the capitalistic danger to democracy by unrestricted liberalism and the market elements.¹

In another respect a popular political ideological interpretation contends that globalization is the formation, mainly on the initiative of the West, of supranational structures that strengthen the West’s control over the economic and political processes of the modern world.

Thus, globalization has proven difficult to define conceptually and to demonstrate empirically. Nonetheless, an established understanding of the driving forces, essence and problems of this process does exist. Today one can argue that this historical process is em-

bracing the entire world. In this connection B. Badi\textsuperscript{2} points out three dimensions of globalization: globalization as an uninterrupted historical process, globalization as homogenization and universalization of the world, and globalization as a ruination of national borders. C. Rowley and J. Benson also refer to the erosion of economic, social and political borders of states as the key characteristics of globalization.\textsuperscript{3} Furthermore, many scholars link globalization with qualitatively new levels of integration, integrity and interdependence of the world, in which the geographical borders of social and cultural systems are erased and people more and more are aware of the disappearance of these borders. Therefore, globalization can be defined as the evolution of a single world — integral in its general outlines and in its internal inter-connected interdependent components. The process itself is characterized as the intensifying unification of humankind. More specifically, Russian economists A. Volodin and G. Shyrokov note a new quality of social being emerging, seeing globalization as a «comprehensive geo-economic, geo-political and geo-humanitarian phenomenon that has a strong demonstrative effect on all aspects of the vital activity of countries drawn into this process.»\textsuperscript{4}

Occasionally globalization has been identified with the evolution of the global economy, but also it has applied equally to politics, law, culture and other areas of public life. Nevertheless economic globalization itself creates the basis for all globalization processes, serving as the engine and propelling their development. Indeed, since other areas of public life are more inertial than the economy, by their own pace and depth globalization in these areas gives way to economic globalization. For instance, globalization of politics, culture and the social sphere encounter national barriers that are difficult to surmount because of national sovereignty, traditions, mentality, and the cultural values of nations. Extending global trends into these areas requires a lot of time and effort by the world community at the national and global levels. For these reasons economic globalization was studied much earlier and much deeper than other areas, and the diversity and depth of its analysis by far has exceeded what has been achieved in other areas.

There are different points of view on the sources of the process of globalization. Some analysts favor a much broader interpretation of

\textsuperscript{2} M. V. II’in i V. L. Inozemtsev, otb. red., Megatrendy mirovogo razvitiya, Tsentr issledovaniy postindustrial’nogo obshchestva (Moskva.: ZAO Izdatel’stvo «Ekonomika,» 2001), s. 156
\textsuperscript{3} C. Rowley and J. Benson, eds., Globalisation and Labour in the Asia Pacific Region (London: Frank Cass, 2000).
\textsuperscript{4} Polis No. 5 (1999): s. 84 [Polis No. 5 (1999): p. 84].
globalization as an inherent process of humankind and believe that in the process of its evolution the idea of globalism in one way or another asserted its presence in the prehistoric, historical and post-historical epochs. Of particular interest in this respect is George Soros’ statement that a global capitalist system is nothing new. Its history goes back to the Hanseatic League and the Italian city-states where different political entities were united by commercial and financial links. But the global capitalist regime ruling today is distinct on the basis of certain features, such as the speed of communication (although there are some doubts about its novelty since the telephone and telegraph invented in the nineteenth century were believed to be no less expeditious than computer communication today). In contrast, some scientists, such as R. Baldwin and P. Martin among others, associate the origin of globalization with the establishment of nation-states during the industrial revolution of the late eighteenth century.

The most current point of view (shared by M. Cheshkov, N. Simonia, G. Shakhnazarov, among others) is that the global community was shaped by the process of internationalization of the late nineteenth-early twentieth centuries. Undoubtedly, internationalization, the historical predecessor to globalization, was the starting point of the international movement of capital, goods, people and ideas that laid down the groundwork for the integrity of the world. Indeed, the internationalization of production and exchange developed over several centuries. Owing to the great geographical discoveries of the fifteenth to seventeenth centuries, countries and continents became involved in international trade, which promoted the substantial growth of its volumes and strengthened international links. Likewise, the industrial revolution and the large capital it generated facilitated the growing international migration of financial capital and labor.

The internationalization of economic life was most intensive in the late nineteenth-early twentieth centuries. In this period, the development of shipping companies and railroads contributed to the intensive development of transport, while the rapid decline in transportation costs and customs tariffs stimulated the growth of world

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7 Grani globalizatsii, s. 366 [Facets of Globalization, p. 366].
trade. During the last quarter of the nineteenth century, the volumes of international trade increased 2.1 times. While world production growth was more than 40 per cent in 1900-1913, the physical turnover of world trade increased by 62 per cent. Financial flows also intensified: in the latter quarter of the nineteenth century capital investments increased 2.3 times, while in the period from 1900 to 1913 they doubled. In 1913 one-third of British capital was located in overseas territories. The migration of people went up markedly: for over 100 years since 1820, approximately 60 million people immigrated to the New World, three-fifth of them to the United States. In the social sphere, standards were becoming more uniform: prices, wages and standards of living were quickly converging in Western Europe and the U.S.. Transatlantic markets were beginning to take shape. Thus, «protoglobalization» has become used by scholars in reference to this period from the mid-nineteenth to the early twentieth centuries (before World War I) and the processes which embraced the Atlantic world, Europe and North America. Relying on such measurements as world trade, export of capital and gold standard, these scholars maintain that by the early twentieth century the world was more globalized, integral and homogeneous than it would be by the mid-twentieth century.

Even so, an analysis of qualitative changes to the world economy under globalization gives reason to believe that economic globalization is the continuation of the internationalization of economic life and marks its transition to a qualitatively new stage. Indeed, it was only in the twentieth century that the vast economic development resulted in the establishment of blocs and unions of states, gigantic corporations and a division of the world. The transformation of the community of nations into a compact network of interactions not only of states but also of other active entities of different dimensions occasioned the appearance of a special type of internationalization, which accurately can be called globalization. In this connection Y. Shishkov points out that globalization is a new, more advanced stage of the earlier known process of internationalization (transnationalization) of different aspects of public life. By the

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11 Megatrendy mirovogo razvitiya, s. 8-9 [Mega Trends of World Development, pp. 8-9].

1960s-1970s, this new stage in the internationalization of public life, which originated more locally, embraced the entire world community and reached planetary dimensions. Therefore, one can agree with the Russian scholar V. Kuvaldin who wrote: «... the roots of globalization are deep in history, and still globalization is a phenomenon of the twentieth century.»  

The majority of academics share this point of view on the origins of globalization.

To better understand what globalization comprises is to identify and better understand those new features that earlier had not existed or were not well developed. For this purpose the principal measurements of the degree of world economic globalization are used. According to the Russian economist S. Dolgov, the following are used to determine economic globalization:

- the volume of internationalized (international) output of goods and services and its growth rates compared with the growth rate of the entire gross product of the world;
- the level and dynamics of foreign direct investments (FDI) compared with the level and dynamics of all investments;
- the amount and dynamics of international centralization of capital (as international mergers and acquisitions of companies) compared with the general data on centralization of capital;
- the value and dynamics of large, comprehensive international investment projects compared with the overall scope of such projects;
- the volume of international trade in goods and services and its growth rates compared with the gross product;
- data on international transactions in patents, licenses, and know-how;
- the volume and dynamics of international operations of banks and other lending institutions compared with the general volume and dynamics of all of their other operations;
- the volume and dynamics of international stock markets compared with the general volume of these markets and their growth rates.  

Generalizing the qualitative and quantitative changes occurring in the world economy under globalization make it possible to single out its main elements — international trade, transnational corporations and international finance. Indeed, as George Soros remarked, «the distinctive feature of the global capitalist system is the mobility of capital, information and business.»

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13 Grani globalizatsii, s. 32 [Facets of Globalization, p. 32].
15 Soros, Kryza global'noho kapitalizmu, s. 126-127 [Soros, The Crisis of Global Capitalism, pp. 126-127].
Above all, globalization is accompanied by a rapid development of trade relations. For instance, while global output increased 20 percent in the 1990s, world trade went up more than 70 percent.\(^\text{16}\) During the last years of the twentieth century world export increased 1.5 to 2 times faster than the gross product. What distinguished the intensive development of trade in the early twentieth century and at its end was the growing share of exports in the world countries’ GDP. In 2001 export of goods and services in GDP accounted, for example, for 84 percent in Belgium, 88 percent in Malta and 95 percent in Ireland. At the same time the world market became for many countries a determined condition for the functioning of the national economy, whereby the volume of exports exceeded a country’s GDP. This was particularly the case for export-oriented countries, in which the respective share accounted for 116 percent in Malaysia, 144 percent in Hong Kong, 156 percent in Luxembourg, and 174 percent in Singapore.\(^\text{17}\)

A second important feature of a global economy is the rapid development of transnational corporations. Describing the transition from internationalization to the globalization of the world economy, G. Gereffi, professor of sociology at Duke University, sees as their main characteristic «the functional integration and coordination of different types of activities on an international scale.»\(^\text{18}\) Thus, at the end of the twentieth century there were about 53,000 transnational corporations with 450,000 foreign subsidiaries in the world and a volume of global sales in the amount of US $9.5 trillion, which accounted for approximately 20 to 30 percent of world output and 66 to 70 percent of world trade.\(^\text{19}\) Today 500 of the largest transnational corporations account for over one-fourth of the world production of goods and services, their share in the export of industrial products accounts for one-third, while their trade in technologies and managerial services accounts for four-fifth.\(^\text{20}\)

The most dynamic processes under developing globalization are occurring in finance. As George Soros pointed out, the global economy is characterized not only by the free trade of goods and services, but also — and to an even larger extent — by the free movement of capital. Interest rates, currency exchange rates and stock prices in different countries are closely interrelated, while global fi-

\(^\text{20}\) Megatrendy mirovogo razvitiya, s. 43 [Mega Trends of World Development, p. 43].
Financial markets powerfully influence economic conditions. In view of the decisive role international financial capital has on the destiny of every country, it is appropriate to speak of a global capitalist system. With the acceleration of the development of international financial markets in the 1980s and despite periodic crises, international capital markets have become global. Indeed, annual trade in currency amounts to some US $400 trillion, i.e. exceeding world trade in goods 80 times (in 1973 this ratio was twofold). Moreover, the turnover in international stock and currency markets exceeds the turnover in trade ten times and hundred times, respectively. Likewise, the export of capital as direct investment has grown two to three times faster than world trade.

But the main qualitative changes in world development are associated with a new scientific-technical revolution at the end of the twentieth century. These changes influence the development of the forces of production, production relations, human development, the competitiveness of nations and the like. In this respect, intellect and knowledge have become direct productive forces in the global economy and information and technologies its most important economic assets. Thus, in the mid-1990s in the countries of the post-industrial West the foundation for continued development — i.e. an economy based on the production, use and consumption of knowledge — was created and the post-industrial economic system has since been defined as one based «on the production and consumption of knowledge.» An economy built on knowledge sharply reduces the role of such principal factors of production as natural resources, fixed assets, production costs and the like. No longer do they determine the value consumers set on one or another product. The economy turns into a system which functions on the basis of production and exchange of knowledge. As Japanese analyst T. Sakaya argues, we are now embarking on a new stage of civilization in which the driving force are values created by knowledge, calling this stage a society based on the values created by knowledge. Along with such traditional measures of national power as territory, population, level of economic development, size of armed forces, as well as scientific and technical assets, globalization brings forward new factors: information-communication potential, status on the world financial markets, speed of assimilation of new technologies and the like.

21 Soros, Kryza global’noho kapitalizmu, s. 123 [Soros, The Crisis of Global Capitalism, p. 123].
22 Grani globalizatsii, s. 53 [Facets of Globalization, p. 53].
Knowledge has not only become the most important production factor, but also a factor in the growth of international competitiveness and prosperity of a nation.

Thus, the underlying basis of an evolving global society is the emergence of a «new economy,» frequently referred to as an «economy of knowledge,» thereby stressing the particular role of science and education in the development of modern production. To date over a half of the GDP in the OECD countries is generated in knowledge-intensive production. Among the scientific discoveries of the past decades, the most important breakthroughs have been in the studies of physics of solids and genetics, which laid the groundwork for modern technologies in information, communication, medicine and agriculture. In the opinion of many scientists, the information revolution, which combined the computer with telecommunication networks, can have the same implications as the steam machine or electric motor in their days. In combination with biotechnologies, robotics, computerized control systems and new methods of transportation, the information revolution has ushered in a new type of production, exchange and consumption.

In this respect, the internet and information technologies have become a phenomenon of the global world. M. Castells, professor at the University of California, points out that during the past twenty years the world saw the appearance of a new type of economy which he calls informational and global: «Informational economy ... consists in a marked improvement and use of knowledge and information in all the process of material production and distribution on the basis of a gigantic leap forward.» More specifically, new information technologies make it possible to instantly transfer information and huge amounts of money to any part of the world, while the speed of distributing large bodies of information exceeds by many times the possibility of moving goods and people, thereby creating a global information environment that is quickly mastered by people. Thus, according to forecasts, the volume of world services provided by commercial enterprises to consumers via electronic modes of trade is expected to amount to US $233 billion in 2004, compared with US $25 billion in 1999. The now 50 million internet users is expected to reach one billion in 2005.
The intensity of information flows speeds up by many times the global spread of knowledge and technical achievements, and for this reason it can be viewed as a new strategic human resource. Indeed, since the fundamental changes in the conditions of the development of economic globalization concern people as the bearers of knowledge, intellect and experience, people are the main component of the «new economy.» The early 1990s saw the appearance of the concept of intellectual capital in economic theory. T. A. Stewart (United States) and L. Edvinsson (Sweden) established its scientific and theoretical status. There are now different definitions of intellectual capital, but its essence is best defined by D. Klein and L. Prusak whereby intellectual capital is an intellectual material that is formalized, recorded and used for the production of more valuable property.\(^{28}\)

Moreover, studies of intellectual capital convincingly have proven the much greater value of intellectual assets of companies compared with their material resources. Professor F. Lichtenberg of Columbia University estimated that one dollar expended for research and development yields eight times more profits than one dollar invested in equipment. Other scholars arrived at similar conclusions. In particular, C. Handy (United Kingdom) maintains that, as a rule, the intellectual capital of a corporation exceeds three-four times the value of its material incomes. According to L. Edvinsson, the ratio of intellectual capital to the aggregate value of material assets of production and financial capital are in the range of 5:1 to 6:1.\(^{29}\)

Thus, human capital and, increasingly, the critical number of creative individuals within an organization are becoming the basis of the «new economy,» not fixed assets and not even managerial resources. From the mid-1970s on, the development of the information economy created a growing demand for employees with a well-developed intellect and good education and also occasioned unprecedented opportunities for creative self-fulfillment.

Production and the application of knowledge shape a new motivation paradigm and, as many scientists believe, is becoming the basis for the evolution in society of new social groups that have the principal attributes of classes,\(^{30}\) whereby the intellectual workers


\(^{30}\) *Megatrendy mirovogo razvitiya*, s. 30 [Mega Trends of World Development, p. 30].
create a dominant class of the new society in the post-industrial world. This class of intellectuals has its own distinctive features. First, with the advancement of the workers' technological skills, there is a trend among the more gifted of higher prosperity that markedly exceeds the average of the majority of employed. Certain individuals, social groups and nations use the advantages of technological progress and command the wealth that they gained by their own creative activity, not by exploitation. In this respect there is the telling example of the US where every fifteenth person who accounts for one percent of the wealthiest Americans earns his income as profit from invested capital; more than half of this group are administrative officers in large corporations, almost one-third is represented by practicing lawyers and doctors, while the rest are people of other professions, including professors and instructors.31

Second, with the economic progress of the twentieth century in developed countries meeting the basic material needs of people, the last decades witnessed a drastic change in the motivation of their activity. More specifically, materialistic motives associated with higher personal prosperity that guided people for many centuries is increasingly giving way to non-materialistic motives as a desire for improvement and maximum self-fulfillment.

Third, the organization of labor is changing as labor itself becomes more intellectual. Traditional companies that used to be instruments of class rule and were organized in accordance with a strict hierarchy have been replaced by corporations promoting flexibility, creativity and cooperation. In addition, the number of diverse medium, small and micro venture enterprises and the phenomenon of the single-person enterprise have increased under these modern conditions.32 The development of high-tech sectors of the economy and the internet have provided opportunities for greater autonomy of an individual, thus opening up prospects for manufacturing a finalized information product and selling it on the market, a mode of production that does not fit the classic capitalist organization.33

Finally, social trends of the past decade suggest that society, which essentially uses the results of technological progress, accordingly has set post-materialistic goals and cultivated supra-utilitarian motives of activity, thereby contributing to the unprecedented growth of property inequality. This inequality results from differences among people in terms of their abilities, talent, educational attainment and resourcefulness. Thus, members of the intellectual

33 Grani globalizatsii, s. 67-74 [Facets of Globalization, pp. 67-74].
class appropriate an ever-greater share of national wealth following non-utilitarian motives, while those of other classes and groups are unable to provide themselves with a decent existence or else simply attempt to improve somehow their standards of living. From one ethical perspective such inequality might be considered to be fair, but the social contradictions it breeds can have serious and unpredictable consequences comparable with the contradictions of the industrial era.

Under conditions of a developing global economy, the policy priorities for ensuring international competitiveness change as well. In order to move from an industrial economy to a knowledge-based society and compete successfully in a post-industrial world where, in the era of network technologies, every country has to have at its disposal the potential for accepting and adapting global technologies while allowing for national requirements, an advanced level of productivity, the potential for a creative labor force, corresponding material conditions and a particular culture of thinking are necessary. These factors themselves require qualitatively new levels of investment into the goals of development and into enlarging the reproduction of humanitarian capital. For these reasons the most effective form of accumulation is the development by each person of his/her abilities, while the most beneficial investments are in people, their knowledge and abilities.

The advancement of science and even the simple replication of foreign technologies foresee the development of the national education system as a priority. Therefore, in many countries the development of education is among the largest state expenditures. In the majority of developed countries spending on education amounts to five to six percent of GDP, reaching 7.8 percent in Sweden and 8.2 percent in Denmark. Large expenditures also have been recorded in several other countries, such as Israel — 7.3 percent, Estonia — 7.5 percent, Cuba — 8.5 percent, and Saudi Arabia — 9.3 percent. In many countries state expenditure for education is supplemented by funding from private sources. In the US, for example, private companies spend approximately US $30 billion a year simply for upgrading the skills of their employees; in comparison, this figure amounts to the total funds allocated for all areas of research in Russia, China, South Korea and Taiwan. Recently, special attention has been accorded to the training of specialists in mathematics, natural sciences and applied sciences. By the late 1990s the share of students majoring in these professions accounted for 37 percent of

35 Ibid.
36 Megatrendy mirovogo razvitiya, s. 33 [Mega Trends of World Development, p. 33].
total students in Finland, 38 percent in Lithuania, Croatia and Macedonia, 42 percent in Kazakhstan, 43 percent in Slovakia and Chile, 44 percent in Moldova, 48 percent in Russia and Georgia, 50 percent in Algeria, and 53 percent in Hong Kong.\textsuperscript{37}

The development of new technologies increases expenditures for research and development (R&D). Throughout the 1990s OECD countries spent on average about US $400 billion for R&D.\textsuperscript{38} Of the total global spending on R&D, the US share alone is 44 percent, while that of countries in Latin America and Africa less than 1 percent total.\textsuperscript{39} From 1996-2000 expenditures for R&D as a share of GNP in the countries of East Asia and the Pacific region amounted to an average of 1.5 percent, the countries of Central and Eastern Europe and the CIS 0.9 percent, and in the OECD countries 2.6 percent, while in Japan and Finland they exceed 3 percent and reached 3.8 percent in Sweden.\textsuperscript{40} But such large expenditures for education, R&D and for the development of human capital as a whole are typical of highly developed countries only. Most others cannot afford developing research in many areas, including the high-priority areas.

In generalizing the manifestations of globalization, the noted Russian scholar Oleg Bogomolov stressed:

... the rapid development of computer technologies and electronic telecommunication, the appearance of high-speed and more economical transportation suddenly brought all continents and countries closer to one another and created necessary preconditions for a rapid increase in transboundary exchanges. The flow from one country to another of goods and services, capital and people, the global system of communication and information, the activity of international economic and financial organizations and corporations created a fabric of global economy, into which are intertwined to a greater or lesser extent all national economies without exception.\textsuperscript{41}

In his assessment of the positive impact of globalization on the development of countries and regions worldwide, Nobel Prizewinner J. Stiglitz pointed out that the discovery of new markets for international trade helped many countries to hasten their economic growth. Indeed, export-stimulated growth was a key element of the industrial policies that enriched a considerable part of Asia and fundamentally improved the life of millions. Owing to globalization, life expectancy increased and standards of living improved for many

\begin{thebibliography}{9}
\bibitem{38} Megatrendy mirovogo razvitiya, s. 33 [Mega Trends of World Development, p. 33].
\bibitem{39} Ibid.
\bibitem{40} Human Development Report 2003, pp. 274-277.
\bibitem{41} Grani globalizatsii, s. 72 [Facets of Globalization, p. 72].
\end{thebibliography}
nations. Globalization reduced the sense of isolation that was keenly experienced in the developing countries and for many improved access to knowledge to an extent greater than the opportunities of even the richest citizens of any country a hundred years before.\textsuperscript{42}

**Contemporary Globalization: Problems and Prospects**

Studies of contemporary globalization have shown that the global economy is not universal in scope, i.e. it does not embrace all economic processes, territories and people, although it exerts a significant influence on all humankind. In this respect a number of international scholars note the segmental nature of the global economy. For instance, M. K. Castells remarks that, «for all the planetary effect of the global economy, its existence and forms concern only individual segments and economic structures, countries and regions proportionally to the definite location of a country or region in the international division of labor.»\textsuperscript{43} Indeed, the world has always been varied and its countries and regions distinguished from each other according to their level of socio-economic development. And it has become already evident that the «global economy is characterized by a fundamental asymmetry between countries by level of their integration, competitive potential and the share of benefits from economic growth.»\textsuperscript{44} This unequal development in the modern world is evident in several areas, of which only one will be considered here.

Specifically, to date there is a vast asymmetry in the world economy and its social structure. On the one hand, we see a small group of countries with a high and average level of civilized development (countries of the OECD), while on the other, there is a large number of developing countries at the initial stages of industrial and scientific-technical civilization. The technological innovations underlying the national wealth of post-industrial countries frequently cannot be either effectively introduced or replicated within the frameworks of industrial and agrarian societies, and yet development is possible only on the basis of such innovations. Herein lies one of the most important explanations for the widening gap between the developed countries of the West and the rest of the world.

As a result of the considerable inequality in development by the late twentieth century, the post-industrial West became the primary


\textsuperscript{43} Castells, Informatsionnaya epokha, s. 114 [Castells, The Information Age, p. 114].

\textsuperscript{44} Ibid., p. 117.
location for humankind’s scientific potential. Holding leading positions in almost all areas of scientific and technical progress, these countries enjoy overwhelming advantages in discoveries, inventions, development of patents and licenses, and technologies and completely dominate fundamental and applied research. In the early 1990s ten of the most developed countries concentrated 84 percent of the world’s R&D, possessed 80.4 percent of the world’s computer equipment, and accounted for 90.5 percent of high-tech production.\textsuperscript{45} Today they own 97 percent of the patents registered in the world and earn over 90 percent of transboundary income from patents and licenses. Specifically, in the 1990s Japan, Sweden, Germany and the US were among the leading nations based on criteria for identifying the intellectual level of economic activity (share of high-tech sectors; share in GNP of expenditures for research and development, for software and education; percentage of a highly skilled labor force).\textsuperscript{46}

Equally representative in this respect is the breakdown of internet users in the world. By the end of the 1990s, 88 percent of users lived in developed countries with only 15 percent of the world’s population, including the US and Canada where 5 percent of the world’s population resided and over 50 percent internet users were concentrated.\textsuperscript{47} In 2001 the number of internet users per 1,000 of the population accounted on average: 1.8 in the least developed countries; 7.8 in the countries of sub-Saharan Africa; 26.5 in the developing countries; 41.4 in the countries of East Asia and the Pacific region; 42.8 in the countries of Central and Eastern Europe and the CIS; 332 in the OECD countries; while in the US and Sweden their number exceeded 500 and in Iceland 599.\textsuperscript{48}

In contrast, high-tech exports as a measure of innovation activity presents a somewhat different picture. In 2001 this indicator was the highest for: Thailand and the UK — 31 percent of export of industrial products, the Netherlands and the US — 32 percent, Ireland — 48 percent, Malaysia — 57 percent, Singapore — 60 percent, and the Philippines — 70 percent.\textsuperscript{49} Interestingly, some developing countries, which recently allocated substantial state funds for education, R&D and social programs, were among the highest. In these countries high-tech exports increased much faster during the past ten years than in developed countries. For instance, in Indonesia these exports increased 13 times, in China and Hong Kong 20 times, in

\textsuperscript{45} Megatrendy mirovogo razvitiya, s. 33 [Mega Trends of World Development, p. 33].
\textsuperscript{47} Grani globalizatsii, s. 72 [Facets of Globalization, p. 72].
\textsuperscript{49} Ibid.
the Philippines 70 times, while in developed countries the rate of increase was approximately 1.5 to 2 times.\textsuperscript{30}

When assessing the achievements the developed countries gained in science and technologies, we should bear in mind that they used not only their domestic potential to this end, but also designed special programs to attract foreign specialists to the most promising sectors. Since developed countries have all the required conditions for research and a high standard of living, there are many specialists who are willing to immigrate to the wealthy countries. In the US in the 1990s alone more than 50 percent of doctorates were awarded to foreign citizens and 47 percent of their foreign holders remained.\textsuperscript{51} Owing to this reason, the export of US intellectual property increased 3.5 times in the period from 1986 to 1995, while the positive balance of trade in this area exceeded US $20 billion.

Already there is a marked differentiation of countries according to level of scientific and technical potential, which in the future will most importantly determine the global economy. Jeffrey Sachs, the eminent American specialist of economic development, divides the modern world into three technological categories: 1) about fifteen percent («the golden billion») who practically provide for the development of science, equipment and new forms of production; 2) approximately half of the world’s population who do not develop new technologies but are capable of using the achievements of the first group; 3) the remaining one-third who lack the capacity to either invent or use the inventions of others. The latter category is technologically marginalized from the world, and the gap between those who possess information technologies and those who do not is widening.\textsuperscript{52} The operative system of generating and using intellectual capital reinforces the existing inequalities. Many scientists are of the opinion that apart from dividing countries into developed and developing, a much deeper division is at play — i.e. the division of countries into those that already have an informational-innovational economy and those who do not even think about it.\textsuperscript{53}

There is also a concentration of a substantial industrial and human potential in the developed countries. Indeed, they became leaders in world development because they were able to manufacture unique products on the basis of information, scientific and innova-

\textsuperscript{30} Ibid.
\textsuperscript{31} Khoros i Krasil’shilshchikov, Postindustrial’ny mir i Rossiya, s. 69 [Khoros and Krasil’shilshchikov, The Post-Industrial World and Russia, p. 69].
tive knowledge. Now they account for the lion’s share of the world’s gross product; more specifically, by the end of the twentieth century 20 percent of the population of the richest countries accounted for 86 percent of the world’s gross product, while the poorest countries (20 percent of the world’s population) only for one percent. Since economic progress is determined by innovation, the developed countries are also increasing their wealth. In the past 20 years the share of the wealth possessed by 20 percent of the planet’s population, the «golden billion,» increased from 70 percent to 82.7 percent, while the share of the poorest 20 percent dropped from 2.3 percent to 1.4 percent.54

Moreover, the levers of management of the world economy are concentrated in the developed countries who have used them to establish unequal rules of participation. As a result, developing countries, when supplying goods and services on the world markets, have to face barriers that are twice as high than for the industrially developed nations. According to UN Secretary-General Kofi Annan, 49 of the least developed countries with 10 percent of the world’s population practically do not engage in world trade and do not receive investments. They are provided with US $12 billion in foreign aid, earn US $25 billion from exports, and receive US $5 billion in foreign direct investment a year, or less than 20 cents a day.55

Thus, globalization tends to preserve and intensify the disparity in well-being among countries. Between the «golden» and «poor» billion there is a large gap in the level, quality and way of life. According to the World Bank, in 2000 the share of one-sixth of the world’s population — mainly residents of South America, Europe and Japan — accounted for 80 percent of world income, i.e. an average of US $70 dollars a day per capita, while the share of 57 percent of the world’s population in 63 of the poorest countries accounted only for 6 percent of world income — an average of less than US $2 a day per capita.56 There are approximately another 1.2 billion people who have a per capita income less than US $1 a day.

During the last decade of the twentieth century, the number of poor people worldwide increased by almost 100 million at a time when the world’s total income was increasing by an average of 2.5 percent a year.57 The US, the richest country, best exemplifies the unbridgeable gap between wealth and poverty, wherein the aggre-

\[54\] Megatrendy mira razvitiya, s. 34 [Mega Trends of World Development, p. 34].
\[56\] Izvestiya (10 April 2000): p. 3.
gate income of the richest 10 percent of its population equals the aggregate income of the poorest 43 percent of the world’s population.

Given that the world’s countries and regions are at different levels of socio-economic development, globalization then creates unequal prospects for them. For the western countries possessing powerful scientific and intellectual capital, globalization offers an opportunity for development, while for the majority of developing countries it spells decline and degradation, a choice between dependence and isolation, and the danger of neo-colonial empires being established on the basis of new technologies. As specialists argue by pointing to the growing global inequality as the reason for the world’s disintegration in the inter-war period, this contemporary inequality can threaten globalization itself. Thus, history could repeat itself.

A no less important problem of globalization is that with increasing interdependence different countries and regions of the world are also becoming mutually vulnerable. This raises in a new way the issues of national, economic, environmental and societal security. Under current conditions, crises in the world economy are spreading quicker and on a much broader scale, as was clearly demonstrated during the financial crisis in 1997-1999 and by the global economic decline in 2001–2002. Indeed, the danger of international terrorism is growing as is the rapid spread of infectious diseases (e.g. the SARS epidemic in 2003). The appearance of ever more sophisticated computer viruses also is endangering the work of global computer systems. This list of new global threats is far from being exhaustive.

Finally, the inherent contradictions of modern globalization are such that, while objectively intended to unite the world through homogenization and universalization on the basis of standard institutions, technologies and patterns of behavior, it is running into fundamentally incompatible political standards and cultural norms, different levels of the economic and political development of countries, their ways of life, traditions and systems of values that are difficult to unify. Therefore, attempts to speed up universalization in the political, economic and cultural areas are frequently of a coercive and imposed nature.

From a positive perspective it should be pointed out separately that globalization substantially changes human and public lives. The information revolution of the past decade makes it possible to establish contact with any point on the globe and changes different types of activity. In the new types of communication, new forms of interaction, and new creative opportunities of people, globalization finds its economic base.
Globalization also profoundly transforms the entire system of social linkages. It unfetters the individual and offers him/her the opportunity to choose his/her own strategy in life. For instance, US scholars P. K. Nandi and Shahid M. Shahidullah point out the subjective, creative nature of globalization and the active, universal response of people to this change. Globalization is a fundamentally new process of growth and development that offers people unprecedented opportunities for self-fulfillment. An argument to the contrary is that the main source of progress of the new era is instead the human aspiration for self-fulfillment. Indeed, the movement for greater human freedom — economic, social, political and cultural — is the basic trend behind the processes that radically changed civilization in the latter half of the twentieth century. Given this ultimate goal, globalization can be called an extension of human opportunities to influence not individual aspects of social progress, but the progress of civilization as a whole.

Nevertheless, under conditions of globalization, the extension of human activity beyond national boundaries and the establishment of transnational forms of its organization produce fundamental changes in the conditions of existence of individuals, social groups, communities, nations and states. The resulting idea is to create a global community — a mega society — in which the existing nation-states will be more or less independent structural entities. Thus, globalization threatens to dismantle the entire social superstructure built throughout the preceding centuries. For a huge number of workers, even in the developed countries, globalization represents employment insecurity, worsening conditions of work and life, a lack of social guarantees, and the like. Indeed, the social consequences of a globalized economy are evident already when international competition becomes more intense and transnational corporations impose their broadening influence. Both poor and rich nations are concerned about the growing ambiguity of the future, as technological progress, expanding international trade and the disintegration of traditional local structures threaten employment, wages and welfare. With the intensification of international competition, both developed and developing countries are losing the incentive to strengthen or even retain the system of social protection and encourage foreign investors to focus more on countries with low wages, irregular conditions of work and low social guarantees. Today workers are alarmed that the opportunities for accelerated growth and higher standards of living underlying globalization will not materialize at

59 *Grani globalizatsii*, s. 37 [Facets of Globalization, p. 37].
all. Therefore, the international community should make allowance for the social aspects of globalization, especially when designing the rules, norms and policies for managing the world economy.

Conclusion

It is becoming obvious that globalization will produce a different impact and consequences for different countries and regions of the world. As analysts point out, if the post-industrial type of development asserts itself only in North America and Western Europe, without going beyond the borders of western civilization, the world as a whole will inevitably be unstable, divided, and doomed to the most violent upheavals in the future.60

Today, when globalization is ascending vigorously, embracing new regions and areas of activity and establishing global institutions, it seems that this process is irreversible and has no alternatives. But historical experience is evidence of nonlinearity and variance of social development.61 For instance, as mentioned earlier, while international linkages and interdependence have intensified tremendously by the late nineteenth-early twentieth centuries, in the late nineteenth century protectionist trends gained a strong foothold in foreign trade whereby continental Europe closed its agricultural markets to the inflow of cheap American and Ukrainian grain, while the US set up tariff barriers to protect its industry from dangerous European competition. Restrictions on immigration were imposed by a number of countries, including the US, Argentina and Canada. For their parts, World War I and the Great Depression of the 1930s also greatly contributed to a turnaround in policy towards autarchy and isolation. Indeed, this turnaround in policy resulted from a ruinous economic crisis that was reinforced by the collapse of the gold standard, the absence of a single monetary unit, and curtailment of trade and that forced governments to concentrate on domestic economic and social problems.

The contemporary wave of globalization rolled across the world in the late twentieth century and immediately proved to be rife with contradictions and problems that have to be dealt with globally. This explains the launch in the late 1990s of a massive transnational movement of social protest, «anti-globalization.» There is nothing comparable to this movement in history, since it unites different strata of people — students, religious communities, environmental-

60 Megatrendy mirovogo razvitiya, s. 200 [Mega Trends of World Development, p. 200].
61 Grani globalizatsii, s. 41 [Facets of Globalization, p. 41].
ists, trade unions, NGOs, pacifists, and the like. The First and Second World Public Forums, held in 2001 and 2002 at Porto Alegre, Brazil, showed that anti-globalization is a public movement that rejects an American-style of globalization and exposes its «human face.» For the most part, the opponents of globalization do not deny the objective process of world development, but they protest its current forms that are influenced by the interests of powerful industrial states.

Many scholars and politicians today express doubts about the irreversibility of globalization. Of particular interest in this respect is the opinion of George Soros who notes: «The First World War destroyed the first version of a global capitalist system of the nineteenth century … There is a high probability that the modern version of global capitalism is approaching its logical end.»\(^{62}\) Indeed, scholars, politicians and public figures conclude that globalization, as a process of developing the interdependence of the world’s countries and regions, has reached a level where it is now necessary to raise the issue of establishing a global system of management. There are different points of view on this matter, but for the most part it is believed that a global system of management will be a multi-tier system of institutions that are capable of ensuring a manageable development under globalization. To date, such global management institutions are the United Nations, the International Labor Organization, the International Monetary Fund, the World Bank, the World Trade Organization, the OЭCD, G-8, G-10, Group of 22, and numerous NGOs. Ultimately, only a managed and regulated process of economic globalization can promote the growth of prosperity and equality for the majority of the world nations. Civilizations can be brought closer together only by establishing a world order based on law, dialogue of cultures, and the assertion of peace and tolerance.

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