

РОЗДІЛ 3. ПОЛІТИЧНІ ПРОБЛЕМИ МІЖНАРОДНИХ СИСТЕМ ТА ГЛОБАЛЬНОГО РОЗВИТКУ

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Megatrends of Global Development: Review of Foresight Reports

The megatrends of future world development are disclosed in the article based on the reports of the leading analytical groups, organizations, institutions. The line uniting all researches is definition of spheres on which it is analyzed the world development: climate change; demographic shifts; urbanization; natural resource scarcity; geopolitical shifts; technological transformation and innovation and inequality.
Key words: Global development, trends, megatrends, foresight, reports.

ресурсів, геополітичні зрушення, технологічні перетворення, інновації і нерівність.
Ключові слова: Світовий розвиток, тенденції, мегатренди, форсайт, доповіді.

В статье рассмотрены мегатренды будущего мирового развития, раскрытые в отчетах ведущих аналитических групп, организаций, учреждений. Объединяющей все исследования чертой является определение сфер, по которым анализируется развитие мира: изменение климата, демографические сдвиги, урбанизация, нехватка природных ресурсов, геополитические сдвиги, технологические преобразования, инновации и неравенство.

Ключевые слова: Мировое развитие, тенденции, мегатренды, форсайт, доклады.

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У статті розглянуто мегатренди майбутнього світового розвитку, розкриті у звітах провідних аналітичних груп, організацій, установ. Рисою, що об'єднує усі дослідження, є визначення сфер, за якими аналізується розвиток світу: зміна клімату, демографічні зрушення, урбанізація, нестача природних

Megatrends are the great forces in societal development that will very likely affect the future in all areas over the next 10–15 years. A megatrend is a large, social, economic, political, environmental or technological change that is slow to form. Once in place, megatrends influence a wide range of activities, processes and perceptions, both in government and in society, possibly for decades. They are the underlying forces that drive trends [1].

The purpose of this article was to identify central challenges to the future global development on the basis of foresight reports of world-famous organizations. Foresight is a convenient and evocative label for a very real trend in prospective studies as applied to strategy and policy planning. Its rise to prominence is driven by real needs and the failings of more traditional approaches. It refers more to an approach or philosophy of doing things rather than to specific techniques. One of the most important sets of practices Foresight comprises emphasizes interactive and participative methods of analysis and decision support.

Political aspects in modeling scenarios of global development marked by different approaches, which are generally defined methodological concepts researchers and various criteria that form the basis of the analysis. Among the dominant approaches include relatively moderate, or traditionalist, outlining global change as a relatively slow and evolutionary, and a radical who interpret polycentric economy world as the objective prerequisites of becoming multipolar international system. In the current political and socio-economic outlook and character vectors of international relations development in the twen-

ty-first century defined within different methodological approaches. First, apply methods of system modeling, based on principles of assessment of power-power components and structure of the political organization of International Relations. Secondly, the projections take into account global trends visible socio-economic changes that determine the need for adaptation of political actors and indirectly affect the potential of their development. Thirdly, future scenarios modeled processes by monitoring and forecasting geopolitical contradictions and application of conscious management of complex trade-offs between the great powers and major integration associations [2].

Among the many projections that periodically available by scientific institutions and research centers attract attention to a number of reports examined below.

The Millennium Project connects futurists around the world to improve global foresight. A one-year subscription has all the elements of the system of “Global Futures Intelligence System”, make suggestions, initiate discussions with experts around the world, and search through over 10 000 pages of futures research and 1300 pages of methods.

The Millennium Project has identified and has been updating the following 15 Global Challenges. They can be used both as a framework to understand global change and as an agenda to improve the future:

1. How can sustainable development be achieved for all while addressing global climate change? The IPCC reports that each decade of the past three was consecutively warmer and that the past 30 years was probably the warmest period in the northern hemi-

sphere over the last 1400 years. Even if all CO₂ emissions are stopped, most aspects of climate change will persist for many centuries. Hence, the world has to take adaptation far more seriously.

2. How can everyone have sufficient clean water without conflict? An additional 2,3 billion people received access to safe drinking water since 1990 – an extraordinary achievement – but this still leaves 748 million without this access. Water tables are falling on all continents, and nearly half of humanity gets its water from sources controlled by two or more countries.

3. How can population growth and resources be brought into balance? The current world population is 7,3 billion. It is expected to grow by another 1 billion in just 12 years and by 2,3 billion in 35 years. To keep up with population and economic growth, food production should increase by 70% by 2050.

4. How can genuine democracy emerge from authoritarian regimes? A global consciousness and more-democratic social and political structures are developing in response to increasing interdependencies, the changing nature of power, and the need to collectively address major planetary existential challenges. Meantime, world political and civil liberties deteriorated for the ninth consecutive year in 2014 (61 countries declined; 33 countries improved).

5. How can decision-making be enhanced by integrating improved global foresight during unprecedented accelerating change? Decision-makers are rarely trained in foresight and decision-making, even though decision support and foresight systems are constantly improving e.g., Big Data analytics, simulations, collective intelligence systems, indexes, and e-governance participatory systems.

6. How can the global convergence of information and communications technologies work for everyone? The race is on to complete the global nervous system of civilization and make supercomputing power and artificial intelligence available to everyone. How well governments develop and coordinate Internet security regulations will determine the future of cyberspace, according to Microsoft.

7. How can ethical market economies be encouraged to help reduce the gap between rich and poor? Extreme poverty in the developing world fell from 51% in 1981 to 17% in 2011, but the income gaps between the rich and poor continue to expand rapidly. In 2014, the wealth of 80 billionaires equalled the total wealth of the bottom 50% of humanity, and Oxfam estimates that if current trends continue, by 2016 the richest 1% of the people will have more than all the rest of the world together.

8. How can the threat of new and reemerging diseases and immune microorganisms be reduced? The health of humanity continues to improve; life expectancy at birth increased globally from 67 years in 2010 to 71 years in 2014. However, WHO verified more

than 1100 epidemic events over the past five years, and antimicrobial resistance, malnutrition, and obesity continue to rise.

9. How can education and learning make humanity more intelligent, knowledgeable, and wise enough to address its global challenges? Much of the world's knowledge is available – either directly or through intermediaries – to the majority of humanity today. Google and Wikipedia are helping to make the phrase “I don't know” obsolete.

10. How can shared values and new security strategies reduce ethnic conflicts, terrorism, and the use of weapons of mass destruction? The vast majority of the world is living in peace, and transborder wars are increasingly rare. Yet half the world is potentially unstable, intrastate conflicts are increasing, and almost 1% of the population (some 73 million people) are refugees or IDPs. The diplomatic, foreign policy, military, and legal systems to address the new asymmetrical threats have yet to be established.

11. How can the changing status of women help improve the human condition? Empowerment of women has been one of the strongest drivers of social evolution over the past century and is acknowledged as essential for addressing all the global challenges facing humanity. The percent of women in parliaments doubled over the last 20 years from 11% to 22%. However, violence against women is the largest war today – as measured by deaths and casualties per year – and obsolete patriarchal structures persist around the world.

12. How can transnational organized crime networks be stopped from becoming more powerful and sophisticated global enterprises? Transnational organized crime is estimated to get twice as much income as all military budgets combined per year. Distinctions among organized crime, insurgency, and terrorism have begun to blur, giving new markets for organized crime and increasing threats to democracies, development, and security.

13. How can growing energy demands be met safely and efficiently? Solar and wind energy systems are now competitive with fossil fuel sources. Fossil fuels receive \$5,3 trillion in subsidies per year compared to \$0,12 trillion for renewable energy sources, according to the IMF. Energy companies are racing to make enough safe energy by 2050 for an additional 3,5 billion people (1,3 billion who do not have access now, plus the additional 2,3 billion population growth).

14. How can scientific and technological breakthroughs be accelerated to improve the human condition? Computational chemistry, computational biology, and computational physics are changing the nature and speed of new scientific insights and technological applications. Future synergies among synthetic biology, 3D and 4D printing, artificial intelligence, robotics, atomically precise fabrication and other forms of nanotechnology, tele-everything, drones, falling costs

of renewable energy systems, augmented reality, and collective intelligence systems will make the last 25 years seem slow compared with the volume of change over the next 25 years.

15. How can ethical considerations become more routinely incorporated into global decisions? Although short-term economic “me-first” attitudes are prevalent throughout the world, love for humanity and global consciousness are also evident in the norms expressed in the many international treaties, UN organizations, international philanthropy, the Olympic spirit, inter-religious dialogues, refugee relief, development programs for poorer nations, Doctors Without Borders, and international journalism.

The Millennium Project’s futures research shows that most of these problems are preventable and that a far better future than today is possible [3; 4].

In September 2015 the world leaders adopted the Agenda for Sustainable Development by 2030 on The Summit on Sustainable Development of the United Nations, which contains 17 Sustainable Development Goals (SDGs) with associated targets to assess progress.

So there are six global trends:

1. Poverty and inequalities. Substantial progress has been achieved in multiple dimensions of poverty in the past decades, including the reduction of absolute poverty, decline in child and maternal mortality rates, and improved access to clean water and sanitation facilities. Income inequality between countries has also been falling, mainly due to the rapid growth in large developing countries. Despite these gains, the progress has been uneven and considerable challenges remain. These include rising income disparities within countries, persistent gender inequality and the recent resurgence of poverty across regions due to economic shocks and escalating conflicts.

2. Demography. The implementation of the 2030 Agenda will be affected by demographic dynamics, including population growth, ageing, migration and urbanisation. International migration has reached record levels. Internal migration is also growing, driving fast increases in urbanisation. On one hand, urbanisation fosters growth and provides a higher quality of life. On the other, it raises concerns about urban poverty, social tensions and disparities, changes in family patterns, and environmental risks.

3. Environmental degradation and climate change. Climate change is also projected to undermine food security, exacerbate existing health threats, adversely affect water availability and lead to increased displacement. In the coming decades, it is likely that this trend will continue, with more losses expected in livelihoods and assets. This underlines the link between poverty and vulnerability to natural hazards.

4. Shocks and crises. Global economic prospects remain subject to various risks, including increasing policy uncertainty in major advanced and emerging

economies, financial market disruptions and heightened geopolitical tensions. The world continues to face significant challenges in addressing health issues and under-nutrition, with nearly 800 million people suffering from hunger worldwide, and high risks of famine.

5. Financing for development. While resources allocated for development objectives are not adequate, there is no shortage of capital in the global economy. As a positive trend, the private sector’s involvement in philanthropic giving, corporate social responsibility initiatives, impact investing, and inclusive business approaches has been expanding.

6. Technological innovations. The biggest technological advancements over the past decades have occurred in health, education and the environment. While technologies have provided innovative solutions to many development problems, they have also added new challenges and risks, including security and privacy concerns, polarising opportunities and job replacement. Forecasts suggest that computers could do the work of 140 million knowledge workers by 2025, while 30% of middle-income jobs could be eliminated due to innovation in artificial intelligence.

The report points to four main factors that are crucial in addressing these trends: the importance of evidence in decision-making; policy coherence across the global goals and at different levels of policymaking and implementation; collective action to maximise the positive dynamics in these areas and minimise risk; and broad-based inclusive participation [5; 6].

Every four years since 1997, the National Intelligence Council has published an unclassified strategic assessment of how key trends and uncertainties might shape the world over the next 20 years to help senior US leaders think and plan for the longer term. This edition of Global Trends revolves around a core argument about how the changing nature of power is increasing stress both within countries and between countries, and bearing on vexing transnational issues. The main section lays out the key trends, explores their implications, and offers up three scenarios to help readers imagine how different choices and developments could play out in very different ways over the next several decades. Two annexes lay out more detail. The first lays out five-year forecasts for each region of the world. The second provides more context on the key global trends in train.

1. We are living a paradox: The achievements of the industrial and information ages are shaping a world to come that is both more dangerous and richer with opportunity than ever before. Whether promise or peril prevails will turn on the choices of humankind.

2. The next five years will see rising tensions within and between countries. Global growth will slow, just as increasingly complex global challenges impend. An ever-widening range of states, organizations, and empowered individuals will shape geopolitics. For

better and worse, the emerging global landscape is drawing to a close an era of American dominance following the Cold War.

3. Meanwhile, states remain highly relevant. China and Russia will be emboldened, while regional aggressors and nonstate actors will see openings to pursue their interests.

4. Nor is the picture much better on the home front for many countries. While decades of global integration and advancing technology enriched the richest and lifted that billion out of poverty, mostly in Asia, it also hollowed out Western middle classes and stoked pushback against globalization. Migrant flows are greater now than in the past 70 years, raising the specter of drained welfare coffers and increased competition for jobs, and reinforcing nativist, anti-elite impulses. Slow growth plus technology-induced disruptions in job markets will threaten poverty reduction and drive tensions within countries in the years to come, fuelling the very nationalism that contributes to tensions between countries.

5. Three stories or scenarios – “Islands”, “Orbits”, and “Communities” – explore how trends and choices of note might intersect to create different pathways to the future. These scenarios emphasize alternative responses to near-term volatility – at the national (Islands), regional (Orbits), and sub-state and transnational (Communities) levels.

6. As the paradox of progress implies, the same trends generating near-term risks also can create opportunities for better outcomes over the long term. If the world were fortunate enough to be able to take advantage of these opportunities, the future would be more benign than our three scenarios suggest. In the emerging global landscape, rife with surprise and discontinuity, the states and organizations most able to exploit such opportunities will be those that are resilient, enabling them to adapt to changing conditions, persevere in the face of unexpected adversity, and take actions to recover quickly. They will invest in infrastructure, knowledge, and relationships that allow them to manage shock – whether economic, environmental, societal, or cyber [7].

The Global Europe 2050 foresight report (2012) by European Commission presents and quantifies three scenarios that identify the main pathways Europe could follow in the coming decades: The Nobody cares scenario where Europe is in a “muddling through” process; the EU under threat where Europe is faced by an economic decline and protectionist reactions; the European Renaissance where the EU continues to enlarge and become stronger with more efficient innovation systems.

The first scenario is what if Nobody cares and Europe just muddles along with no clear vision or direction. In this scenario the analysis shows that economic growth will remain stubbornly lower than in the US and China, and that we will fail to exploit our potential for innovation and will, in consequence,

lose our position in terms of global competitiveness to other regions in the world.

At the other extreme, the EU under threat scenario paints a bleak picture of global economic decline followed by reactionary protectionist measures. The EU will see its share of world GDP fall by almost a half by 2050. Frequent food and oil crises will occur. EU Member States will become more inward-looking leading to inefficient fragmentation of effort that will touch every sector especially research – so vital for our future prosperity.

Fortunately, the third scenario, which the experts call the European Renaissance, describes a much more attractive pathway. The EU continues to enlarge and become stronger. It consolidates its political, fiscal and military integration. Innovation systems become more efficient with an increased role given to users. Investment in technological and services innovations will have a direct impact on economic and social development. Member States will work together to make the European Research Area fully functional with research agendas being decided in common across Europe. EU GDP almost double by 2050.

The research is based on the following six dimensions: global demographic and societal challenges; energy and natural resource security and efficiency, environment and climate change; economy and technology prospects; geopolitics and governance: EU frontiers, integration and role on the global scale; territorial and mobility dynamics; research, education and innovation [8].

The report “The world in 2050” (2012) by HSBC had their view of the world in 2050 The report identifies the Top 100 economies by size based on an economy’s current level of development and the factors that will determine whether it has the potential to catch up with more developed nations. The prime role of economy in development is explained by the fact that we are moving into a world where global growth will be powered by emerging economies, rather than held back by them.

According to forecasts of specialists of HSBC Bank rapid development of economy will continue. Experts note that the most serious demographic changes by 2050 will happen outside Europe. By 2050, the collective size of the economies currently deem “emerging” will have increased five-fold and will be larger than the developed world. And 19 of the 30 largest economies will be from the emerging world. At the same time, there will be a marked decline in the economic might – and potentially the political clout – of many small population, ageing, rich economies in Europe. Global growth will accelerate thanks to the contribution from the emerging economies. According to forecasts of analysts, by 2050 (on such indicators as the economy size, the income size per capita and the number of the population) will enter ten the leading countries of

the world: China, USA, India, Japan, Germany, Great Britain, Brazil, Mexico, France, Canada [9].

All considered reports dealing with details the seven megatrends for development: climate change and planetary boundaries; demographic shifts; urbanisation; natural resource scarcity; geopolitical shifts; technological transformation and innovation and inequality. The foresight trend, if anything, can help to embed in both decision makers and wider society and educational systems the inclination and means to consider the future as carefully as the past and the present.

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