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# Megatrends and their Implications in the Globalised World

#### Abstract

**RESEARCH OBJECTIVE:** The goal of the paper is to explain the essence of megatrends, to show global trends most often perceived as megatrends, and also to present some implications of these phenomena.

THE RESEARCH PROBLEM AND METHODS: The research problem can be expressed in the form of questions: Are megatrends as phenomena important? Can the method which is appropriate for conducting global trends be determined? The paper has a conceptual character; the main research methods that are applied include literature studies, the method of analysis, the method of comparative analysis and the descriptive method.

THE PROCESS OF ARGUMENTATION: The disquisition is composed of three major parts. The first concerns conceptualisation of megatrends: definitions, the nature of the phenomenon and also identification of phenomena approached as megatrends. The second part provides explanation why research of megatrends is important. The third part presents foresight as the most often applied research method of the discussed phenomenon.

**RESEARCH RESULTS:** With respect to definitions concerning megatrends there are no significant divergences. However, they occur at the attempt of classification of a particular phenomenon as

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a megatrend. Megatrends have the nature of permanent trends that in a growing degree permeate all areas of human life. Megatrends increase complexity, uncertainty and risk and accelerate feedback within and between economic, social, political, technological and environmental systems. Therefore it is necessary to monitor and assess these phenomena.

### CONCLUSIONS, INNOVATIONS AND RECOMMENDATIONS:

Prediction of megatrends can be an important element of the potential of an organisation, the key to economic decision-making, as well as for planning and building the strategy on different levels of economic and social area, from micro to global level. However research of megatrends is associated, among others, with the problems resulting from ambiguous classification, dynamic character of these phenomena, uncertainty they are accompanied by, and also application of an adequate research method. It is important to contribute to the development of a more innovative research agenda for effective projection of megatrends.

#### KEYWORDS:

megatrends, global economy, globalisation, foresight

### INTRODUCTION

Contemporary global economy is the arena of dynamic changes. Globalisation that underpins these changes is characterised by intensification of cooperation and strong relationships between the states and societies that constitute global community. Globalisation is the process of simultaneous expansion and enhancement of various types of relationships and associations in the system of global economy (McGrew, 1992). Global space is changing dynamically and permanently under the influence of strong global megatrends that are correlated and influence each other. These global powers shape the future of the whole world. They significantly determine the shape and directions of development of contemporary global economy. The power and the course of the process may change in various areas, and under the influence of various events.

Globalisation is being intensified and the threats resulting from dynamics and unpredictability of these processes bring the questions of presumable trend of global changes and forthcoming future in a more or less distant future. Predicting these processes is difficult and explicitly uncertain. However, the need of anticipation brings the necessity to formulate the forecasts that are on the other hand disputable and controversial.

The goal of the paper is to explain the essence and directions of current global trends that are called megatrends. It analyses the importance of these changes in contemporary global space, synthetically presents selected definitions, explains the importance of megatrends and reviews the classification of megatrends proposed in the literature. The paper also presents problems associated with research of megatrends and foresight as the most often applied research methods of the discussed phenomenon.

The paper has a conceptual character; the main research methods that are applied include literature studies, the analysis methods, the method of comparative analysis and the descriptive method.

### MEGATRENDS IN WORLD ECONOMY – DEFINITION AND AN ATTEMPT AT THEIR CLASSIFICATION

The notion of megatrends is a very broad term, often of interdisciplinary character. John Naisbitt was one of the first authors who introduced and popularised the notion of megatrends. In *Megatrends*. *Ten New Directions Transforming Our Lives* published in 1982 Naisbitt indicated the most important directions of changes occurring inside American economy. Naisbitt defined megatrends as the most important transformation processes observed in societies (Naisbitt, 1984). On the basis of observation and analysis of processes of change that took place in the 1970s and the 1980s in American society and economy, Naisbitt indicated 10 emerging new and profound changes that lead from industrial era to post-industrial era (information era).

Initially Naisbitt's research focussed on the analysis of large trends in American society but it started an intensive discussion in the circles of economists, political scientists and sociologists that concerned processes occurring in global space. Intensification and expansion of globalisation process brought dynamic growth in research in this area. New phenomena that are challenges facing contemporary societies became the basis of broader research works concerning megatrends no longer in national dimension but in worldwide dimension.

Megatrends are large movements that become great forces in societal development they define the present world and have potential to shape the future (McGregor, 2012).

Megatrends can be defined as a group of trends, phenomena or processes of global nature that have occurred in the process of civilizational development of man. It has diversified determinants and permeates all areas and spheres of human life including economic, social, political and cultural relationships as well as human awareness (Muszyński, 2001). Megatrends are analysed on a global scale and go beyond narrow territorial borders of countries while determining functioning of the whole societies and conditioning major directions of development of humanity (Marek & Białasiewicz, 2011; Mariański, 2016; Muszyński, 2001; Pieriegur, 2015).

Another definition perceives megatrends as important phenomena including various scientific disciplines (for example economics, sociology, demography, ecology, psychology, technology and culture) that while being subject to feedback, create dynamic and often unpredictable environment. These trends have more precisely determined directions of change and additionally, they are analysed from the point of view of their impact on the environment (Borodako, 2009).

Megatrends can also be approached as all phenomena (positive and negative) that have a great power of impact (of global and supranational character) on human environment and their surroundings, i.e. economy, social relationships, institutions, culture and natural environment. This phenomenon is observed in a long period. It is characterised by large probability of occurrence, but there is a possibility of change and correction as a result of impact of other similar powers (Prandecki, 2012). Megatrends are phenomena of worldwide nature that fundamentally determine transformations of contemporary civilisation in its major areas. The area of influence of global megatrends is very extensive and includes geopolitical, social and technological environment, as well as natural environment.

If the trend is approached as a long-lasting development trend, the megatrend is a much stronger tendency (Prandecki, 2012). A megatrend is composed of all the phenomena concerning one area, for example demographic changes that are formed of other trends like for example world population growth, population ageing or the

phenomenon of worldwide migration and mobility. The phenomena that form a megatrend are shaped slowly, but once they are formed, they have a great impact on many areas of social and economic life (Mariański, 2016). These phenomena become an integral element of contemporary economies and permeate all areas of life of individuals and societies. They shape life and its quality, and determine a general direction of development of contemporary societies (Muszyński, 2001).

Megatrends are characterised among others by their variability, co-occurrence, i.e. mutual overlapping of various trends, but at the same time the emergence of countertrends as a reaction to the leading trend or megatrend. The impact and the scope of countertrends is significantly smaller than of megatrends.

Research area of megatrends nowadays refers to three dimensions: global, regional and national. Determining the level or dimension which the research concerns is the starting point for research. Such an approach makes the analysis of megatrends complicated because in either case, the analysed dimension ought to be identified first. And therefore other phenomena will be global megatrends; others will occur on supranational level (for example European Union), others on the level of economy and some others on micro-economic level, with reference to, for example, enterprise management or consumer behaviour.

Numerous definitions of megatrends can be presented, however it can be ascertained that from the point of view of definition there are no great differences. There is no similar convergence and coherence with reference to classification of a particular global phenomenon as a megatrend. Classification of global megatrends is not univocal and the review of literature and research in this sphere allows for stating the existence of quite significant divergences. Classifications presented below are only an illustration of research in this area.

Table 1 Some megatrends recognized in the literature

	cosmized in the mermine
Naisbitt (1982)	Shift from industrial society to strategic resources of information society Shift from forced technology to high-tech/high touch Shift from national economy to world economy Shift from short term to long term Shift from centralization to decentralization Shift from institutional help to self-help Shift from representative democracy to participatory democracy Shift from hierarchies to networks Shift from north to south Shift from either/or to multiple option
Lee, Ribeiro, Olson & Roig (2007)	Globalisation Digitalization Deregulation / Privatization Changing demographics Changing industry mix Convergence wave Commoditization of processes Increasing importance of emerging economies
Muszyński (2001)	The demographic explosion accompanied by huge, global migration Economy and communications globalisation The scientific and technological progress and significance for contemporary human outlook The next industrial revolution wave based on computer science and automation The end of traditional national state and movement of discrepancies and conflicts towards sphere of intercivilizational (cross-cultural) confrontation The growing ecological danger and exhaustion of resources
Larsen (2006)	Ageing Globalization Technological development Prosperity Individualization Commercialization Health and environment Acceleration Network organizing Urbanization
The US National Intelligence Council <sup>1</sup> (2012)	Individual empowerment and growth of the global middle class Diffusion of power Demographic patterns Food, water, energy nexus

<sup>1</sup> R.A. Slaughter performed a critical analysis of megatrends proposed by The NIC while claiming that at least Individual Empowerment is disputable in the presence of expansion of government control over civil society (Slaughter, 2013, p. 354).

Gregosz (2012)	Pressure for consolidation is rising in the west There are new power centres emerging Population growth develops into a real challenge Rising resource consumption demands action Digitisation warps, accelerates, connects everything
Tinnilä (2012)	Change in population age structure and urbanization Pace of societies towards round-the-clock use of services and consumption Increased ICT pervasiveness Consumer power expansion due to availability of information in digital networks E-commerce, e-shopping and mobile service expansion Globalization of businesses with consequent structural changes due to competition, including changes in service businesses
The European Environment Agency (2015)	Diverging global population trends Towards a more urban world Changing disease burdens and risks of pandemics Accelerating technological change Continued economic growth? An increasingly multipolar world Intensified global competition for resources Growing pressures on ecosystems Increasingly severe consequences of climate change Increasing environmental pollution Diversifying approaches to governance
Pieriegud (2015)	Smart city Big data Connectivity& convergence, connected living Artificial intelligence, automation, robotics Urbanization Global population growth Ageing population Sustainability Resource scarcity Renewable energy Globalization Sharing economy
Kleiber (2015)	Demographics changes Globalization and changing character of commodity and services markets Access to resources – the access to natural resources and their use caused by climate changes The development of knowledge society and creativity along with the dynamics of innovative technological change The growing awareness of global responsibility
Retief et al. (2016)	Demographics Urbanization Technological innovation Power shifts Resource scarcity Climate change

Source: Own study based on the literature review.

On the basis of presented review it can be stated that some trends are mentioned in majority of classifications. The most frequently mentioned trends include changing demography, urbanization, climate change, continued globalization, scarcity of resources, fast technology and innovation, or change of civilisation megatrend that is associated with the shift of world economic activity of developed West to the countries of Asia and Middle East. Other megatrends are also mentioned, but less frequently. They include growth of global income and social inequalities, growing problem of debt on a global scale, growing importance of individual, increased importance of health and wellbeing, increased impact of consumer technology adoption and consumer service demands, entrepreneurship rising expansion of Sovereign Wealth Funds (SWFs) that change the direction of capital flow – from developing emerging markets to mature economies, and from state capital to private corporations, shaping a three-dimensional monetary system, as well as change in relationships between major currencies, i.e. dollar, euro and renminbi.

Global economy is constantly facing new challenges. Among them global economic downturn and slowdown of the volume of world trade that is the result of fluctuations in demand on emerging markets, prevailing low prices of raw materials, wave of currency depreciation all over the world or protectionist trends and isolationist economies ought to be indicated. Contemporary wave of protectionism on the level of national state, but also existing forms of protectionism applied on supranational level are the reaction to global economic crisis of 2008 (e.g. rescue packages for governments, public aid for banking sector and other participants in financial markets, pumping the empty money into economy). Although it has been 8 years since the beginning of crisis, economic growth is still weak, and expected economy "recovery" has not appeared so far. The period of internal economic and social problems, or conducted election campaign (e.g. current presidential campaign in the USA) make isolationist tendencies even more intensive. The decision of Great Britain concerning exit from the structures of the European Union (the so-called Brexit) is an explicit expression of these tendencies. Brexit intensifies uncertainty related to the functioning of the European Union, influences the world trade and economic policy, and thus constitutes the threat to stability of the global economy. Other challenges, such as the threat to world security, migration crisis in Europe and many others are also occurring.

Dividing megatrends from the point of view of the area of their influence into technological, demographic, social, ecological, geopolitical and economic (including megatrends referring to changes in consumer behaviour) facilitates analysing the nature and importance of trends.

Megatrends can also be analysed from the point of view of importance of their impact into those that promote existence of mankind, and those that form a threat to it. Such a classification is adopted by the authors of the Report "Poland 2000" who state that "if it is assumed that survival of mankind is a primary goal, in practice, positive megatrends that bring its implementation and strengthen hope for a better future, and negative megatrends that hinder this process can be distinguished" (Kuźnicki, 1995, pp. 49-50).

Megatrends supporting humans include such phenomena as expansion and strengthening of market economy and the process of democratisation, increase of pro-ecological awareness, and advantage of humanism in human life, development of information society and development of IT sector. However, not all global trends support man, some of them can form a threat to human existence, like for example threats in the sphere of natural environment, megatrends of overpopulation and demographic paradoxes, increase in civilisation distance between wealthy countries (of the North) and poor countries (of the South), intensification of poverty and food globalism that results from both demographic and ecological megatrends (that come from devastation and pollution of natural environment) and determines the size of food production and its quality, the problem of raw materials and power, the vision of thermonuclear war or new dangerous megatrends such as terrorism and international crime, epidemics and civilisation diseases, and also increase in unemployment in contemporary societies (Marek, & Białasiewicz, 2011; Muszyński, 2001).

## IMPLICATIONS OF GLOBAL TRENDS, OR WHY DO MEGATRENDS MATTER?

Knowledge concerning shaping trends in the future allows not only for the analysis of phenomena on the level of global economy, but also on the level of integrating economies, national or regional economies, on micro-economic level, mainly on the level of enterprises (both supranational corporations and also the smaller ones), and also from the point of view of consumer behaviours. While planning actions and goals in long time horizon, governments, institutions and companies must take global changes into consideration.

Megatrends can constitute a starting point for the analysis of global economy but at the same time they can form the basis for creation of scenarios, and construction of Early Warning System. They can also become the starting point for strategic analysis, corporation strategy, as well as innovative, marketing and product activities on market or in the area of human reactions (Larsen, 2006).

Public authorities that are the entities responsible for shaping and implementing a broadly perceived economic policy must take global changes into consideration in their decisions. Dynamic changes in the world space ought to be accompanied by rational and prospective policy of social and economic development, worked out and implemented on various levels, including supranational, national, regional level and the level of local government. An accurate description of megatrends is useful for diagnosing social and economic needs and determination of trends of the state modernisation, but also for determining activities that allow for absorbing or strengthening the influence of global trends. If in the case of megatrends that are favourable from the point of view of humanity the consequences will be generally positive, some megatrends can be the reason for significant perturbations in global space, or they can form a serious threat to the whole mankind. Knowledge about the trends supports searching for the ways to enhance the positive trend and in the case of negative trends, to create solutions and develop scenarios that would allow for retaining, reversing or slowing down the trend or minimising its effects (Larsen, 2006; Prandecki, 2012).

However, a division into positive and negative trends is not explicit because the same global phenomenon can bring different results. Scientific and technical revolution allows for development of information society with the advantage of intellectual over manual work. At the same time, it dramatically changes the functioning of the sector of industry and services. Intense automation, robotics and computerisation of production processes accelerate growth of production, improve economic results. However they reduce the demand for labour while intensifying the problem of unemployment. Mass urbanisation creates the opportunity for development of business but at the same time it constitutes a great challenge to the policy of spatial development among others.

Knowing future trends concerning dynamics of population growth, real help can be considered, particularly in less developed countries that may not be able to ensure a minimum well-being to their citizens. Society ageing as a trend, and increase in the 60+ population can be perceived as a chance and not only as a threat to social and economic development. Knowledge about urbanisation processes allows for determining activities and policy of spatial development of an agglomeration and for absorbing unfavourable phenomena resulting from this process. Therefore it is necessary to monitor and assess these phenomena.

As Prandecki states, the analysis of megatrends allows for recognition and assessment of changes in the environment, but also for identification of opportunities and threats in the future (2012). This allows for formation of effective scenarios that apply the potential of changes.

### GLOBAL MEGATRENDS RESEARCH PROBLEMS

Reliable projections of future events are encumbered with large uncertainty and unpredictability. Dynamics of changes of development processes on all levels and in all areas of social and economic life make the forecasts a very difficult challenge. As it is stated by Kołodko: "The future is first of all changeable and the scale of this changeability is going to increase" (Kolodko, 2015, p. 41). For Kołodko "(...) the future is an enormous collection of potential and real phenomena and processes ranging from totally unpredictable to explicitly obvious ones" (Kolodko, 2015, p. 42).

Precise description of the future seems to be impossible, therefore it is often emphasised that attempts at forecasting individual behaviours and future changes are doomed to fail. This is because even the general phenomenon that seems to be inevitable and certain, can be slowed down or even stopped as a result of unpredictable events (for example the terrorist attack of 11th September 2001 slowed down globalisation process) (Larsen, 2006; Prandecki, 2012). Identifying a megatrend shows possible but not certain future. As a result of occurrence of some event or some counter-force, every megatrend can fundamentally change its direction (Larsen, 2006). Therefore, megatrends are probable but not absolutely certain future because they always have an element of uncertainty. Thus it is necessary not only to indicate the megatrend but also to monitor it regularly as this allows for the assessment of reliability of the forecast, possible reaction and taking adjustment actions (Prandecki, 2012).

Projecting the future in a long time horizon is possible firstly with reference to phenomena of a general nature such as for example megatrends. Detailed analyses concerning for example the scale and pace of changes, their impact and long-term results bring problems.

Equivocal classification also complicates conducting research of megatrends. Trends are frequently not clearly enough separated from their causes. A trend can be approached as a phenomenon of change of specific attitudes in time, but the determinants that affect its shape are not a megatrend in themselves, but its cause (Prandecki, 2012).

The problem also concerns the method that investigates the shaping of trends. The methods of projections of the future are subject to evolution, from classical deterministic methods based on decomposition of time series, through stochastic models, to the models that apply artificial intelligence for predictions in integrated approach (Mach, 2013). In the turbulent environment, at high dynamics of changes and growing intensity of non-continuous changes, these methods are not satisfactory (Mach, 2013; Pieriegud, 2015). According to Larsen, in research concerning the shaping of the future, three essential elements (3P) are taken into consideration: the predictable, the possible and the preferred (2006). While applying various methods, this research, indicates future changes that are possible, predictable and preferred.

In the case of projecting the future, the method of *foresight* type is particularly important. It is the method increasingly more often applied in research of global trends.

Slaughter defines foresight as "the ability to create and maintain a high-quality, coherent and functional forward view and to use the insights arising in organisationally useful ways; for example: to detect adverse conditions, guide policy, shape strategy" (Slaughter, 1999, p. 287). Conway understands foresight as "the capacity to think systematically about the future to inform decision making today. It is a cognitive capacity that we need to develop as individuals, as organisations and as a society" (Slaughter, 2015, p. 2). According to Keenan and Miles, foresight is "a systematic, participatory, future intelligence gathering and medium-to-long-term vision-building process aimed at present-day decisions and mobilising joint actions" (Keenan & Miles, 2001, p. 3).

Foresight consists in prospective confronting of various points of view of specialists from various areas of science, business, administration, politics, and non-governmental organisations that do not focus on maximising profit but basically on non-lucrative goals. Foresight aims at identifying the area of strategic research of new techniques and technologies from the point of view of their applicability for social and economic development. This research does not only refer to the knowledge in the strict sense, but also to adopted values or represented interests (Kołodko, 2015).

Foresight is an efficient tool to analyse the unpredictable environment (Ejdys, 2013). It allows for anticipation and shaping of future strategies for organisations (broadly perceived), but also for forecasting opportunities and threats resulting from influence of global trends. More and more frequently it constitutes the basis for formation of strategies (therefore strategic foresight) on microeconomic level (enterprises), mezo level (regions, provinces) or macroeconomic level (Jasiński, 2007). Therefore division into technology foresight, national foresight, regional foresight, industry foresight or corporate foresight is distinguished (Pieriegud, 2015).

A lot of foresight methods are presented in the literature (Jasiński, 2007; Keenan & Miles, 2001; Pieriegud, 2015; Popper, 2008; Porter, 2010). The most important determinant for selection of the method is its nature. This classification allows for identification of qualitative, quantitative or semi-quantitative methods.

The qualitative methods are based on subjectivity and creativity. They refer to judgements, opinions, beliefs or attitudes. Results of these methods are difficult to be univocally verified or confirmed. Brainstorming, interview, citizens panels, conferences, scenario writing, expert panels, literature review, scenario, surveys, SWOT analysis, weak signals or wildcards are most often mentioned. The quantitative methods apply statistics and other data, e.g. statistical analyses, benchmarking, bibliometrics, modelling, or trend extrapolation. The semi-quantitative methods which include cross-impact and Delhi key technologies, multi-criteria analysis, quantitative scenarios, stakeholder analysis are mentioned (Popper, 2008).

Expert panels, scenarios, trend extrapolation, future workshops, brainstorming, Delphi, interviews, key technologies, questionnaires and/or surveys and SWOT analyses are among 10 most frequently applied foresight methods (Economic and Social Council, 2015, p. 4). According to Popper's research: literature review, expert panels and scenarios, workshops, brainstorming, trend extrapolation, interviews, questionnaires, surveys, Delphi, key technologies, megatrend analysis and SWOT analysis are foresight methods that are most often applied (Popper, 2008). From the point of view of classification by the frequency and nature of methods, qualitative methods are predominant in foresight research.

Applying diversified methods, data sources and also methods of their acquisition allows for reducing unpredictability of the environment (Ejdys, 2013). This makes research of the foresight type increasingly more popular in projecting changes.

Research concerning foresight shows that selection of methods is a multi-factor process which is not always coherent or systematic. This process is dominated by intuition, impulsiveness, premonition, and sometimes lack of experience (Popper, 2008). Because of versatility of methods and their generality, results of research should be approached with caution.

### CONCLUSION

Megatrends approached as macro-economic powers shape the global space. These trends affect an individual as they shape their future,

but at the same time they affect the whole humankind while going beyond national borders and continents. This is because they change societies, cultures and economy. In the forthcoming perspective economic, social, demographic, technological and ecological changes are going to be of predominant significance. However it is difficult to indicate megatrends in an explicit and exhaustive way. Changing demography, urbanization, climate change and scarcity of resources, continued globalization, technological development and shift in global economic power occur among the most frequently mentioned, however researchers and institutions working in this subject area also show other trends. Growing isolationist and protectionist trends that are becoming an important element of the policy pursued by some economies are translated into decreasing dependence on commercial exchange and economic policy of other countries. At the same time, these trends affect the occurring megatrends. Therefore, the analysis of megatrends ought to take these changes into consideration.

These changes are enormous and on the one hand they constitute the largest challenges, and on the other hand, the opportunities facing contemporary societies. They determine our current and future worlds; therefore interactions occurring between them are important.

If possible, anticipation of trends that will allow for taking a reasonable attitude towards changes and starting appropriate actions is of the key importance both for national economies as well as for global economy. In this perspective, the analysis of megatrends is becoming extremely important.

Megatrends may constitute a tool that explains with high probability the fundamental phenomena that can occur in a long term. Although predicting global trends in the perspective of several decades brings a lot of controversies, diagnosing them can be useful from the point of view of determination of the future social needs and thus, directing development of economies. Projecting the directions of megatrends shaping can be the key determinant for making economic decisions as well as planning and forming future development strategy on various levels of social and economic life, starting from micro to global level. Knowledge about megatrends can also be useful in analysis of future development of economy sectors.

The research of megatrends is associated, among others, with the problems resulting from ambiguous classification, dynamic character

of these phenomena, uncertainty they are accompanied by, and also application of an adequate research method.

From the point of view of occurring global trends, not only identification of the trend but also threats or opportunities it generates is a fundamental issue.

Accurate identification and description of megatrends allows for reliable analysis of the progress of the trend in the future. The analysis of megatrends applies to a long-term, thus a risk of inaccuracy appears. The inherent diversity, complexity and uncertainty of global megatrends require a broad approach and various methods. Foresight methods that make reference to various research methods are currently more and more often applied. The foresight methods could be an effective tools enabling to anticipate and analyse unpredictable environment but the foresight methods are selected in a multi-factor process dominated by the intuition, impulsiveness and – sometimes inexperience.

Without any doubts, foresight research is useful; however it is necessary to develop models that would consider various techniques, and also to create a more innovative agenda that would allow for effective projection of the future and describing as well as explaining megatrends in the context of dynamic environment.

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