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# The importance of current megatrends and trends in the opinion of X and Z generations

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#### Abstract

Contemporary changes in the world can be described by looking for similarities in phenomena occurring in different places. Currently, such megatrends include, among others: Demographic Shifts, Multipolarization of the World, Symbiocene, Bioera, and Mirror World. They are strongly related to technological progress, digitalization, and changes in societies. The aim of this article is to answer the question of whether the development trends are perceived as equally important by representatives of generations X and Z. Their attitude will be related to the willingness to accept the anticipated and already occurring changes. The research was conducted in 2023 on a sample of 500 people from generations X and Z. It was found that regardless of their generation, the respondents considered all megatrends current and important. They rated the importance of the Mirror World megatrend as the lowest, which means they are skeptical about the rapid domination of relationships by those taking place mainly on the Internet. The trends perceived as important included Mental Well-Being, Loneliness, Depopulation, and Roboticized Life, while the following were considered less important: Deglobalization, Medicine Resistance, Nation-State Collapse, and Identity Nomads. By comparing the assessments of trends by the representatives of the X and Z generations, it was

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found that the importance of each of the examined trends was assessed higher by younger people from Generation Z. For the most current trends, the differences in the assessments are statistically significant.

#### 1. Introduction

A megatrend is a concept relating to crucial development trends. According to Kożuch et al. (2023), this term was first used in the book by J. Naisbitt and P. Aburdene entitled *Megatrends 2000: Ten New Directions for the 1990s.* According to the authors, a megatrend is: "significant and lasting economic, social, political and technological changes that take shape slowly, but when they occur, for some time they influence all areas of life and, consequently, the future shape of this world" (Naisbitt and Aburdene, 1990).

Megatrends are essential (with a large area of impact) and lasting forces that influence and change the economy, society, and culture. These are global forces that affect all people. They are interconnected and influence each other (EY, 2015). Recognizing these forces and areas that change, allows us to better understand the challenges and opportunities that countries and businesses face worldwide (Bojar and Kłosowski, 2015).

A megatrend is similarly defined by Muszyński (2001): "economic, social, political and cultural phenomena arising in the process of development of human civilization, having various conditions, affecting humanity as permanent tendencies." According to Prandecki (2012), phenomena classified as megatrends should have a high chance of implementation. However, the possibility of their correction as a result of other forces should be taken into account. The supra-local scope of megatrends, long duration, and significant impact on the socio-economic environment is usually emphasized (Przybylski, 2019).

# 2. Currently important megatrends and trends — literature review

There are many examples of megatrends in the literature. Table 1 shows the current sets indicated by selected authors. It is worth noting that the individual proposals contain many common elements. These include population growth, urbanization, ageing of society, resource depletion, the rapid development of technology, digitization, and sustainable development.

Globalization processes resulted mainly from global trends, such as increasing similarity of countries in terms of consumer demand, increased liquidity on international capital markets, decreasing customs barriers, technological improvements, innovations, and the emergence of new competitors (Stonehouse, Hamill,

Authors	Megatrends
M. Camdessus (2019)	Old world, young continent A world of constant growth The breakthrough of emerging economies Galloping urbanization The flourishing of international trade Globalization of finance The rise of the middle class in developing economies Depletion of natural resources Climate change Rapid technological progress The new face of violence
Płonka, Kożuch, Stanienda (2022)	Digitization Globalization Urbanization and suburbanization Demographic shifts Sustainable development and green transformation of the economy Knowledge-based economy
ptsp.pl (2023)	World population growth Increasing migrationsAgeing of societies in developed countriesGrowing social polarizationA growing of middle-class Increased urbanizationGrowing demand for energy Digitization and automation of workClimate change Environmental pollution and loss of biodiversity Decreasing food security Rising international tensions The crisis of democracy and new models of governance

Table 1. Megatrends examples proposed by various authors

Source: authors' elaboration.

Campbell, Purdie, 2001). A common area is also pursuing sustainable development and saving non-renewable resources.

Identified megatrends often result from aggregating similar changes of smaller scope and significance. Such phenomena are considered trends. According to Natalia Hatalska, who prepared the Trend Map at the Infuture Institute in 2023, it is worth paying attention to the Mirror World megatrend related to the ongoing digitization of life (Wiązowska, 2023). It enters into the most significant number of relationships with other megatrends and digitization is changing the world in social, political, and economic aspects. Many trends seem to be mutually exclusive, which confirms the complexity of the world, which is a world of "and-and," not an "or-or" world (Naisbitt, 1997). It is worth noting that, considering our ex-

pectations, we can identify positive and negative trends in relation to these expectations (Przybylski, 2019).

The Trend Map prepared at the Infuture Institute in 2023, which we used in our research, contains five megatrends that present an assessment of the environment, society, technology, regulatory, and economic changes. These are:

1. Mirror World (intensive and constant transfer of various activities at all possible levels to the digital world).

2. Multipolar World (related to the loss of social cohesion, deglobalization, and an increasing number of conflicts).

3. Bioage (in which humans change nature and living organisms in such a way that they meet their needs, related to the intensive development of genetic engineering, tissue engineering, nanotechnology, biotechnology, etc.).

4. Symbiocene (where humans again become an equivalent part of the ecosystem).

5. Demographic Shifts.

The map also shows time perspectives relating to the highlighted trends (Table 2). These are the perspectives:

- new normal (currently leading trends),

— reactive zone (short-term perspective, the trend needs 1 > 5 years to become a leading trend),

— innovation zone (medium-term perspective, the trend needs 5 > 20 years to become a leading trend).

Setting time frames for individual phenomena is necessary so that entities operating in the market can take appropriate actions. According to the author of the Trend Map, the current perspective, i.e., the new normal zone, allows us to define areas that must be addressed most urgently. If it turns out that a company does not respond in any way to trends in the new normal zone, it is lagging behind the needs of the market or the competition's offer. When it comes to the reactive zone, i.e., a 1–5 year perspective, knowledge of trends from this perspective helps develop the organization's strategy because it is assumed to have a view of several years (Wiązowska, 2023).

On the Trend Map 2023, 50 trends were assigned to individual megatrends (Table 2). What is new, is showing the interdependence between megatrends and trends. Some trends are repeated within individual megatrends, e.g., Mental Well-Being appears in four out of the five megatrends mentioned.

As we mentioned earlier, in addition to megatrends, there are also trends. These are more detailed characteristics of areas and directions of change than megatrends. They are characterized by relatively high stability and describe changes in phenomena in a given direction (Wojtkiewicz, 2016). However, trends do not have as much power and influence as megatrends. Compared to a megatrend, a trend is easier to recognize, develops quickly, and has a relatively limited im-

	Megatrends							
Zones	Demo- graphic Shifts	Mirror World	Symbiocene	Bioage	Multipolar World			
		Trends a	ssigned to indivi	dual megatrends				
New normal	Loneliness Mental Well-Being Migration Zalpha "Silver Tsunami"	Mental Digitalization Mental Mental Well-Being Uell-Being Loneliness Zalpha Techcontrol		No-Code*	Polarization TechControl Drop Digital Inequalities Conflict Digitalization Loneliness Human Right to Science Cold War 2 Mental Well-Being Antytech Migration Backlash Against Science Resilience			
Re- active zone	Identity Nomads Depopula- tion	Decentralization Non-Human Rights Dematerializ- ation Roboticized Life Generative AI* Technosocialism Antytech Interoperability	Social Economy Non-Human Rights Circular Economy E-Mining Decoupling Self- Sufficiency*	Medicine Resistance Biomaterials Bioenergy	Europe Reindus- trialization Decoupling Europe Deindus- trialization Hyperlocality Deglobalization Disillusionment with Democracy Nation-State Collapse			
Innov- ation zone		Quantum Economy Metaverse Economy Biodigital Systems Internet of Beings	Bioarchitec- ture* Internet of Beings	Bioarchitecture Bioeconomy Lab Grown Editable Nature Biodigital Sys- tems Internet of Beings Human+* Depopulation*	Self-Sufficiency			

#### Table 2. Megatrends and trends according to Trend Map 2023

Note: \*some of the trends are placed on the map on the border of two or more megatrend zones. Source: authors' elaboration based on: https://www.infuture.institute/mapa-trendow/. pact area. It causes evolutionary changes, not revolutionary ones, like a megatrend (Pieriegud, 2015).

In economic terms, a trend can be defined as systematic changes in the level of a given phenomenon, most often caused by the development of productive forces, for example, as a result of technical and scientific progress (Rutkowska, 2018). A trend is also called a search and compensatory movement that appears automatically in the economy and unnoticeably adjusts values to the system of new requirements (Zmyślony, Niezgoda, 2003). The importance of trends can be analyzed from a micro- and macroeconomic perspective, including examining their impact and manifestations in consumer behavior on the market (Gibbs, 1990; Mróz, 2013; Alagierska, 2018; Tkaczyk, 2012), the functioning of enterprises and institutions and entire economies (Przybylski, 2019). An example may be consumers following the trend of consumerism but also the emergence of counter-trends, e.g., sustainable consumption.

The characteristics of the trend are (Szulc, 2018):

- the relative stability in the short term, in the long term volatility appears;

— co-occurrence, i.e., mutual overlap of trends;

- divergence - the formation of countertrends.

Nowadays, trends impact marketing activities and the management of market-oriented enterprises. Identifying trends is especially important when a company operates in sectors where rapid technological changes are observed and product innovations occur frequently.

Introducing solutions by companies that consider current trends (new normal, reactive zone) may enable them to take a leading position in a given area in the future. Trends included in the innovation zone are less critical for the current functioning of the organization. However, considering phenomena expected in the future is important from a strategic perspective, giving an impulse to undertake development activities.

The inspiration and basis for conducting this research was the Trend Map 2023 published by the Infuture Institute. The co-author of the map, N. Hatalska, was included by the *Financial Times* in the New Europe 100 list, appreciating her skills in forecasting trends (2017). As part of this research, it was decided to check whether the identified megatrends and trends are equally important for generations X and Z representatives: people with experience and those just starting their professional lives. Generation Z calls itself the post-millennial generation, the prosperity generation. People from this group differ in many ways from people from Generation X. At the same time, people from these groups cooperate in various areas, including professional work, service relationships, etc., which sometimes becomes a cause of conflicts resulting from different perceptions of the importance of phenomena (Talarek, 2020; Oprzędek, 2023). The characteristics of people from generations X and Z are summarized in Table 3.

Generation	Characteristics
Generation X	A generation of skeptics, rebels, and contestants. Instead of the hierarchy desired by their parents, there was opposition to authoritarian attitudes. It is worth not- ing that at that time, technological development accelerated, which changed the perception of complex competencies from the sense of absolute professionalism towards the human being's self-development, empathy, interpersonal communi- cation, relationships, freedom of choice, and action. It is also believed that people from this generation are very well educated.
Generation Z	A generation that has been in harmony with digital technologies since birth. Tab- lets, smartphones, screens, and interactive services are natural companions in their everyday lives. All the mentioned "digital riches" are at the user's fingertips. This generation is entering the labor market, which is quite mysterious; we don't know much about it yet. Experts' diagnoses indicate that these are people of above-aver- age talent, resourcefulness and intelligence, with high ecological awareness. How- ever, a characteristic feature of this generation is a lack of patience, possibly due to immediacy effects on desire.

Table 3. Characteristics of Generation X and Generation Z

Source: own elaboration based on Gawina, M. (2022).

# 3. Aim and methods

The aim of the article is to answer the question of whether there are differences in the perception of the importance of the identified megatrends (definitions were presented to the study participants) by representatives of the young (Z) and mature (X) generations. In the research, respondents were also asked to express their opinion on the potential importance of selected phenomena currently described as trends. Trends were considered from the following three perspectives: the current status, perspectives for 5–10 years, and perspectives for over 10 years.

The megatrends and trends used in the study were adopted according to the Trend Map 2023. In the survey, all megatrends and twelve trends were selected to assess their validity and development potential empirically. These were the trends that are repeated in the most significant number of megatrends, i.e., 1) Mental Well-Being, 2) Loneliness, 3) Digital Inequalities, 4) Deglobalization, 5) Nation-State Collapse, 6) Disillusionment with Democracy, 7) Depopulation, 8) Roboticized Life, 9) Medicine Resistance, 10) Identity Nomads, 11) Metaverse Economy, and 12) Biodigital Systems.

Selected trends are included in the new normal zone (1-3), the reactive zone — trends 4-10, and the innovation zone (11-12).

In this research, the following research hypothesis was formulated: "The assessment of the importance of megatrends depends on the respondent's generation."

The research was carried out in March 2023, using the survey method, on a sample of 500 respondents selected using the snowball method. IBM SPSS Statistics 29 was used to analyze the acquired data. To determine the significance of the relationship between the age of respondents and the assessment of selected trends, the Chi<sup>2</sup> test of independence was used.

The examined sample consisted of people from generations X and Z, i.e., born in 1965–1980 and 1997–2012, respectively. There were 305 people in Generation X, and 195 in Generation Z. The youngest research participant was 17 years old, and the oldest was 58. The average age of the respondents was 38 years old. The median age was 46 years.

The study involved 314 women (62.8%) and 186 men (37.2%). They indicated both the city (54.4% of respondents) and the countryside (45.6% of respondents) as their place of residence. The largest share in the analyzed sample were people still studying/learning (34.2%), the next group were people with secondary education (25.4%), higher education and postgraduate education (22.2%). Respondents with vocational education were exclusively from Generation X; they accounted for 18.2% of the sample.

#### 4. Research results

In the first stage of the study, respondents from Generation X and Generation Z were asked to assess the importance of individual megatrends: Mirror World, Multipolar World, Bioage, Symbiocene, and Demographic Shifts (Table 4). It was evaluated whether there are differences in the assessment of their importance depending on the respondents' generation.

In the opinion of Generation Z, all the indicated megatrends are currently important (the total ratings were: important — 4 and very important — 5). The following results were obtained for individual megatrends: Demographic Shifts (84%), Bioage (80.5%), Symbiocene (78%), Multipolar World (67.7%) and Mirror World (51.2%). In the case of representatives of the X generation, for each of the megatrends mentioned, the total rating of important and very important indications was lower and amounted to: Demographic Shifts (74%), Bioage (48.5%), Symbiocene (43%), Multipolar World (57.8%), and Mirror World (33.1%).

The weighted average ratings calculated for individual current megatrends indicate that younger people (Generation Z) consider most megatrends important; for three of the five phenomena examined, the rating is 4 and higher, and only Mirror World was rated moderately important (score 3.4). However, representatives of Generation X rated the importance of all analyzed phenomena lower than Generation Z. They considered three megatrends to be of medium importance (scores 2.9– 3.4) and one (Demographic Shifts) as important. The ratings for the Multipolar World megatrend were the closest and at an average level (3.6 and 3.8). The differences between the weighted average ratings for individual megatrends ranged from 0.2 to 0.7.

The Chi-square test of independence was used to determine whether respondents from Generation X and Z perceive the importance of individual megatrends equally. For the megatrends Bioage, Mirror World, Symbiocene and

	Importance rating						Chi <sup>2</sup> test results*		
Generation	very little impor- tant (1)	not impor- tant (2)	neither impor- tant nor not impor- tant (3)	impor- tant (4)	very impor- tant (5)	aver- age	Chi <sup>2</sup> <sub>emp.</sub>	<i>p</i> -value	
		Mirro	r World (%	6 of respor	nses)				
Generation Z	4.1	16.4	28.2	37.4	13.8	3.4	22.241	< 0.001***	
Generation X	9.8	26.9	30.2	21.6	11.5	2.9			
		Multipo	lar World	(% of resp	onses)				
Genaration Z	1.0	7.2	24.1	42.6	25.1	3.8	11.137	0.025**	
Generation X	3.9	14.4	23.9	34.8	23	3.6			
		Bio							
Genaration Z	1.5	5.6	12.3	61.5	19	3.9	54.407	< 0.001***	
Generation X	3.9	16.7	30.8	32.8	15.7	3.4			
	Symbiocene (% of responses)								
Genaration Z	0.0	4.1	17.9	54.4	23.6	4.0	62.170	< 0.001***	
Generation X	3.3	20.3	32.5	30.5	13.4	3.3			
	Demographic Shifts (% of responses)								
Genaration Z	1.5	1.5	12.8	40.5	43.6	4.2	6.240	0.182	
Generation X	1.6	4.3	17.4	41	35.7	4.0			

Table 4. Distribution of answers regarding the importance of individual megatrends (%)

Note: N = 500, df = 4.

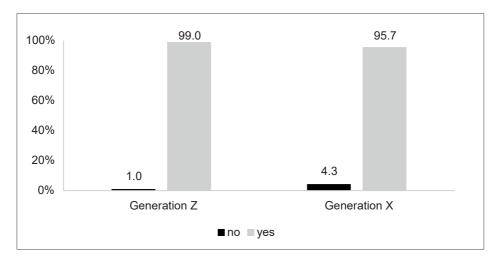
Source: authors' research.

Multipolar World, it was found that there is a statistically significant relationship between membership in a generation and the assessment of the importance of the megatrend (*p*-value is less than 0.05). Representatives of Generation Z considered them significantly more important than those of Generation X. Only when assessing the importance of the Demographic shifts megatrend respondents' opinions did not differ significantly depending on the generation. The obtained results confirm that the importance and significance of individual phenomena are assessed differently by representatives of the surveyed generations.

In the next research stage, respondents were asked to assess whether they considered the phenomena indicated as trends significant. The study asked about the 12 most frequently repeated trends: three from the new normal zone, seven from the reactive zone and two from the innovation zone.

#### 4.1. New normal perspective

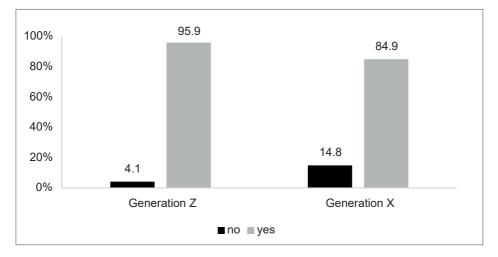
Respondents were asked whether they consider new normal zone trends such as Mental Well-Being, Loneliness and Digital Inequalities important. In the case of the Mental Well-Being trend, 97% of all respondents admitted that they consider it an important phenomenon, including 99% of Generation Z and 96% of Generation X (Figure 1).

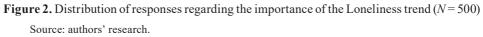


**Figure 1.** Distribution of responses regarding the importance of the Mental Well-Being trend (N = 500)

Source: authors' research.

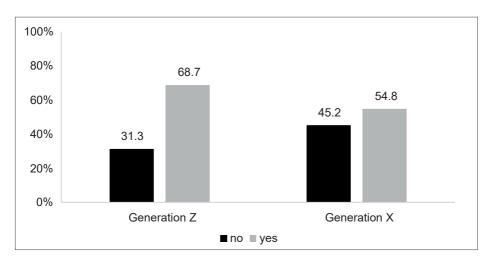
Another trend studied was Loneliness. As many as 89.4% of all people participating in the study indicated it to be an important phenomenon (Figure 2).





In the case of the Loneliness trend, 96% of Generation Z respondents indicated that it was an important phenomenon, compared to 85% of Generation X respondents. The assessment of the importance of this trend was significantly different depending on the generation ( $chi^2_{emp.} = 14.97$ , *p*-value < 0.001, *df* = 1, N = 500) (see Table 6).

The Digital Inequalities trend received, both in the opinion of people from Generation Z and Generation X, a significantly lower number of "yes" responses than previously analyzed (Figure 3). Only 69% of respondents from Generation Z and 55% of people from Generation X believed that this is currently an important phenomenon. At the same time, the assessment of this trend was significantly different between generations (chi<sup>2</sup><sub>emp.</sub> = 9.68, *p*-value = 0.002, *df* = 1, *N* = 500) (see Table 6).



**Figure 3.** Distribution of responses regarding the importance of the Digital Inequalities trend (N = 500)

Source: authors' research.

#### 4.2. Reactive zone perspective

Participants were also asked about the importance of trends in the reactive zone as part of the research. These were seven trends: Depopulation, Deglobalization, Nation-State Collapse, Medicine Resistance, Roboticized Life, and Identity Nomads. These social and political phenomena are expected to have a growing impact on the functioning of economies. Table 5 shows the distribution of responses regarding trends that may be important in 5–10 years.

Two of the three political trends, i.e., Deglobalization and Nation-State Collapse, have little chance of becoming leading in the opinion of people from both

Trends for reactive zone		Yes
		responses in %
Deglobalization will become a leading phenomenon in 5-10 years		
Generation Z	57.90	42.10
Generation X	60.30	39.70
Depopulation will become a leading phenomenon in 5-10 years	I	
Generation Z	41.50	58.50
Generation X	46.20	53.80
Roboticized Life will become a leading phenomenon in 5-10 years	I	
Generation Z	36.90	63.10
Generation X	44.90	55.10
Medicine Resistance will become a leading phenomenon in 5-10 years	3	
Generation Z	50.80	49.20
Generation X	51.80	48.20
Identity Nomads will become a leading phenomenon in 5-10 years		
Generation Z	38.50	61.50
Generation X	57.70	42.30
Nation-State Collapse will become a leading phenomenon in 5-10 year	rs	
Generation Z	76.40	23.60
Generation X	71.80	28.20
Disillusionment with Democracy will become a leading phenomenon i	n 5–10 years	
Generation Z	40.00	60.00
Generation X	44.60	55.40

Table 5. Distribution of answe	rs regarding the importance	e of trends in the next 5–10 years

Note: N = 500

Source: authors' research.

Generation X and Generation Z. The answer confirming that Nation-State Collapse will be a very significant phenomenon in the medium term was given by 28.2% of representatives of Generation X and 23.6% of Generation Z. Respondents from Generation Z (42%) expressed more positive indications for the Deglobalization trend than Generation X (39.7%). The Disillusionment with Democracy trend received similar average ratings (60% and 55.4%). The increasing importance of the mentioned trends is observed in Poland and other European countries, constituting elements of the multipolar world megatrend.

The next analyzed trend was Depopulation from the demographic shifts area. This trend is considered negative and occurs mainly in European countries. The assessment of the change in the significance of the Depopulation trend in the coming years was similar in the eyes of both the younger and older generations. The number of positive indications for both groups was 50–60%.

Roboticized Life as a technological and social trend was considered to have potential for development by 63% of respondents of Generation Z and 55% of Generation X. This result seems to be relatively low.

A significant trend in the period of the so-called post-pandemic phenomenon has become Medicine Resistance. 49% of Generation Z and 48% of Generation X indicated this trend is important. The fact that this is an important issue can be proven by implementing the National Antibiotic Protection Program, a program dedicated to the fight against medicine resistance.

For six trends from the reactive zone, it was found that their perception does not differ significantly between generations (see Table 6).

To determine whether the "generation" variable is statistically significantly related to the variables assessing the development opportunities of the examined trends, Chi-square tests of independence were performed to evaluate each of the discussed trends (Table 6). A discussion of the results is provided in the text in the individual trend paragraphs. It is worth emphasizing, however, that there is no constant trend in the difference in grades. Surveyed respondents from the X and Z generations perceive the possibility of becoming most important in the coming years (5–10 years) of trends such as Mental Well-Being, Loneliness, Digital Inequalities and Identity Nomads differently. They also differ in their assessment of trends that may become leading in the longer perspective (up to 20 years), which are Metaverse Economy and Biodigital Systems. In the case of other 7 out of 12 trends, no significant differences in assessment were observed.

Trend	Chi <sup>2</sup> <sub>emp.</sub>	N	df	<i>p</i> -value	Independence
Mental Well-Being	4.28	500	1	0.039**	no
Loneliness	14.97	500	2	< 0.001***	no
Digital Inequalities	9.68	500	1	0.002***	no
Deglobalization	0.28	500	1	0.597	yes
Depopulation	1.06	500	1	0.303	yes
Roboticized Life	3.13	500	1	0.077	no
Medicine Resistance	0.05	500	1	0.821	yes
Identity Nomads	17.62	500	1	< 0.001***	no
Nation-State Collapse	1.29	500	1	0.254	yes
Disillusionment with Democracy	1.02	500	1	0.312	yes
Biodigital Systems	9.60	500	1	0.002***	no
Metaverse Economy	15.92	500	1	< 0.001***	no

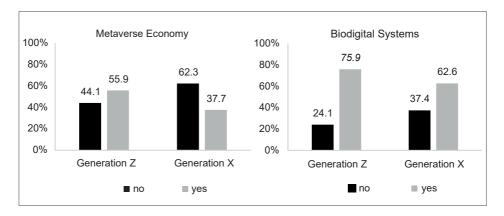
**Table 6.** Results of the Chi<sup>2</sup> test for the "generation" variable and assessment of the development chances of the selected trends

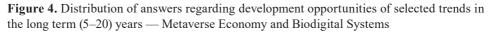
Source: authors' research.

#### 4.3. Innovation zone perspective

Specific trends belonging to the innovation zone are not currently widespread and highly complex, and it takes time to be adequately understood by everyone. These include, for example, Biodigital Systems and Metaverse Economy. Hence, they have been classified as trends whose importance will increase in the long run. As part of the study, respondents were asked to indicate the chances that the trends mentioned will become trends of great importance in the long term.

The respondents perceived both trends selected from the innovation zone significantly differently (Table 6). Representatives of Generation Z mostly gave positive answers about development opportunities in the area of Biodigital Systems and the area of Metaverse Economy. They assessed that in the long term, Metaverse Economy has a chance to become a leading trend (56%), as did Biodigital Systems (76%). Representatives of the X generation perceive the opportunities for developing Biodigital Systems as significantly lower but positively (approx. 63%). In comparison, they appreciate the Metaverse Economy to a lesser extent (38% of responses to yes) (Figure 4).





Source: authors' research.

# 5. Discussion

As stated in our research, the importance of individual trends and megatrends is perceived differently by generations X and Z representatives. However, it should be noted that some of the assessed trends were considered important, regardless of the respondents' affiliation with a specific generation. This is due to the high intensity of the phenomenon described by the trend, which makes it more noticeable and aware by respondents.

For example, assessing the significance of the Demographic Shifts megatrend confirms that regardless of age, respondents notice changes in the social, legal, and economic environment related to the activity of older people, which is referred to as the "silver tsunami." These changes concern health care, finances, and the professional activity of older adults. The Demographic Shifts megatrend also includes such essential trends as Loneliness and Mental Well-Being, as well as the trend regarding the importance of migration.

Mental well-being is a feeling resulting from fulfillment and satisfaction with our lives and a low stress level. It is described in the following six dimensions: self-acceptance, personal development, purpose in life, control over the environment, autonomy, and positive relationships with others (Niśkiewicz, 2016). The factors that strengthen the importance of the Mental Well-Being trend are the observed multiplication of crises. The global health crisis (the COVID-19 pandemic) and economic and political crises (wars, terrorism) overlap. These phenomena cause a weakened sense of security and anxiety, which leads to an increased number of cases of depression and contributes, for example, to an increase in the number of suicides. According to research results published in various studies, mental well-being is essential for young people. It is one of the most important aspects considered when planning private and professional life. In business reality, prevention supporting the good mental health of young employees will be critical (Cpl Poland, 2022).

According to Loneliness trend. This trend means not only the phenomenon of building social relationships via the Internet but also, for example, touching, smelling, and tasting within the Internet of the senses. Experts predict that by 2030, the internet of senses will become more widespread thanks to technologies such as artificial intelligence (AI), virtual reality (VR), and augmented reality (AR) (Ericsson, n.d.). Digitization is already taking place at the expense of social life (Nowak, 2023). The widespread of various digital channels for access to information and events leads to limited live meetings and natural interactions with other people.

The Digital Inequalities trend is also a current phenomenon. Such inequalities result from differences in access to the Internet, level of digital skills, and different motivations to use the Internet. In the long run, this leads to diversification of life opportunities (from education through work to consumption), even more so as the importance of digital services in social and economic life grows. The relatively low assessment of the importance of the Digital Inequalities trend in our research results from the fact that many older respondents grew up during the intensive development of technology. They use it efficiently (electronics, social media) and are still willing to learn new things, so digital solutions do not constitute a significant barrier for them. However, almost 55% of respondents from this age group indicate the importance of this phenomenon, observing that not everyone keeps up with

changes in the IT area (mobile applications, artificial intelligence). They notice many people who cannot cope with new digital solutions. Young representatives of Generation Z see that their parents' generation does not keep up with "novelties" at the same pace as they do, which is why almost 69% of the responses say this trend is essential.

Relatively low assessment of the Roboticized Life trend by respondents from both generations. This result seems relatively low compared to the tendency observed in society to automate processes and use robots in all areas of life (Kruczkowska, 2017). Perhaps automation and robotization are not noticeable to many because they are largely implemented in operational processes in enterprises.

It is worth noting that there are no differences between representatives of the surveyed generations in the assessment of trends in the sphere reactive zone. It means that changes in the importance of trends in several years perspective are assessed similarly. This may be because knowledge and understanding of future phenomena come from analyses of the directions of development in the world that are equally available to everyone. Significantly different opinions among respondents from different generations were obtained only for the Identity Nomads trend. In the opinion of Generation Z, it has a greater chance of becoming a leader (61%) than in the opinion of Generation X (42%). The differences in assessment are probably related to the fact that the phenomenon of identity fluidity is more known and accepted in Generation Z, known for its far-reaching individualism and independence (Hatalska, 2016).

It should be noted that the assessment of the importance of trends observed in this research is not fully consistent with the results obtained by other authors. For example, aspects of robotization and automation seem to be underestimated. It should also be remembered that the assessment of changes in the world around us also results from the difference between generations in relying more on the information provided rather than on their own observations (Hatalska, 2016).

#### 6. Conclusions

1. Megatrends are phenomena that affect countries and entire economies. They influence societies by changing the political, demographic, social, religious, educational, environmental, and technical environment. Their identification allows us to recognize and adapt to future changes or limit their impact.

2. The currently observed changes in economic conditions and the rapid development of technology are important premises for researching current and future trends. In this context, building and analyzing a trend map is essential for obtaining knowledge about the future. Information obtained based on that map can help mitigate undesirable trends in the case of negative trends or implement longterm development plans in the case of positive trends. 3. The results of empirical research on assessing the importance of current megatrends (Demographic Shifts, Multipolar World, Symbiocene, Bioage and Mirror World) confirm that the described megatrends were selected accurately. Most respondents (60–70%) believed these are important phenomena. The exception was the megatrend Mirror World, whose importance ratings were medium and low.

4. It was found that there is a significant difference in the perception of the importance of megatrends by people belonging to different generations. Younger people assigned higher importance to each megatrend; the differences were statistically significant. The exception was the Demographic Shifts megatrend, which was considered highly important by representatives of both generations surveyed. This may be because changes related to this phenomenon can already be directly observed in the environment, especially the ageing of societies and migrations.

5. Trends in the environment were assessed differently by respondents depending on the generation. However, there are no clear relationships for all the examined trends. From the current — new normal — perspective, both Mental Well-Being, Loneliness and Digital Inequalities were considered important, with the Digital Inequalities trend having a relatively low importance rating. The ratings differed significantly depending on the generation.

6. The future importance of trends established for a dozen or more years was assessed as lower than the current ones. On average, 40 to 60% of respondents considered them important. The exceptions were the Nation-State Collapse and Deglobalization trends, whose chances of becoming significant were assessed by respondents as low — at approximately 20-40%. Similarly, the opportunities for developing the Metaverse Economy trend were considered low. No significant differences were found in assessing trends from a medium-term perspective. Perhaps the respondents do not have enough experience in this field.

7. To summarize the entire study, Generation X representatives rated the chances of achieving high importance for each megatrend and trends lower. In most cases, the differences in assessment were statistically significant.

## References

- Alagierska, K. (2018). Trendy konsumenckie i ich implikacje marketingowe w branży modowej. Debiuty Naukowe Studentów Wyższej Szkoły Bankowej, 18, 31–50.
- Bojar, E., Kłosowski, G. (2015). Metody identyfikacji i ocena wpływu megatrendów na biznes lokalny i globalny. Przegląd Organizacji, 12(911), 27–35. https://doi.org/10.33141/po.2015.12.04.

Camdessus, M. (2019). Rok 2050. Wyzwania i prognozy. Warszawa: Wydawnictwo Nieoczywiste. Cpl Poland. (2022). Zoomersi w pracy, czyli jak pokolenie Z podbija rynek pracy w Polsce. Cpl

- Poland. Retrieved June 24, 2023, from https://www.landing.cpl.com/Zoomersi-w-pracy/pobierz-raport.html.
- Ericsson.com. (n.d.). *Redefining Business*. Retrieved May 23, 2023, from https://www.ericsson.com/ pl/about-us/new-world-of-possibilities/redefining-business.

- EY. (2015, April 20). Raport EY: Sześć globalnych megatrendów, które wywrą wpływ na społeczeństwa, kulturę i gospodarkę. infoWire.pl. Retrieved May 12, 2023, from https://www.infowire. pl/generic/release/294826/raport-ey-szesc-globalnych-megatrendow-ktore-wywra-wplyw-na-spoleczenstwa-kulture-i-gospodarke
- Financial Times. (2017, November 23). New Europe 100: Eastern Europe's emerging technology stars. *Financial Times*. Retrieved April 26, 2023, from https://www.ft.com/content/10da5832ce4b-11e7-9dbb-291a884dd8c6.
- Gawina, M. (2022, May 18). My z Pokolenia BB, X, Y, Z, czyli co łączy, a co dzieli młodych i starszych. Pokoleniowa analiza eksperta UwB. Uniwersytet w Białymstoku. Retrieved April 28, 2023, from https://www.uwb.edu.pl/aktualnosci/my-z-pokolenia-bb-x-y-z-czyli-co-laczy-a--co-dzieli-mlodych-i-starszych-pokoleniowa-analiza-eksperta-uwb-4578.html.
- Gibbs, P. (1990). *Jak robić interesy we wspólnocie europejskiej* (B. Jawłowska, trans.). Warszawa: Nowe Wydawnictwo Polskie Ypsylon.
- Hatalska, N. (2016). *Identity Nomads*. Infuture Institute. Retrieved March 23, 2023, from https://www.infuture.institute/raporty/identity-nomads/.
- Infuture Institute. (n.d). *Trends Map.* Infuture Institute. Retrieved March 23, 2023 from https://www.infuture.institute/mapa-trendow/.
- Kożuch, M., Rosiek, K., Wąsowicz, K. (2023). Współczesne megatrendy jako kreatory przedsiębiorczości komunalnej. Kraków: Attyka s.c. J. Jagla, W. Skrzypiec.
- Kruczkowska, M. (2017). Chiński inżynier zbudował sobie żonę i wziął z nią ślub. *Gazeta Wybor-cza*. Retrieved May 25, 2023, from https://www.wyborcza.pl/7,75399,21593898,chinski-inzy-nier-zbudowal-sobie-zone-i-wzial-z-nia-slub.html.
- Mróz, B. (2013). Konsument w globalnej gospodarce. Trzy perspektywy. Warszawa: Oficyna Wydawnicza SGH.
- Muszyński, J. (2001). Megatrendy a polityka. Wrocław: ATLA 2.
- Naisbitt, J. (1997). *Megatrendy: dziesięć nowych kierunków zmieniających nasze życie* (P. Kwiatkowski, trans.). Poznań: Zysk i S-ka.
- Naisbitt, J., Aburdene, P. (1990). *Megatrends 2000: Ten New Directions for the 1990's*. New York: William Morrow & Company.
- Niśkiewicz, Z. (2016). Dobrostan psychiczny i jego rola w życiu człowieka. *Studia Krytyczne*, 3, 139–151.
- Nowak, K. (2023, March 14). Osamotnienie, czyli nowa normalność. Tracimy społeczeństwo ludzi, którzy ze sobą współpracują. *Forsal.pl*. Retrieved March 24, 2023 from https://www. forsal.pl/lifestyle/technologie/artykuly/8680011,internet-istot-symbiocen-trendy-2023-przyszlosc-hatalska.html.
- Oprzędek, K. (2023, June 23). "Roszczeniowe zetki" rozwścieczyły pracodawców. "Rozwydrzone dzieci, które nie dorosły do pracy". *TOKFM.pl*. Retrieved July 18, 2023 from https://www. tokfm.pl/Tokfm/7,103085,29822242,roszczeniowe-zetki-rozwscieczyly-pracodawcow-rozwydrzone.html.
- Pieriegud, J. (2015). Wykorzystanie megatrendów do analizy przyszłościowego rozwoju sektorów gospodarki. In J. Gajewski, W. Paprocki, J. Pieriegud (eds.), *Megatrendy i ich wpływ na rozwój sektorów infrastrukturalnych* (8–25). Gdańsk: Instytut Badań nad Gospodarką Rynkową — Gdańska Akademia Bankowa.
- Płonka, M., Kożuch, M., Stanienda, J. (2022). The Fourth Industrial Revolution and contemporary technological, economic and cultural megatrends. In M. Płonka (ed.), *Public Goods and the Fourth Industrial Revolution: Inclusive Models of Finance, Distribution and Production* (7–34). London: Routledge. https://doi.org/10.4324/9781003274681-2.
- Prandecki, K. (2012). Rola megatrendów w przewidywaniu przyszłości. Przyszłość. Świat-Europa-Polska, 2, 75–94.

- Przybylski, B. (2019). "Megatrendy" we współczesnym świecie. Perspektywa europejska. Forum Pedagogiczne, 9(2), 223–236. https://doi.org/10.21697/fp.2019.2.16.
- ptsp.pl (n.d). *Czym są megatrendy?* Polskie Towarzystwo Studiów nad Przyszłością. Retrieved May 25, 2023 from https://www.ptsp.pl/megatrendy/.
- Rutkowska, A. (2018). Współczesne megatrendy w konsumpcji. In A. Kucner, G. Pacewicz, A. Rutkowska, R. Sierocki, J. Sobota, M. Sternicka-Kowalska, R. Szulc, M. Świgoń, P. Wasyluk (eds.), *Trendy. Interpretacje i konfrontacje* (116–125). Olsztyn: Wydawnictwo Uniwersytetu Warmińsko-Mazurskiego.
- Stonehouse, G., Hamill, J., Campbell, D., Purdie, T. (2001). Globalizacja. Strategia i zarządzanie (M. Albigowski, J. Dąbrowski, trans.). Warszawa: Felberg SJA.
- Szulc, R. (2018). Znaczenie trendów w poznawaniu i rozumieniu zmian w otoczeniu rynkowym człowieka. In A. Kucner, G. Pacewicz, A. Rutkowska, R. Sierocki, J. Sobota, M. Sternicka--Kowalska, R. Szulc, M. Świgoń, P. Wasyluk (eds.), *Trendy. Interpretacje i konfrontacje* (87– 107). Olsztyn: Wydawnictwo Uniwersytetu Warmińsko-Mazurskiego.
- Talarek, M. (2020, October 20). Czynniki kształtujące motywację pracowników należących do pokolenia X, Y oraz Z — skrót pracy dyplomowej. Multis Multum. Retrieved April 26, 2023 from https://www.wszib.edu.pl/multis/czynniki-ksztaltujace-motywacje-pracownikow-nalezacychdo-pokolenia-x-y-oraz-z-skrot-pracy-dyplomowej/.
- Tkaczyk, J. (2012). Trendy konsumenckie i ich implikacje marketingowe. *Handel Wewnętrzny*, 58(2), 126–133.
- Wiązowska, K. (2023, April 23). "Warto znać trendy, aby je wyprzedzać". Rozmawiamy z Natalią Hatalską. *Bankier.pl.* Retrieved April 26, 2023 from www.bankier.pl/wiadomosc/Warto-znac--trendy-aby-je-wyprzedzac-Rozmawiamy-z-Natalia-Hatalska-8526517.html.
- Wojtkiewicz, M. (2016). Analiza trendów w otoczeniu marketingowym. In G. Rosa, J. Perenc, I. Ostrowska (eds.), *Marketing przyszłości: od ujęcia tradycyjnego do nowoczesnego* (77–90). Warszawa: Wydawnictwo C.H. Beck.
- Zmyślony, P., Niezgoda, A. (2003). *Popyt turystyczny. Uwarunkowania i perspektywy rozwoju*. Poznań: Wydawnictwo Akademii Ekonomicznej w Poznaniu.