Part II

DEMOGRAPHIC ISSUES FROM AN INTERDISCIPLINARY PERSPECTIVE

Chapter 3

Macroeconomic Impacts of Demographic Change

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Abstract

This chapter explores the relationship between demographic change and the macroeconomic condition of society. It describes three approaches to population growth that are present within economic theory and demonstrates how the last decades have offered evidence that demographic growth should generally not be seen as a threat to socio-economic development. In addition, the chapter discusses selected aspects of the economy in the context of the influence of demographic decline. In connection to this, it presents the simplified scheme of the process of the influence of a decrease in fertility and population ageing on economic stagnation. Finally, the impact of the quality, structure, and stability of the family environment on the economy is examined in the context of positive outcomes such as human and social capital.

Keywords: demographic change, economy, macroeconomic impact, development, family.

1. Introduction – demography is destiny

At present, there are increasingly fewer doubts that ongoing demographic changes, such as a decreasing number of marriages, low fertility, and the ageing of societies have already brought about a substantial shift in the size, age structure, and productivity potential of different populations. A related concern is that this 'demographic winter', as it is sometimes called, has a significant impact on the global

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economy, which places the future safety and welfare of our societies at grave risk. Interestingly, the consequences of these negative demographic changes have been neglected and ignored for decades. It is certain that 'the world is undergoing a major demographic upheaval with three key components: population growth, changes in fertility and mortality, and associated changes in population age structure'.[1]

A lack of demographic awareness has also been witnessed in macroeconomic policy debates and discussions, as if the desire and will to have children is some kind of 'physical law' independent from cultural shifts and individual decisions. There is still some difficulty in accepting that it is no longer reasonable to hold such an assumption. In economics, 'most growth models assume that population grows at a constant rate – sometimes zero for simplicity – and many business cycle models fix the size of population in analyzing aggregate demand'.[2] In a sense, the unprecedented demographic shift we are experiencing seems to be a new and unknown phenomenon – at least in the world's most recent history.

One of the signs of the growing awareness of the seriousness of demographic challenges is a new document prepared by the Joint Research Centre and presented by the European Commission in 2023. This is an important turning point because, until now, the European Commission has been rather sceptical of addressing depopulating demographic tendencies (caused by decreasing fertility) and treating them as issues that are potentially dangerous for the stability and future development of the European Union. The document states that,

> [w]hile population growth implies almost by definition higher emissions, at least in the short term, the intrinsic inertia in demographic processes implies that solutions to reduce emissions need to come from reducing inequalities, the greening of the economy and a change in consumption rather than from interventions on fertility.[3]

The demographic consequences for the macroeconomic situation will be more severe in richer countries. According to Bloom, 'in the coming decades, demographics will be more favorable to economic well-being in the less developed regions than in the more developed regions'.[4] In general, it seems that most experts in this field agree that 'population change will have profound implications for national, regional, and global economies'.[5] This chapter discusses the connection between demographic processes and the macroeconomic dimension, pointing out the main issues and aspects of this problem to offer a general overview of the questions and dilemmas in this field. Nevertheless, due to space limitations, it is not possible to describe and

1 Bloom, 2020, p. 6.
2 Cf. Yoon, Kim, and Lee, 2014, p. 21.
3 European Commission, 2023b, p. 1.
4 Bloom, 2020, p. 9.
5 Mason and Lee, 2022, p. 51; cf. Wesley and Peterson, 2017, p. 12.

analyse herein all the specific issues and aspects of the complex macroeconomic domain and their relationship to demographic processes.

2. Does the economy depend on demography? Three different approaches in the economic theory

One of the reasons that it is still not widely accepted that demography drives the economy is the ongoing dispute among economists about the influence of demographic processes on economic outcomes. It should be noted that this debate has a long tradition, dating from at least the times of Thomas Malthus, who warned that population growth would be the main reason for future catastrophic hunger and poverty. Nevertheless, it is important to mention that Malthus based his theory on the assumption of slow technical progress and the belief that the quantity of the resources for growing food was and would continue to be fixed. In the 1790s, Malthus expressed his negative view on the possibility of socio-economic development in light of uncontrolled population growth, writing thus:

> Taking the population of the world at any number, a thousand millions, for instance… the human species would increase in the ratio of 1, 2, 4, 8, 16, 32, 64, 128, 256, 516, etc. and subsistence as 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, etc. In two centuries and a quarter the population would be to the means of subsistence as 512 to 10; in three centuries as 4,096 to 13, and in 2000 years the difference would be incalculable.[6]

Since Malthus's time, this 'Malthusian', and later 'neo-Malthusian', way of thinking has been present in socio-economic policies. History has shown that despite unprecedented demographic growth, humanity has never before experienced such incredible flourishing or such increases in living standards being accessible to so many people. To confirm this perspective, it is worth recalling the words of Noble Prize laureate in Economic Sciences, Gary S. Becker, who, at the end of his life, wrote,

> … we economists (in particular the neo-Malthusians among us) have concentrated on a few potentially harmful effects of population growth on the economy, and ignored what are often – indeed, I think, usually – more important, positive effects. … [P]opulation growth has positive effects and has demonstrated increasing returns, as in the beneficial incentives to medical innovation of larger populations. Unfortunately,

6 Malthus, 1798, cited in Bloom, Canning, and Sevilla, 2003, p. 3.

> insufficient academic attention has been devoted to these positive effects, and this oversight should be corrected.[7]

To comprehend the whole picture of this discussion, which continues mainly in the fields of economics, demography, and ecology, it is useful to present the parties participating in it. In general, we can distinguish three standpoints on the relationship between population growth and macroeconomic impacts. We will start from the 'neutral theory', which does not acknowledge a strong link between demographic processes and economic outcomes. Consequently, this theory concentrates mainly on the potential of the market mechanism to stimulate the economy, leaving aside demographic issues. Economists in this area, as Bloom, Canning, and Sevilla write, 'have been more interested in Adam Smith, and in his narrative of the power of the market, than in Thomas Malthus's dire predictions about population'.[8] What is important is the fact that this theory was the dominant view from the mid-1980s, as Bloom et al. remind us when citing Kelley, who claims that it was already a very influential theory among academics from the 1950s.[9] In a sense, we may ask if our current demographic challenges were not partly influenced by the lack of what can be called 'demographic awareness' among the economists and social policy practitioners who subscribed to neutral theory. In this context, the following statement in *The Demographic Dividend* by Bloom et al. seems to point at this problem:

> [P]opulation neutralism, which has focused on the effects of population *growth*, has encouraged economists to neglect demography when considering the future prosperity and development of the world's countries.[10]

Next among the relevant theories is the so-called 'pessimistic theory', which is built upon the concepts of Malthus, whose views were described earlier in this chapter. This line of thinking has continued, with the most popular and representative publications on this theory being written in the second half of the 20th century. The first of these publications was *Population Bomb* written by Paul Ehrlich in 1968, which was followed by *The Limits to Growth* by Donella H. Meadows, Dennis L. Meadows, Jørgen Randers, and William W. Behrens III in 1972, and *Global 2000 Report to the President: Entering the Twenty-First Century*, which was developed in the United States by The Council on Environmental Quality and the Department of State from 1980–1981. The message communicated by all of these publications was based on the Malthusian concept of the negative impact of (uncontrolled) demographic growth, which was assumed to be a threat and danger to the flourishing and development of society.

7 Becker, 2007, p. 5.
8 Bloom, Canning and Sevilla, 2003, p. 17.
9 Cf. Bloom, Canning and Sevilla, 2003, pp. 17–18; Kelley, 2001, cited in Bloom, Canning and Sevilla, 2003, p. 18.
10 Bloom, Canning and Sevilla, 2003, p. 81.

The third and final theory of relevance here is the 'optimistic theory', which considers population growth a positive factor in terms of socio-economic development. The key authors who have conducted research and developed many arguments for this standpoint include Julian Simon, Herman Kahn, Deepak Lal, and David Lam. In 2011, Lam wrote the article 'How the world survived the population bomb: Lessons from 50 years of extraordinary demographic history',[11] the title of which speaks clearly about the quality and value of the predictions offered by Malthusian and neo-Malthusian 'pessimistic theory'. It is worth mentioning that the 'optimists' were also inspired and somehow preceded by such outstanding economists as Ester Boserup, who indicated that the pressure for the more effective use of resources increases as a population grows; Simon Kuznets, who pointed to the innovation potential of human communities; and Gary S. Becker, who was mentioned earlier.

In fact, as was stressed and widely presented by the 'optimistic' authors, reality proved the 'pessimists' wrong. Per capita incomes have grown by about two-thirds during a time when the world's population has doubled. The famines that have occurred were not as apocalyptic as Ehrlich predicted, and their main cause was not overpopulation and an absolute lack of food but a shortage of resources to purchase it. Technological and organisational progress has accelerated in an unprecedented way, people's participation and the associated social and institutional innovations have sky-rocketed, and the prices of many raw materials have declined.[12]

The main discussion on the macroeconomic impact of demographic changes continues to engage the followers of the 'pessimistic' and 'optimistic' theories. A good representation of the main points and arguments in this area can be found in the *Global 2000 Report to the President* and Simon and Kahn's *The Resourceful Earth*, which offers direct counterarguments to the content of the *Global 2000 Report*.

11 Cf. Lam, 2011.
12 Cf. Bloom, Canning, and Sevilla, 2003, p. 15.

Pessimistic theory	**Optimistic theory**
Global 2000 Report to the President If present trends continue, the world in 2000 will be more crowded, more polluted, less stable ecologically, and more vulnerable to disruption than the world we live in now. Serious stresses involving population, resources, and environment are clearly visible ahead. Despite greater material output, the world's people will be poorer in many ways than they are today. For hundreds of millions of the desperately poor, the outlook for food and other necessities of life will be no better. For many it will be worse. Barring revolutionary advances in technology, life for most people on earth will be more precarious in 2000 than it is now – unless the nations of the world act decisively to alter current trends.[13]	*The Resourceful Earth* If present trends continue, the world in 2000 will be less crowded (though more populated), less polluted, more stable ecologically, and less vulnerable to resource-supply disruption than the world we live in now. Stresses involving population, resources, and environment will be less in the future than now … The world's people will be richer in most ways than they are today …. The outlook for food and other necessities of life will be better… life for most people on earth will be less precarious economically than it is now.[14]

For a complete overview of the discussion taking place in the field of economics, it is worth mentioning the contribution made by Robert W. Fogel and Dora L. Costa and their theory of 'technophysio evolution'. In the context of the macroeconomic impact of demographic processes, this theory should not be ignored because it offers an insightful perspective and shows that it is not justified to treat every historical period of demographic and socio-economic development in the same way, especially the last three centuries. Fogel and Costa describe their theory as follows:

> The theory of technophysio evolution rests on the proposition that during the last 300 years, particularly during the last century, humans have gained an unprecedented degree of control over their environment – a degree of control so great that it sets them apart not only from all other species, but also from all previous generations of *Homo sapiens*. This new degree of control has enabled *Homo sapiens* to increase its average body size by over 50%, to increase its average longevity by more than 100%, and to improve greatly the robustness and capacity of vital organ systems.[15]

Fogel and Costa's contribution is especially important because it demonstrates the need to pay attention not only to the economic or physical domains (in terms

13 The Council on Environmental Quality and the Department of State, 1980, p. 1.
14 Simon and Kahn, 1984, p. 2.
15 Fogel and Costa, 1997, p. 49. On p. 50 of this article, the authors include very insightful figure (Figure 1. *The growth of the world population and some major events in the history of technology*) that illustrates this unprecedented transformation of humanity.

of the natural raw materials available) but also to the social and cultural domain. This domain proves to be unpredictable as a result of innovativeness and the enhancement of human potential by employing scarce resources in new ways that show that the old limits no longer apply. This theory can be confirmed by a comparison of the population and GDP growth rates calculated from 1950 until 2020 using data from 186 countries, as shown in Table 1.

Table 1. Comparison of population and GDP growth rates from 1950–2020[16]

Period	Annual population growth rate	Annual GDP growth rate
1950–1975	1.92%	4.65%
1975–2000	1.65%	3.20%
2000–2020	1.20%	3.58%

Table 1 indicates that from 1950–2020, the GDP growth rate was close to or more than two times larger than the population growth rate. This means that, as Fogel and Costa claim, humanity has learned to effectively increase productivity and improve living conditions on an unprecedented scale.

3. Demographic challenges for the economy in the 21st century

Having considered three theoretical approaches towards the impact of demographic processes on the economy, we now turn to look at the current civilisational context of the third decade of the 21st century. It seems that as the demographic winter proceeds, there are fewer and fewer voices defending the 'neutral' and 'pessimist' theories, and more attention is being given to the 'optimist' theory, which connects welfare and socio-economic flourishing with demographic growth.

When it comes to the current situation and the predicted future, we can observe some characteristic features that are expected to accelerate in the coming years and compose the demographic horizon before us. First, the fertility rate, which has been declining over the last four decades, is unlikely to rise in the near future. Second, the continued increase in longevity is certainly a civilisational achievement, yet combined with falling birthrates, it will contribute to the ageing of societies. Third, given this ageing process, a decrease in the proportion of the working-age population in developed countries will follow. In Europe, this will cause a gradual decline in the

16 Source: Mason and Lee, 2022, p. 57.

European population and further shrinkage of the labour force.[17] At the same time, we should also mention technological developments such as online work and education, the digitalisation of society and the economy, artificial intelligence, the implementation of robots, and large-scale automation, which have already reshaped the macroeconomic context. Finally, attention should also be paid to profound cultural shifts that, for a few decades, have already been transforming families, communities, and societies, such as individualisation and de-familism/post-familism,[18] the mediatisation and digitalisation of socialisation and relationships, and the growing threat of unprecedented loneliness pandemics, which are forcing governments to seek solutions and remedies.

Among these phenomena are some others that were previously unheard of. In our times, a growing number of people are deciding to live alone, are not forming unions, and are not having children. This profound demographic change means that the assumption that people will always have children, which was taken for granted for centuries, is no longer valid. As such, the role of cultural factors, such as values, norms, and beliefs, will have an ever-growing impact on the state of demographic processes in societies and, therefore, their macroeconomic conditions. This intuition was expressed by Nick Schulz, who wrote that 'purely economic explanations for the changes in marriage and birth patterns will get us only a little way in the face of the dramatic scope of changes that have occurred'.[19]

In terms of the economic consequences of current demographic tendencies, it is important to highlight the new challenges that the decreasing and ageing of populations brings. These challenges have been listed in a European Commission document entitled 'The impact of demographic change in a changing environment'.[20] The ageing and shrinking of societies causes a decrease in the working-age group, which, at the same time, puts pressure on the conditions of labour markets and welfare states.[21] This also makes finding the adequate number of properly qualified employees more difficult for employers, profoundly impacting entrepreneurs and economic organisations. One of the publications from the Polish Demographic Congress 2021–2022 states,

> Demographic changes have a huge impact on the functioning of enterprises. The future competitiveness of companies and the efficiency of their operations will depend on the effective engaging of older employees and the development of their skills. In the current market, where the best employees are sought on a global scale, recruiting talent, regardless of their age, is still a challenge for employers. Everyone will face the problem of ageing societies and competitive advantage therefore will be achieved by those companies that will adapt their strategies, internal procedures and policies for upcoming changes at the earliest.[22]

17 Cf. Banco de España, 2018, p. 213.
18 Cf. Kotkin, 2012; cf. Michalski, 2015.
19 Schulz, 2013, p. 31.
20 Cf. European Commission, 2023a, p. 1.
21 Cf. Johansson et al., 2012, p. 13.
22 Trzpiot, 2023, p. 28.

Regarding the impact on welfare states, the ageing and shrinking of the population translates into decreasing tax incomes for the public budget, which is the source of funding for various public services and social policies. This process also increases the old-age dependency ratio and raises the per-capita burden of public debt.[23] As the authors of the European Commission document write, 'to sustain economic growth, the working-age population must increase, labour-force participation rates must go up and/or productivity has to increase through technological advances and/or skills development'.[24] In addition to the aforementioned outcomes, population ageing is also connected with other challenges, such as the need to adapt existing workplaces and modify welfare and public health systems to meet the larger demand for quality healthcare and long-term care services.

Though the knowledge on the above-mentioned relationships seems to offer trustworthy evidence of the generally negative impact of demographic stagnation and decline on the macroeconomic condition of society, the economic standpoint is still not unequivocal. This is visible in the fact that there are generally two approaches to analysing the macroeconomic impact of demographic changes. The first of these approaches can be called the 'standard' approach and accepts assumptions about the constant age-specific behaviours of individuals related to issues such as employment, earnings, consumption, and savings. The main task, therefore, is to assess the implications of demographic changes. The problem in this approach is that it may be misleading: while it is helpful for capturing the so-called 'accounting effects' of demographic processes, it neglects the fact that the behaviours of economic agents can be modified and that institutional aspects can be subject to adjustment. The second approach respects the behavioural, institutional, and global aspects of the economic realm. In this approach, the complexities of the socio-cultural context are taken into account, which enables the tracking of various channels and their interactions. As a result, it offers a more comprehensive oversight as it includes responses to ageing-induced price changes, international differences, and various policy decisions.[25]

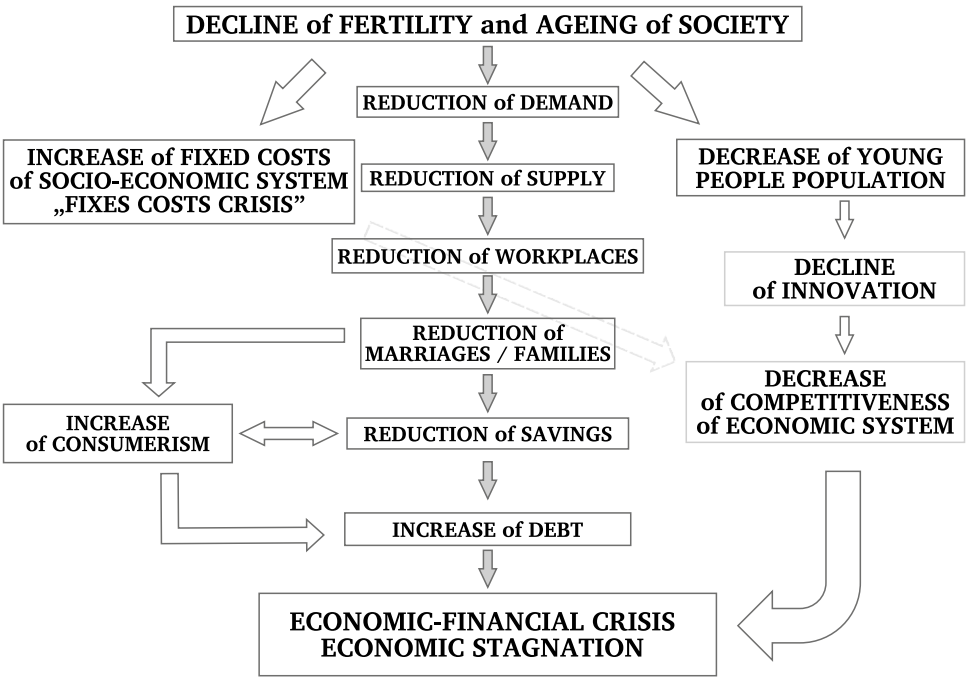
4. From demographic decline to economic stagnation – a chain reaction

This section illustrates the relationship between demographic decline and macroeconomic changes in order to reveal how elements of an economic system are linked to each other. The analysis does not include all the details and nuances of the economy because it would require much more space, and such an attempt would

23 Cf. European Commission, 2023a, p. 1.
24 Cf. Ibid.
25 Cf. Yoon, Jinill, and Jungjin, 2014, p. 10.

hardly be communicative. Therefore, the picture presented in Figure 1[26] is simplified and reduced to selected main aspects of the whole complex realm.

Figure 1. From demographic decline to economic stagnation[27]



Following a decline in fertility, which results, among other consequences, in the ageing of the population, societies that have reached a certain level of civilisational development experience an increase in the fixed costs of their socio-economic systems, which I call the 'fixed-costs crisis' (left side of Figure 1). The efficiency of certain elements of, for example, infrastructure, such as public transport, sewage treatment plants, waterworks, and power lines, must be maintained and secured, regardless of the size of the community that uses them. This means that in the case of shrinking populations, there is a growing financial burden connected with preserving the standard of living. At the same time, owing to falling fertility rates and ageing populations, the population of young people, which automatically becomes a new talent pool will become smaller. Consequently, the potential for innovation will be smaller, thus creating the risk of a decrease in the competitiveness of the economic system (right side of Figure 1). What's more, in the current geopolitical

26 Cf. Michalski, 2014, p. 193.
27 Source: Author's own work.

context, a deficit in the younger generation will also influence the military potential of a society in the case of armed conflict.

Finally, what seems most evident is that a decline in fertility and the ageing of society will result in a reduction of demand given the smaller group of consumers (middle of Figure 1). According to market rules, there will, consequently, be a reduction of supply, which is producers' standard reaction to a falling number of purchases. In the next step, this will most likely result in a reduction in the workforce, which will cause unemployment and a loss of wages as the source of financial means. This changes the material stability of existing families, who will be more likely to put off fertility plans, and may discourage those living alone from starting a family and becoming a parent. Another interesting and not widely recognised consequence of this situation is a decline in savings, which are, in terms of motivation, largely linked to paternal love and care.[28] The other side of this phenomenon is the stronger tendency for consumerism among people living a single life, which can be also juxtaposed with economies of joint consumption that are especially present in households with children, where a lot of goods are used as public goods.[29] The reduction of savings is likely to be linked to an increase in debt, which is a very probable consequence of shrinking tax transfers and lost wages due to a reduction in employment. As a result, all these interrelated phenomena contribute to economic stagnation and economic-financial crisis, which is an increasingly likely reality for many developed countries today. This prediction is supported by Bloom, whose opinion about more positive impact of demographics in case of less developed regions in the coming decades has already been mentioned[30] Similarly, Andrew Mason and Ronald Lee claim,

> Population change will drive large regional shifts in economic activity: decline in the shares of global economic activity in East and Southeast Asia, Europe, and North America; and an increase in the shares of Central and South Asia and sub-Saharan Africa. Economic shifts should be greater than population shifts.[31]

Interestingly, the OECD offered a similar prognosis about a decade ago in a report entitled *Demographic Change and Local Development: Shrinkage, Regeneration and Social Dynamics*. This report noted that 'as a result of falling fertility rates, many cities and regions in OECD member countries are likely to continue to "shrink" in the coming decades, even with some increases in population due to migration (from within or from outside the country)'.[32]

28 Cf. Marshall, 1907, pp. 227–236; cf. Grinstein-Weiss, Zhan and Sherraden, 2006.
29 Cf. Ermisch, 1993, p. 354.
30 Cf. Bloom, 2020, p. 7.
31 Mason and Lee, 2022, p. 58.
32 OECD, 2012, p. 11

Fortunately, this new situation is changing the attitudes of policymakers and experts, although a large group still follow the standpoints of Malthus, Ehrlich, Meadows, and others whose theories did not stand the test of time and turned out to be wrong. This group's current line of argumentation is concentrated around ecological challenges and treats population growth as a threat to natural survival.

Nevertheless, the rational voice of those who call for a demographic renaissance is becoming increasingly heard, and awareness in this aspect is growing. As a consequence, expert voices such as that of Bloom, cited below, are being treated with due attention and seriousness.

> Population aging is sounding alarms worldwide. Whether increased longevity is associated with more or less of a person's life lived in frailty is among the most salient unresolved questions public and private policymakers throughout the world face. Economists continue to express concerns. These relate to downward pressure on economic growth due to labor and capital shortages and falling asset prices in the future as a growing and more aged cohort of older people seeks to support itself by liquidating investments. Another major issue has to do with fiscal stress. Government coffers will be strained by rising pension liabilities and the cost of health and long-term care associated with the expected growth in the incidence and prevalence of chronic diseases such as cancer, among others. These challenges will, however, be partially offset by the increasing, but typically neglected, value older people create through productive nonmarket activities like volunteer work and caregiving. Without historical lessons from a world with such large numbers of older people, there is even more uncertainty about our collective future. However, adopting a business-as-usual approach to the challenges of population aging would be irresponsible.[33]

5. Role of family condition in demographic processes and macroeconomic outcomes

To close this chapter, it is worth examining an issue that is rarely taken into account when considering predicted population change. Demographic analysis is most often concentrated on the quantitative dimension; however, it also seems necessary to take qualitative aspects into account. These aspects were signaled above when the cultural shift was mentioned as the factor that shapes attitudes and decisions on marriage and fertility on an increasingly larger scale and influences the socialisation outcomes of contemporary families. This issue must be discussed when considering the macroeconomic impacts of demographic change because the quality and

33 Bloom, 2020, p. 9.

condition of the family environment play a role in both the quantity and quality of human and social capital.

Currently, these two assets are invaluable for economics, and in this context, the role of family – as the basic transmission belt for culture[34] and the 'factory' of human and social capital – in socio-economic development is understood and recognised on a larger scale.[35] This turns out to be evident when we consider the causes of the higher or lower levels of development in different countries or regions in the world, as evidenced by research on economic culture that has been developing over the years.[36] The example of this research area clearly shows that attempts to deepen our understanding of the causes of certain phenomena and processes taking place in a society cannot ignore explanations of a normative nature. From this perspective, attention should be paid to the importance of family condition for the functioning of the socio-economic order. This means agreeing to the fundamental assumption that not every family situation is equally functional when it comes to economic prosperity and social well-being.

In recent years, there has been an increase in research examining the issue in this way, an example of which is the index of the costs of family breakdown, which has been calculated by the British organisation Relationships Foundation for several years. In 2018, the organisation estimated the 'Cost of Family Failure Index' to stand at £51 billion, compared to £37 billion 10 years earlier.[37] Similar calculations have been undertaken for Poland, which showed that divorces and family breakdowns costed the country around PLN 5.7 billion in 2019.[38] Other studies also indicate that both the family structure and its durability influence children's future economic achievements (*economic mobility*). Authors such as DeLeire, Lopoo, and Schulz state that divorces cause particular harm in this respect.[39]

As for other insights illustrating the importance of a properly functioning family for both individual well-being and the entire socio-economic order, the research of economist James J. Heckman is extremely important. Heckman provides answers to the long-running question of what is most effective in determining the development of children and adolescents, especially in environments at risk of pathological phenomena. As Heckman shows, it is not money and equalising income inequalities that are the most effective strategies for increasing young people's educational and professional opportunities but the quality of the family environment. Taking into account, as Heckman confirms, that families are the main producers of skills, it is not the state and other institutions – although they are necessary and useful in many respects – that have a decisive impact on equipping children with the non-cognitive skills that are critical for future success. Heckman writes,

34 Cf. Merton, 1968, p. 212.
35 Cf. Michalski, 2014.
36 Cf. Harrison and Huntington, 2000; cf. Acemoglu and Robinson, 2012.
37 Cf. Relationships Foundation, 2018.
38 Cf. Michalski and Furman, 2021, p. 9.
39 Cf. DeLeire and Lopoo 2010, p. 2; cf. Schulz, 2013, pp. 50–51.

> Families are major producers of skills. They do much more than pass along their genes. Inequality in skills and schools is strongly linked to inequality in family environments. While the exact mechanisms through which families produce skills are actively being investigated, a lot is already known. Parenting matters. The true measure of child poverty and advantage is the quality of parenting a child receives, not just the money available to a household.[40]

The results of other studies align with Heckman's conclusions. In their book *Growing Up with a Single Parent*, the research duo Sara McLanahan and Gary Sandefur demonstrate that children raised by only one biological parent are in a statistically less favourable situation than children who grow up with both biological parents, regardless of their race, the parents' education, whether the parents were married at the time of the child's birth, or whether the parent who lives with the child enters into another relationship.[41] Another study by Alexandra Usher and Nancy Kober suggests that children brought up in so-called 'disadvantaged' families have fewer opportunities to develop competences, receive fewer incentives to enjoy learning, and are less likely to develop independent learning skills and maintain relationships that can support and reward achievements.[42]

Returning to Heckman's research, we can treat his findings as a summary of the importance of the quality and durability of relationships within the family for children born within them to have the ability to take on various social roles adequately and effectively. Though Heckman is very careful in discussing the structure of the family and its impact on children's socialisation and achievements, he makes it clear that not every form or formula of family life affects well-being and social well-being in the same way, stating:

> Intact families invest greater amounts in their children than do single-parent families, although the exact reasons why are not known. These investments pay off in higher achievement. There are large gaps in cognitive stimulation and emotional support at early ages. They persist throughout childhood and strongly influence adult outcomes. The evidence on disparities in child-rearing environments and their consequences for adult outcomes is troubling in light of the shrinking proportion of children being raised in intact families. … The problem is not just income. Even though income is the standard way to measure poverty, recent research suggests that parental income is an inadequate measure of the resources available to a child. Good parenting is more important than cash. High-quality parenting can be available to a child even when the family is in adverse financial circumstances.[43]

40 Heckman, 2011a, p. 26.
41 McLanahan and Sandefur, 1994, p. 1.
42 Cf. Usher and Kober, 2012, p. 5.
43 Heckman, 2011b, p. 33.

Finally, it is worth foregrounding another study that draws attention to issues other than the structure or durability of the family. The research by Ron Haskins and Isabel Sawhill indicates that a 'traditional' or 'conservative' order of important life decisions makes a difference to living standards. They write,

> Those who finish high school, work full time, and marry before having children are virtually guaranteed a place in the middle class. Only about 2 percent of this group ends up in poverty. Conversely, about three-fourths of those who have done none of these three things are poor in any given year.[44]

This concept has been developed and confirmed by Wendy Wang and W. Bradford Wilcox of the Institute for Family Studies, who report:

> 97% of Millennials who follow what has been called the 'success sequence' – that is, who get at least a high school degree, work, and then marry before having any children, in that order – are not poor by the time they reach their prime young adult years (ages 28–34).[45]

On the basis of these findings, it seems appropriate to seek socio-cultural (including political and educational) and economic solutions that will support factors conducive to fertility, high-quality socialisation, innovation, and social cohesion. If we are aiming for prosperity, economic development, and social well-being, then at the level of shaping socio-economic policy, we cannot ignore the arguments confirming that a permanent, intact family based on formalised marriage is statistically conducive to fertility and the development of good quality human and social capital.

6. Conclusions

In the face of the challenges of our time, there are increasingly fewer doubts that demographic processes do indeed influence macroeconomic performance. Based on the contributions of economists such as Becker, Boserup, Kuznets, Simon, and Fogel and Costa, among others, we can also say that humanity has learned not only to deal with population growth but also to develop economies of scale that, quite often, are possible due to the larger size of local communities and wider societies. As such, from the technological, organisational, and civilisational perspectives, overpopulation certainly should not be seen as a grave threat to humanity. At the same time,

44 Haskins and Sawhill, 2009, p. 9.
45 Wang and Wilcox, 2017, p. 4.

we should not ignore the fact that demographic decline affects aspects of our civilisation, changes the foundations on which every area of the socio-economic order relies, and destabilises the whole process of socio-economic reproduction.

When it comes to economics, there will always be competing ideas and discussions about which elements of the socio-economic realm are interrelated and how strong or weak the influences of these elements are. This is the nature of theoretical disciplines, and we cannot forget that from time to time their findings and forecasts are simply inaccurate. This is also true in the case of economics, which means that interpreting demographic processes and shaping demographic policies cannot be left only to economists. No doubt that regarding issues where the impact of demographic change is unclear, it seems safer and better from a long-term perspective to avoid possible risk and opt for demographic growth rather than decline. This was likely what Ernst F. Schumacher meant when he wrote that 'from an economic point of view, the central concept of wisdom is permanence. We must study the economics of permanence. Nothing makes economic sense unless its continuance for a long time can be projected without running into absurdities'.[46]

We certainly wish for permanence and continuity. Thus, demographic issues should be included in the concept of sustainable development to form a strategically important concept that could be called 'sustainable demographic development'. From this perspective, respecting and taking responsibility for the next generations is not a choice but a duty.[47] We do not have the right to say how many people is enough or too many. This basic truth about our existence was expressed in a simple way by Charles Handy, who wrote, 'We are links in a chain; it is up to us to keep things going because who knows which generation will be the one to make the big difference'.[48] How is our generation supposed to know that?

46 Schumacher, 1993, p. 20.
47 Cf. Michalski, 2018.
48 Handy, 1994, p. 241.

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