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Depopulation and its Challenges for Development: An International Comparison

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Depopulation is a relatively new demographic challenge, resulting from declining fertility and population loss due to migration. This study discusses its impact on development at both the national and local levels. Besides deconstructing depopulation into various demographic components, the study also offers a conceptual insight into the connection between population dynamics and development thought. Since demography has always been a central component of understanding economic growth and social well-being, a historical overview discusses depopulation in this context. International examples are used to highlight the major impacts of depopulation, both economic and social, with a specific emphasis on the connection to culture. Finally, various policy options to address national and local depopulation are also discussed.

Introduction

When looking back in history, most accounts on demography probably consider the 1960s and 1970s as the peak period of overpopulation concerns, especially after the 1968 publication of the *Population Bomb*. Yet, the first systematic account of depopulation was also written around that time (Beale, 1964). This study documented the dynamics behind rural depopulation in the United States, but it received little attention for decades to come.

Overpopulation was still very much on people's minds in 1996, when the reports on world population policies recorded the lowest percentage of governments (13%) that wanted to raise the rate of population growth (United Nations, 2013). In the same year, 37% of governments, mostly in less developed regions, intended to curb population growth. This latter number has not changed much by 2013, the most recent time the United Nations collected such data, but the share of those nations that wanted to increase population growth rates has reached 20%. Most of this increase had come from more developed countries that opted for "no intervention" back in 1996. Today, the world looks at population growth very differently, than what the perspectives were twenty or fifty years ago.

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This difference plays out in two distinct trajectories of population dynamics. When global population was estimated to have reached 7 billion in 2011, future projections were quick to point out that this historically unprecedented growth may add another 3 billion people before the momentum disappears (Alkema et al., 2011). At the same time, it has already been clear that almost all population growth until 2050 would occur in less developed countries (Bloom, 2011). In contrast, the experience of most leading industrial nations has been stagnation or even actual population decline. This may seem as a new theme after half a century obsession with the population bomb and its ever delayed explosion, but, as Calvin Beale's 1964 study had demonstrated, depopulation has already been an important demographic trend in several countries, especially when look at sub-national dynamics.

Changes in population size, composition, and distribution are not purely academic topics. People see such trends around them, and may even be reminded of these by their elected politicians, local activists, or national advocate groups. The discourse in such cases tends to be simplified, using language directed at the lay public, shown by quotes such as "A cancer is an uncontrolled multiplication of cells; the population explosion is an uncontrolled multiplication of people." (Ehrlich, 1968:166), or "Throughout recorded human history, declining populations have always followed or been followed by Very Bad Things." (Last, 2013:7). The reason for this general interest is that people intuitively feel that demography is a core component of their community's social and economic conditions, past traditions, and future prospects.

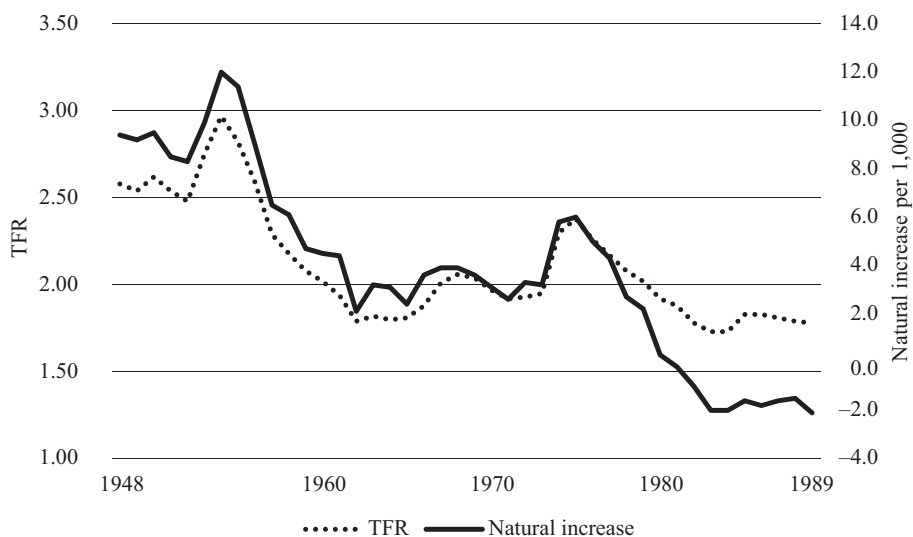
Population dynamics indeed have important consequences for progress and well-being, often summarized by the term development. While most people could identify development when they see it, both the proper definition and the indicators to measure it have been subjects of heated debates, generating substantial scholarship in various disciplines (Peet and Hartwick, 1999; Caldwell, 2005; McMichael, 2007). It is easy to see why: the very definition of development provides the key to setting the discourse, determining the goals, and measuring progress. The topic of population and development is as old as demographic thought itself (Kulcsár, 2016), thus depopulation must also be discussed in the same context of social and economic well-being.

This study focuses on depopulation and its challenges to societal development through examples from Europe and North America, as they are pertinent for Japan's own depopulation experience. I start with deconstructing depopulation as a demographic process, and then offer a conceptual argument on depopulation and development. I follow up with the national and local impacts of depopulation, and finally draw some conclusions and discuss policies that various governments have employed to address these challenges.

Deconstructing Depopulation

Depopulation is often seen simply as a shrinking population size. Populations can only change by fertility, mortality, or migration, and all three may contribute to depopulation in unique ways. Some of these ways are obvious, while others are less clear. Excess mortality caused by war, famine, or natural disasters may take huge tolls on a population. Persistent outmigration due to the lack of jobs or adverse residential preferences can turn once thriving communities into ghost towns. Keeping everything else constant, fertility rates below replacement level lead to depopulation once the population momentum of the last large birth cohort fades away. An example of this latter is the case of Hungary before 1990 (Figure 1). Hungary during the communist period was a closed country, and international migration played virtually no role in population dynamics. When the echo of the postwar baby boom disappeared, and the total fertility rate fell permanently below replacement in 1977, the country was already on its way to first experience of absolute population decline only a few years later.

Figure 1. Total fertility rates and natural increase in Hungary during the communist period, 1948-1989.



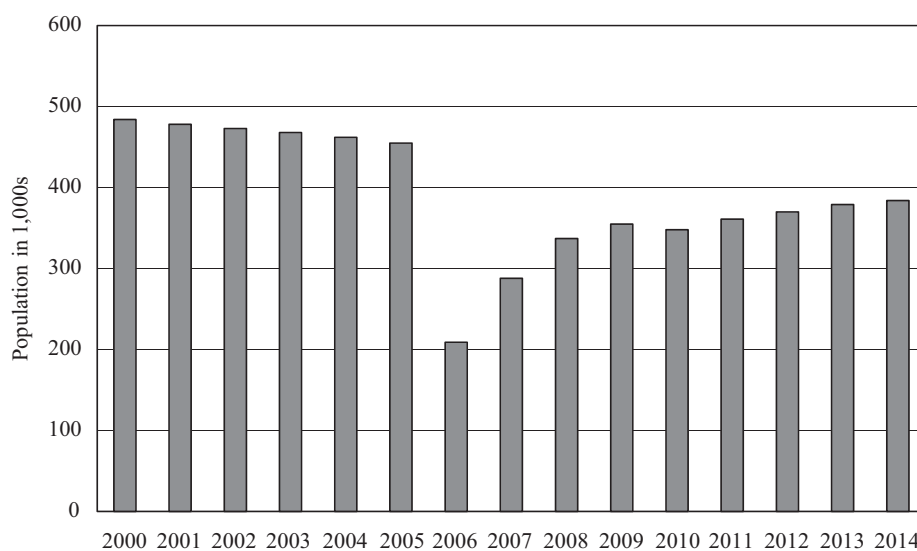
Source: Hungarian Demographic Yearbook, 2001 (KSH).

In most cases, however, trends of fertility, mortality, and migration work in some combination. The best example for this is the changing age structure of a population. All demographic events have different risks of experiencing them at different ages. Migration for example is most likely to happen in ages 20-35, when young adults are at a specific stage in their

life course, finishing education, and starting a family. Places or countries with negative net migration not only lose these people, but through them a significant part of the population's reproductive capacity disappears as well, since this is also the age when childbearing is the most likely (and decisions about it are important drivers of migration in the first place). Improving mortality rates, seen most commonly as increasing life expectancy at birth, often add to the distortion of the age structure, and exacerbate aging in place. In turn, a distorted age composition may contribute to social and economic conditions that induce further outmigration and population loss.

Conditions that trigger depopulation differ with respect to their long-term impact on population trends. Shock events may cause significant population loss or displace many people, yet, if the social and economic foundations of the place remain sound, the population typically rebounds in a relatively short time. The example for this is New Orleans after Hurricane Katrina (Figure 2). Following the mass displacement caused by the hurricane, the city's population started to rebound within a year, although due to suburbanization the city itself was slowly shrinking before Katrina. However, as a recent article demonstrated, this rebound has also resulted in significant changes in population composition with the city of New Orleans losing about a third of its African-American population (Martinez, 2015). This is a clear example, that while population size matters, composition is just as important, particularly when demographic trends are connected to development outcomes.

Figure 2. The population of the city of New Orleans, 2000-2014.



Source: U.S. Bureau of Census.

An example for the opposite outcome is Finney County in Kansas. The central place of the county, Garden City has provided many jobs in the meatpacking industry since the 1980s (Broadway, 2007). These were usually filled by immigrants, first Vietnamese and then Mexicans. Due to this influx of workers, the population dynamics of the town became very different from most nonmetropolitan places in Kansas. However, around Christmas in 2000 a fire destroyed most of the plant. The company decided not to rebuild it, and subsequently, migration trends took a sharp turn. The place did not have the solid economic or cultural foundations to retain the immigrants, and Finney County started to lose population soon afterwards, reverting to the typical western Kansas trends.

Shock events that devastate already declining places often accelerate depopulation. These examples show that the real impact of a shock event is not so much on the population per se, but on the economic and social foundations of the place. The causal direction runs both ways: development outcomes influence demographic trends, while at the same time, population dynamics have considerable impacts on social and economic progress.

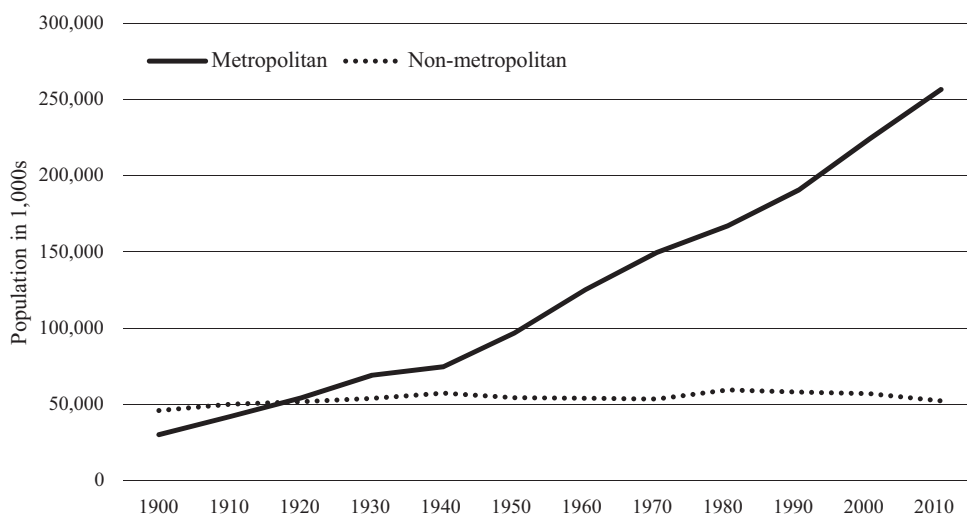
While the triggers and the mechanisms of depopulation may be very similar, the geographic unit of analysis makes a difference when it comes to policies addressing population loss. For example, in smaller areas migration trends are more important. Unlike mortality and fertility that tend to change gradually over a longer period of time, migration is more sensitive to abrupt changes in local economies or residential preferences.

At the national level, migration dynamics are still important, but long-term demographic trends are equally influenced by mortality, and especially fertility outcomes. The conditions determining these latter two change slower, therefore the demographic inertia of both mortality and fertility is greater when compared to migration dynamics. This also means that while the societal forces changing mortality and fertility must be larger, upon the emergence of unfavorable dynamics the remedy tends to be more difficult and costly too. For example, below replacement fertility at the national level proved to be quite onerous to turn around, particularly in the absence of significant, positive net migration of young adults in childbearing ages. Taking the big picture view, the impact of fertility on population growth is the most visible at the global level, the only geographic unit where migration does not count. The decreasing rates of population growth in the past decades have mostly been caused by declining global fertility rates.

Finally, it is important to note that while depopulation is usually measured as a decrease in absolute numbers, relative depopulation is just as important. This can occur if a particular region or settlement type, such as a farming area or rural communities in general, experience stagnation or growth below the national average. If depopulation is not a nationwide phenomenon or if it is manifested in stagnation as opposed to steep decline, the discourse may remain localized with insufficient policy tools to remedy the situation. As an example of relative depopulation, Figure 3 shows the decennial census counts for metropolitan and non-metropolitan populations, common

proxies for urban and rural residential distribution, in the United States in the past 110 years. The chart indicates that the rural population of the U.S. has been relatively stable, fluctuating around 50 million people throughout the entire period. However, this constitutes an ever-shrinking part of the total American population, due to the substantial metropolitan population growth occurring in the same time. This proportionate rural decline has been manifested in the public discourse as the rapid depopulation of the American countryside, evoking many emotional responses.

Figure 3. Metropolitan and non-metropolitan population in the United States, 1900-2010.



Source: U.S. Bureau of Census.

It is clear that the term depopulation has a negative connotation. Even in cases when governments want to curb population growth, they would not want depopulation to occur. One reason for this is the deep-seated understanding of progress, or development, as a linear process. Depopulation means movement in the opposite direction on that path. In an abstract sense, development is a positive trend, and debates only heat up when it is about its practical definition and measurement. Therefore, in the same abstract sense, depopulation is almost always considered a problem. To address depopulation, it is very important to understand this conceptual context as well, discussed in the next section of this study.

Depopulation and Development in a Historical Context

Population dynamics have long been associated with the concept of development. Development is typically seen as an improvement in social, economic, cultural, or political conditions. Unfortunately, there is no universal agreement on what these improvements should be,

and nations, as well as regions within nations, do not always have the same access to resources to pursue them. Thus, development has many layers of complexity, resulting in theoretical, practical, or power differences between various actors.

The concept of development is a social construct. Over the past two hundred years, Western philosophy and scholarship has monopolized both the discourse about it and the interpretation of what it means, and had put growth in the center. Until the late 1970s, this was manifested in the dominant paradigm of modernization, which argued that development occurs in a uniform fashion, following a linear trend (Rostow, 1960). This has later been contested from several different conceptual directions, partly due to its relatively poor record on the ground, resulting in a search for a more inclusive definition of development by the 21st century (Peet and Hartwick, 1999; Rist, 2000).

The assessment of population dynamics in this context has also changed a lot in the past two hundred years. The first philosophers typically took abstract positions on how population dynamics are connected to societal well-being. The debate between the optimists of Enlightenment, such as William Godwin, and the pessimists about human nature, such as Robert Wallace employed little empirical evidence, and made no effort to understand the drivers of population dynamics. This all changed when Thomas Malthus wrote his thesis on population, first describing the perceived dangers of overpopulation, resource depletion, and poverty, lending a scientific overlay to demography. In the following decades of the 19th century, as social sciences were carving out their places in academic scholarship, many tried to use demography to warn about social ills or offer practical solutions for the benefit of societies.

It did not take long for the first concerns about depopulation to appear in this environment. Fertility differences between social classes were easy to observe since the time of Malthus, which in fact was his main concern to begin with, and soon these were extended to population growth differences between ethnic groups and nations. On occasion, this led to less controversial actions, such as the establishment of the first birth clinic in London, following the work of Marie Stopes, advocating for fertility control among the lower classes but still providing information on contraception (Rose, 1992). In most cases, however, concerns about diverging fertility rates were wrapped in social Darwinist and eugenic arguments that were not only racist but also justified exclusionary positions against various population groups (see for example Allen, 1989 on the U.S. case).

The first to bring up depopulation as a national problem were the French, following their defeat from the Prussians in 1871. As Teitelbaum and Winter (1985) argued, this concern has become a permanent part of the rhetoric in the Third Republic, and extended beyond the academic discourse, manifesting in literary works such as *Fecondité* by Emile Zola. In the atmosphere of the preparations for the inevitable next war, the French public was obsessed with low birth rates, which of course were seen not so much as a pure development issue by today's standards, rather the main

currency a nation could have at the height of the struggle for power in Europe.

The First World War and the flu epidemic of 1918 brought an unprecedented loss of life. Birth rates have rebounded in the 1920s and as mortality rates declined in Europe, little public concern was voiced over depopulation. In his seminal article on what later became the theory of demographic transition, however, Warren Thompson (1929) first brought up the issue of systematic natural decrease in countries that he put in Group A, where growth rates were expected to fall. He pointed out that "... since the last quarter of the nineteenth century, they have passed from the state of having a very high rate of natural increase into a state where they have quite low rates of increase and will shortly become stationary and start to decline in numbers." (Thompson, 1929:968). He then contrasted such depopulating countries with nations that struggle with overpopulation, highlighting the inverse relation between population growth, size and global land ownership. As such, he was the first scholar discussing depopulation and development in abstract terms, creating the foundation for the international concerns in the postwar era.

A lot has been written on the general demographic atmosphere of the period between the 1960s and 1980s (Ehrlich and Holden, 1971; Teitelbaum, 1976; Simmons, 1983; Finkle and Crane, 1985; Lam, 2011, just to name a few examples). The important point for this study is that the alarmist tone of the discourse was as much about relative depopulation as it was about absolute overpopulation. As Warren Thompson implied decades earlier, overpopulation is not only a challenge for the country experiencing it, but it could also be seen as a threat to international order. At the onset of the Cold War and the decline of colonial empires, this was indirectly framed as a problem of relative depopulation in the West. Frank Notestein, who is usually credited with rediscovering Thompson's work, had a clear position on this already in 1944, talking about countries with rapid population growth potential: "They will be increasingly expensive and troublesome to administer, and unsatisfactory to do business with. Of themselves they will be too impotent to threaten the peace, but probably they will be discontented, disloyal, and ready, if somewhat inefficient, materials for each new political conflagration" (Notestein, 1944:148).

Ironically, when the West was concerned with a demographically induced political destabilization in developing countries, supposedly aiding the Soviet Union and its proxies, the communist bloc was also going through a period of anxiety over depopulation. Birth rates rapidly fell in almost all Eastern European countries in the 1960s. This resulted from a combination of trends embedded into the total transformation of these nations from agrarian hinterlands to industrial societies. Rapid urbanization, the break-up of traditional rural family structures, the official promotion of gender equality to absorb a large number of women into the labor force, and the widespread availability of induced abortion as the primary method of contraception all had their impact on fertility within a generation after the communist takeover. Public health measures significantly reduced infant mortality, but the plummeting birth rates gave plenty of reasons to be concerned about relative depopulation in the future, the same topic occupying scholars on the other

side of the iron curtain.

Still, these concerns about depopulation were not systematically analyzed. Policy makers and demographers were mostly trying to curb the population explosion in developing countries. There were no direct cases of depopulation, and accepting the model of demographic transition meant that all developed nations positioned themselves in the last phase of the transition, and their attention was mostly on how the rest of the world would move through the rapid growth period. In that logic, taming overpopulation effectively meant fixing relative depopulation as well, therefore actual depopulation as a phenomenon seldom appeared anything but a demographic curiosity. The 1975 edition of a standard demography textbook for sociology undergraduates (Petersen, 1975) discussed depopulation only in two specific contexts. One was the depopulation of "primitive peoples", which the book explained with warfare, loss of food resources or disease, while the other was the population decline in the Soviet Union due to totalitarian politics and social engineering. Modern depopulation, at least at the national level, was difficult to imagine, yet its first examples were less than a decade away.

If depopulation has actually occurred at this time, it was observed at the subnational level. However, while it was devastating for local communities, it has not made it to the forefront of demographic inquiry as a societal challenge. In Western countries, particularly in the United States, the boom and bust cycles and ghost towns were familiar phenomena, and in most cases, they were considered as part of standard economic dynamics, especially if these occurred in the context of national population growth. Although rural depopulation has already been pointed out (Beale 1964), high fertility rates were often seen as a sufficient counterbalance of persistent outmigration.

In communist countries, depopulation in rural communities was often a desired outcome, as public policies were aimed at creating urban population concentrations for more efficient industrial development. Agricultural collectivization and even modest levels of farm mechanization required fewer workers, and the rural population was seen as a reserve pool for industrial expansion. It is also important to note that communist states, just as any totalitarian regimes, suppressed the discussion and analysis of seemingly negative trends, and the central planning apparatus was not flexible enough to address the challenges of small geographic units, where depopulation first emerged.

By the second half of the 20th century, population growth has become the normal demographic trend around the globe. All historical examples indicated that depopulation is a temporary phenomenon, thus most of the public discussion was related to managing this growth to achieve the optimal development outcome. In the 1980s, however, the theory of demographic transition was challenged from a new direction. A few years before, Teitelbaum (1976) argued that the transition would be different in developing countries, and now its future relevance for developed nations was also under scrutiny. Citing new social trends, scholars have pointed out that fertility declined below what was expected in the original theory as the phase of modern stability,

and this became known as the second demographic transition (van de Kaa, 1987).

Persistent, below replacement fertility has become one of the driving forces behind modern depopulation. The fact that it first emerged in the most developed countries was puzzling, as it was generally believed that demographic dynamics in these societies had been well understood. When at the Bucharest population conference in 1974, the Indian delegation famously stated that development is the best contraceptive, nobody imagined that the same relationship could be applied on developed countries hardly ten years later. Yet, only after some former communist nations experienced absolute population decline due to the combination of emigration and the post-transition fertility drop, had a more substantive discourse started on the dynamics of depopulation. This was partly due to the realization of how the new demographic reality of shrinking and aging populations would affect these countries' social and economic well-being.

The current iteration of the discourse on depopulation and development focuses on three connected mechanisms: fertility rates, aging populations, and migration dynamics. The two most common development impacts, which I will discuss in the next section, are the ways these trends affect economic productivity, particularly the labor market, and the consequences they carry for the social and cultural character of the place. We should not forget though that development is a social construct. Elusive it may be it is always open to interpretation and reinterpretation.

The Impacts of Depopulation

The most commonly mentioned impact of depopulation concerns economics, namely the shrinking labor force. This is usually expressed through changes in the dependency ratio, the proportion of active age adults to those younger than 18 or older than 65. This is a relatively simple indicator to assess change over time or across international borders. However, it is also a product of an era with a somewhat different economic paradigm, and can be criticized for implying that those outside the 18-65 range are dependents simply because of their age. It also neglects the changes in working conditions of the global economy, which has made the traditional understanding of active age obsolete.

That said, most organizations use dependency ratios to predict future trends in aging. The latest statistics for the European Union for example warn about a 10% increase in the 65+ population by 2080, reaching close to a third of all EU citizens, which would mean an old-age dependency ratio of 51% (Eurostat, 2016). Predictions from the United Nations (2015) for Europe are similar, in contrast with the United States (18.5% to 36.9% between 2000 and 2050), or less developed countries (8.1% to 22.8% in the same time frame).

The falling number of workers (if depopulation is absolute), or the shrinking proportion of them (if depopulation is relative) has a number of implications. The first is the contracting size of the economy, with declining tax revenues, spending, investment, and innovation. This argument

originates in the work of Julian Simon (1981) about people being the ultimate resource. However, critics have pointed out that development, and particularly innovation is also contingent upon social organization and institutional capacity (Keyfitz, 1990), such as a well-funded and autonomous higher education system, or access to global trade and resources. The simple size of the workforce in itself means less, which is well demonstrated through the example of several countries that have relatively young age structures but limited means to provide jobs for their active populations. In addition, the size of the economy is more than simply the size of its working age population, being influenced by many other factors, such as trade balance, technological development and general infrastructure, human capital and so forth.

The workforce shortage problem typically occurs in developed countries due to fertility decline, which is the chief cause behind aging populations. There are two ways to address this shortage, namely either increasing participation rate of the existing workforce, or adding people to the labor pool. The first is done through tweaking retirement eligibility and extending the mandatory retirement age. The second is usually promoted through replacement migration (United Nations, 2000), although in some cases there may be untapped domestic reserves not yet on the labor market. These are typically women, but mobilizing them may also create further pressure on fertility rates, especially if a country does not have an affordable childcare system or other resources that are needed for families to balance life and work.

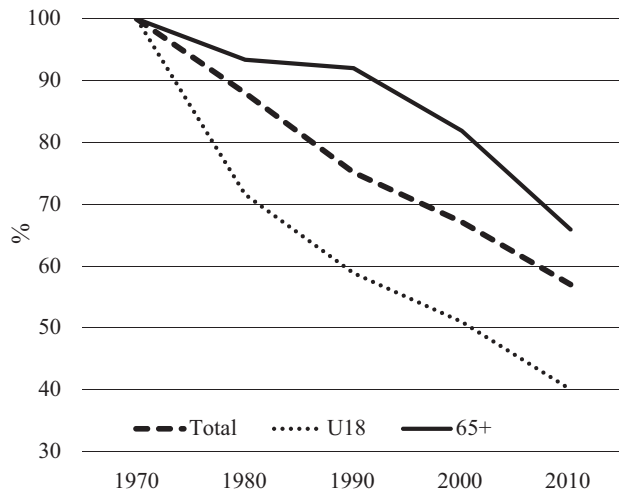
A shrinking workforce may not only lead to diminishing economic output, but at the same time it can also put more burden on the active age population to finance social security or pension systems. When experiencing population aging, social security payments are under increasing pressure due to fewer active contributors and a growing share of the population receiving these transfers. As life expectancy at birth increases, people need to prepare for longer retirement at the same time when the national pension schemes collect declining revenues. In such cases, there is a temptation to rely mostly on individual savings and private providers, but this brings up the question of social equality in old age, demonstrated by the often criticized defined contribution (401k) schemes in the United States (Butrica, 2009). The topic of financing social security in aging populations has a large literature with various proposals but without any silver bullet solutions (Nyce and Schrieber, 2005).

The specter of declining economies and unsustainable social security is usually discussed at the national level. Local economies, however, can be more vulnerable to depopulation not only because relatively small changes can have large impacts, but also because municipalities have fewer resources to address these challenges. Depopulation for any reason can trigger a vicious cycle of decline. If people move away, businesses would suffer and potentially close, and tax revenues would decline. Declining revenues lead to service consolidation or discontinuation, which then would make more people move away, restarting the cycle. These challenges may turn into a persistent, path dependent decline if unfavorable demographic trends do not change. This is

particularly true for less diversified local economies, such as those relying on natural resource extraction or specific forms of agriculture.

A typical case for this local decline would be Smith County in Kansas. At the beginning of the 20th century, this was one of the most populous rural counties in the state. Farm consolidation and mechanization contributed to disappearing employment in agriculture. As many workers were displaced from agriculture, a relatively large distance from the interstate highway system made it difficult for the county to attract other types of industry. Not even the fact that this is the geographic center of the contiguous United States could be utilized to boost tourism, remaining a local curiosity, nothing more. The county's population declined from more than 16 thousand in 1900 to 6,700 in 1970. The loss between 1970 and 2010 was another three thousand people. However, as Figure 4 shows, this latter loss was disproportionately high for the population under 18. The decline for them was almost twice as large as the one among those of 65+. Therefore, the county has not only become smaller, but also much older, with a median age of 49.6 in 2010, a ten year increase in two generations.

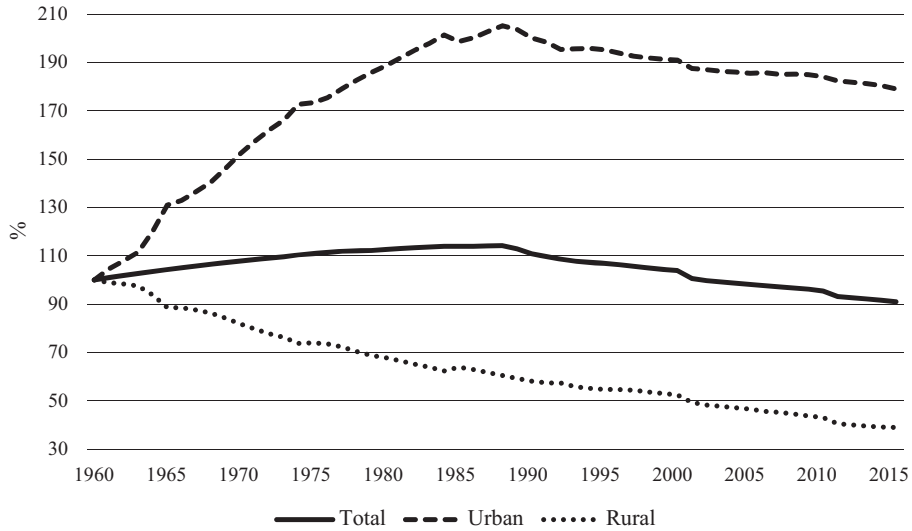
Figure 4. Population loss in Smith County, Kansas in various age categories (1970=100%).



Source: U.S. Bureau of Census.

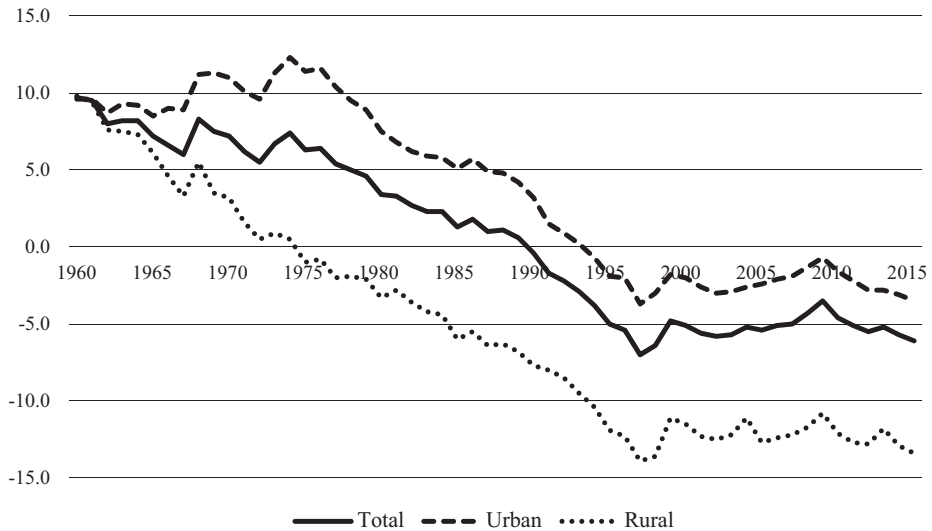
Bulgaria offers an interesting case of depopulation at the national level. Figure 5 shows urban and rural population change, taking 1960 as 100%, while Figure 6 shows the rates of natural increase by residence that were about the same in 1960 and before. From these figures, we can construct an interesting picture, particularly about the contrast between the communist and post-communist times.

Figure 5. Change of total, urban, and rural population in Bulgaria (1960=100%).



Source: National Statistical Institute, Bulgaria.

Figure 6. Rate of natural increase by residence in Bulgaria.



Source: National Statistical Institute, Bulgaria.

Depopulation started in rural areas during the communist period when the countryside was deliberately undeveloped for reasons mentioned before. As typical for most communist countries, urban population increased, and more than doubled by the time it peaked in 1990, the year of the

political transition. During the same time, rural areas have lost 40% of their population. Figure 6 offers additional insights into this trend. For about 15 years after 1960, the rate of urban natural increase has grown as a result of young families moving to urban areas following industrial jobs. In the same period, the rates natural increase in rural areas declined, reaching the point of zero increase by 1975.

Following the mid-1970s, communist states ran out of resources to pursue large scale development projects that induced massive population redistribution. In the absence of government incentives in a stagnating economy, fertility started to decline while mortality rates increased. (This latter, particularly the worsening of male mortality was a unique trend in Eastern Europe, see Meslé, 2004.) This started to pull the rates of natural increase down in both urban and rural areas. Internal migration trends have not changed though, so urban places were able to increase their population despite declining fertility, while rural places experienced both natural decrease and persistent outmigration at the same time. Eventually, the national rate of natural increase dropped to zero in 1990, coincidentally in the year when communism fell, and five years later urban natural increase disappeared too.

Following the political changes, the former communist countries were reintegrated into the international flow of labor, and many, including Bulgaria, started to experience emigration as well. Since fertility and mortality dynamics have not changed, it took Bulgaria only ten years after 1990 to lose a 30 year worth of population growth (Figure 5). After twenty years of steep decline in natural increase rates, the drop has turned into fluctuation in the late 1990s, but this relative stabilization has occurred well below zero (Figure 6). Coupled with population loss due to international migration, this means that Bulgaria has to brace for further depopulation at both the national and the municipal levels. This situation has already been dubbed as a national catastrophe more than ten years ago (Vassilev, 2005), yet, as a recent article in the New York Times (Lyman, 2015) pointed out, there is still a deep-seated resistance toward accepting migrants as a potential remedy.

Germany offers a more complex case of depopulation, which is highly localized and path dependent. Until the reunification of the country in 1990, the western and eastern parts followed very different demographic and development trajectories, although both were outliers within their respected group of countries. Eastern Germany was more developed than the average communist country, with higher rates of urbanization and subsequently lower fertility in 1945. These starting positions predetermined population trends, although the typical devaluation of the countryside still induced rural to urban migration, and despite the pronatalist measures, fertility fell below replacement by the 1980s. Western Germany had a somewhat unique settlement morphology with multiple cores slowing urban growth, while at the same time employed a proactive immigration policy replacing workforce losses due to war casualties and low fertility rates.

These trends have changed substantially after 1990. Depopulation became quite visible in

the eastern regions, as a large scale migration flow developed from east to west (Kemper, 2004). One driver of this migration stream was the set of changes in post-communist economies that were present in the former Eastern Germany as well: the collapse of urban heavy industry, rising unemployment, and the decline of agricultural production facing strong competition from the west. Foreign direct investment was very selective targeting only a few urban areas that offered reliable returns, therefore many in Eastern Germany felt that the opportunities are much better in the western regions, especially seeing those for decades as the land of opportunities. This depopulation was not limited to rural areas either. Many large eastern cities also struggled with population decline due to not only the collapse of their economic base but also the changing residential preferences favoring less density, a unique trend called sprawl without growth (Schmidt, 2011).

Partly due to this migration, fertility rates in the east have dropped as rapidly as in other post-communist countries, although it has generated an interesting debate whether it was a crisis or an adaptation to lower Western German fertility (Kreyenfeld, 2003). Migration from the east to the west as well as from rural areas to urban places diminished the reproductive capacity of the places of origin, making many face the same depopulation challenges as places in Bulgaria or rural Kansas. It is yet to be seen if the recent influx of refugees would affect these trends.

In most cases, the economic impact of depopulation is possible to measure with standard quantitative methods. The social or cultural impact, however, is more complicated to assess, but nonetheless, or exactly because of this, it also tends to generate heated debates. In that perspective, depopulation is often seen as a decline of traditional values or an erosion of moral order, usually portrayed as the crisis of the family or family values. This is understandable, because depopulation is mostly a function of fertility or outmigration. If children are not born, or many leave their communities, people often look for cultural explanations besides economic ones.

The importance of culture in demography is a relatively new topic (Bachrach, 2014). Since demography is an inherently quantitative field, it is quite challenging to operationalize culture in a meaningful way. This was the typical experience when family planning projects were evaluated in the 1970s, where the unexplained residuals in many models using standard econometrics were probably caused by cultural factors.

Nevertheless, the connection between fertility and culture has been observed decades ago (Cleland and Wilson, 1987), and one main driver behind the second demographic transition was how cultural norms contributed to below replacement fertility since the 1980s. This partly explains why the empowerment of women, especially their participation in higher education and the labor force, is often contrasted with their role as mothers. Family and motherhood are among the oldest and most sacred cultural entities, thus the decreasing number of babies tend to evoke strong emotional responses that look for problems in the character of the parents or the childless adults that are supposed to be parents.

As I pointed out earlier, depopulation as a phenomenon has a negative connotation. If it

happens, it can easily be portrayed as a crisis to be addressed, potentially turning it into a political platform. Certain groups may be seen as responsible for the crisis, hence being targeted by strong criticism. If depopulation is mainly caused by declining fertility, young adults, and women in particular, may be blamed for their non-reproductive behavior, which is seen as inconsistent with national interests or cultural traits.

Another politically and emotionally charged variation of this topic is the obsession with the high fertility of a minority group; let that be Mexicans in the United States, Muslims in Western Europe or the Roma in Eastern Europe. This is the same relative depopulation issue at a different level of geography; in fact, it is a modern iteration of the late 19th century arguments on fertility differences based on social class. Such arguments targeting women, younger generations or ethnic minorities are usually futile with respect to making any demographic difference, but may serve as conceptual breeding grounds for questionable policies.

Negative net migration can also result in the same cultural stigmatization, both toward the place and those who had left it. If depopulation is projected at the place itself, it may become a paralyzing trend, inducing further outmigration as a self-fulfilling prophecy. Since migration is selective, the first to escape this psychological burden would be the most resourceful, best educated and creative residents. This further strips the local community of the much needed human capital to address the impacts of depopulation.

Such changes in population composition would not only diminish local development capacity, but could also make people dig in their heels, possibly revert to denial and reject any potential remedies. Some would rationalize why such trends are actually not negative, particularly if they are in leadership positions, which would imply their responsibility even if depopulation is caused by forces beyond their control. This may also happen if people do not have the resources to move away and feel being left behind.

A somewhat different perspective on local depopulation is when the leading citizenry argues that such trends would only leave the most resilient community members behind, evoking the golden days of old times. Such behavior was observed during fieldwork in various farming communities in the American Great Plains, where resilience was blended into the picture of heroic struggle in the frontier lands. In this narrative, depopulation actually preserves the desired character of the place and ensures a certain way of life. With no challengers left to rally for changes, local elites could be solidified for a long time. In many cases, such conflicts have a generational overlay, which is amplified as depopulating places are getting progressively older.

When looking at the relationship between culture and demography in the specific topic of persistent outmigration, we can frame this in the context of place attachment. Place attachment refers to the subjective, intangible bonds to a location based on individual preferences. The location in this case refers to both the physical location and the community of residents living there. The importance of place attachment for demography is that it can help explain migration behavior, as

these subjective considerations play an important role in decision making. Place attachment also varies in the life course, and the recent surge of seeing retirement migration as a development strategy in the United States is a good example for the efforts to revitalize once depopulating communities.

Place attachment works both ways. If it is strong, it can mitigate the negative impacts of push factors, as long as those are temporary. If retention capacity is strengthened by place attachment, it can also give extra time to the community to tackle the challenges. However, if place attachment is weak, it can erode communities without any shock event. Since it is a function of subjective preferences, it is often weakened when broad social change assigns different values to various aspects of what a good quality of life is.

The best example for eroding place attachment is the large scale urbanization in the 20th century, which fundamentally changed social and economic organization, and placed increased value on urban amenities. However, we could observe changing place attachment in the other direction as well: the so-called nonmetropolitan turnaround in the United States in the 1970s occurred because residential preferences started to favor rural areas over cities with high crime rates and crumbling services. The scholarship on counter-urbanization (Champion, 1989; Kontuly, 1998; Mitchell, 2004) found this to be a complex phenomenon, but it seems clear that apart from economic restructuring providing jobs in smaller places, subjective preferences on where people want to live also played a role. Such population turnarounds are selective though, and not all depopulating places could utilize the increased interest in more dispersed living conditions. This is particularly true in the United States where the rampant expansion of suburbia is marketed to offer both tranquil residential living and urban amenities in a close proximity.

The last impact of depopulation to be mentioned is the changing political landscape. The most common example is the shrinking rural constituency. Political parties that rely heavily on rural votes face difficulties if their base regions decline. Paradoxically, the same trend can entrench local politicians in these areas if they remain without political challengers. Thus, while the weight of these areas or populations decrease at the national level, their local politicians can enjoy greater support at the municipal level, which in turn can strengthen narratives about them being the last true representatives of a golden age.

Concluding Thoughts: Addressing Depopulation

Depopulation is usually a sign of unfavorable economic or social trends that jeopardize future development and social well-being. However, while numbers do not lie, the desired future development as well as the challenges blocking the road to it are socially constructed. In this respect, over-dramatizing the crisis is no better than denying it. To address depopulation, it is important to identify the triggers beyond demography, and look for solutions that are economically

feasible and culturally reasonable.

Japan is said to be in a unique situation with low fertility, very long life expectancy at birth, little international migration, and the recently started absolute depopulation at the national level. While a specific combination of these trends would make any nation unique, all components of depopulation can be found in other countries, and various solutions have also been tried to turn these trends around. The difficulty for any country is managing the short term challenges while preparing a long term solution, especially if resources to do either are limited.

At the national level, there are two major ways to slow down and possibly even turn around depopulation. The first is addressing fertility decline. The ideational changes that pulled total fertility rates below replacement in developed countries would likely not change. The goal should be to stop further decline and stabilize total fertility as close to replacement levels as possible. This needs to address the issue of working mothers, women who would be costly to remove from a shrinking workforce but are also required to have children at the same time. Investing resources in maternal benefit programs, and particularly in childcare support is crucial for making such work-life balance possible. Considerations should also address the resources needed to raise children in an academically highly competitive environment, which may also work against decisions to have more than one child. Such policies must have a proper cultural fit, because promoting certain family models cannot happen without long term buy-in from constituents, especially if significant national resources would be devoted to this goal. Working on fertility is definitely a long-term process, which even if the policies were successful would take many years to make their impact on demographic trends.

The second area of intervention is managing international migration. From a purely policy perspective, international migration has two distinct forms that could overlap in practice. Guest worker programs provide many benefits without most of the challenges, at least in theory. Guest workers simply add numbers to the labor pool, not only boosting economic productivity, but also mitigating the workforce pressure in certain regions struggling with depopulation. A good example for this latter is the presence of nurses and other healthcare workers from Southeast Asia in the rural United States. These guest workers helped keeping hospitals and long term care facilities open, and subsequently contributed to the retention capacity of many places.

Guest worker policies require careful considerations not only about issuing temporary work permits, but also about the potential transition to immigrant status. Migration results in building social networks and acquiring familiarity about the destination, and this may turn into intentions to settle down permanently. While it requires considerable effort from the host country to integrate migrants, especially if they belong to an ethnic minority, such as Mexicans in the United States or Turks in Germany, the major benefit of a well-functioning immigration policy is the fact that migrants not only add to the workforce but also to the reproductive capacity of the destination country. However, the importance of culture must not be forgotten: it is relatively easy to establish

immigration policies, but it takes a lot more time and effort to prepare a society to embrace it. The approach must be gradual, keeping two important things in mind. The first is that the negative population momentum would possibly mask any benefits on the short-term even when the broader trends move into the right direction. The second is that resistance to guest worker programs and immigration tends to be the largest at the onset of the change, exactly when the costs are the greatest and the benefits are the most modest. However, managing demography is always playing the long game where patience does pay its dividends at the end.

Addressing depopulation at the local level is both easier and more difficult. It is easier, because the trends creating depopulation are simpler and easier to identify. At the same time, it is more difficult, because certain forces, such as a national fertility decline, are well outside the power of local leaders to address. In addition, local communities, especially declining ones, have fewer policy tools to employ and limited resources to utilize. This is particularly true in rural areas where depopulation tends to start; hence, in the following I discuss this in the context of the emptying countryside.

It is commonly asked whether there should be a national policy or some funding mechanism, which helps local communities tackle such challenges. There are a number of considerations in this respect. First, one size does not fit all. There is no national policy, which would help all depopulating places, especially if depopulation occurs for different reasons and plays out in various local contexts. The best course of action is building local capacity to let communities work on the problem themselves and develop unique strategies. Second, in capitalist economies state intervention can be seen as meddling with the Invisible Hand. If support is provided to depopulating places, it is a form of subsidy, which needs to happen in the context of a broad societal discourse on preserving places or communities that could not wither the storm of market forces. This is not an easy discussion even in places, such as the United States, where rurality carries cultural significance. Market is a harsh mistress, and in the absence of a societal consensus, such actions could simply be seen as catering to a shrinking political constituency. Third, it is important to address the cultural aspect of local depopulation. This can be done by promoting a positive image of the countryside. However, such promotion should correspond with certain levels of infrastructural development, so that the positive aspects would not immediately be overshadowed by the lack of basic amenities. Governments also have to prepare that this promotion will likely counter the views of the majority of the population, typically those in cities where most of the GDP is generated and services have their price tags too. One target audience must also be niche groups that could serve as catalysts later on. A good example for this latter is adventure tourism.

The approach to address rural depopulation is typically built on the fundamental dynamics of migration, which is its most common direct cause. This recognizes that population distribution trends depend on two factors: job opportunities and residential preferences. In rural areas, the first

is usually in agriculture, other extractive industries, or tourism, while the second relates to a subjective image of the countryside featuring low density and high quality living with easy access to various amenities.

In the European Union, rural jobs are maintained by a proactive support of rural economies. This is a costly approach, especially because of the subsidies through the Common Agricultural Policy, which tends to generate heated public and academic discussions. The unique mechanisms of EU revenue redistribution make this a feasible strategy though, even if member states often negotiate various deals for their respective economic landscapes.

The other angle of the EU approach is the heavy promotion of the countryside as part of the European heritage. This is mostly done through promoting the active use of rural areas as tourist destinations, recreational opportunities, places of cultural significance and so on. This tackles the negative image of declining places by branding the countryside as both a link to a shared past (often more imagined than real) and a core contributor to modern qualities of life. This not only supports local economies beyond agriculture and extraction, but also fosters an active connection between the rural population and urban residents, shifting rural from the place of production to a place of consumption (for more on this topic, see for example Silva and Figueiredo, 2013).

The United States has a very different approach, based on neoliberal market logic, largely rejecting the central redistribution of development resources. Powerful interest groups, such as farmers, do succeed capturing certain subsidies though. According to the complex logic of agricultural dependence (Curtis-White, 2008), the success of farming does help rural economies but farm consolidation and mechanization do undermine the demographic sustainability of these places by displacing labor and blocking the development of a more diverse economic base. Apart from these farm subsidies, communities are largely left alone to raise resources themselves.

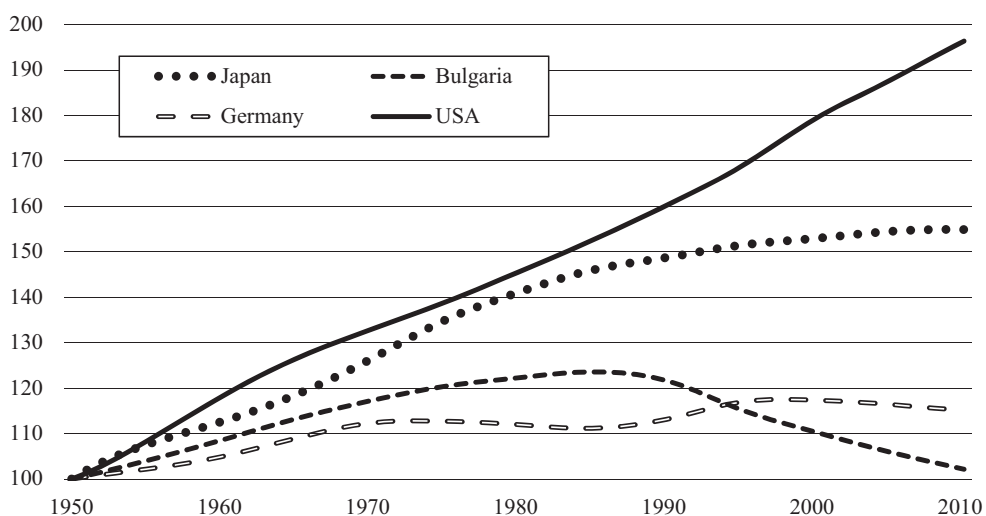
A successful strategy, building on demographic cohort dynamics, is attracting retiree migrants (Brown and Glasgow, 2008). Rural retirement destinations show continuous population growth, and even if they are becoming older, their resource base is more than capable of counterbalancing this change. Retirement migration, however, does not occur randomly; rather it follows established social ties and networks. In most cases, it is driven by natural amenities; however, the presence of specific infrastructure is crucial, explaining why not all places with beautiful landscapes become retirement destinations (Brown et al, 2011).

Other efforts to address rural depopulation are less successful. Persistent population decline has long been the trend in rural Kansas, yet various state and county initiatives were unable to reverse this. An example is giving free land to newcomers if they settle permanently, mimicking the original Homestead Act of 1862. This had only very modest success because of the lack of employment opportunities at the same time. Another failed attempt is the Rural Opportunity Zones (ROZ), with a five year waiver on personal income tax and a \$15,000 student loan repayment incentive after moving to a depopulating county in the state. The reason why the ROZ scheme is

not working is that, similarly to the free land scheme, it ignores the underlying complexity of migration decision making when it comes to assessing future careers and the availability of various amenities. In addition, while implementing the ROZ program, the conservative government of Kansas had also been cutting taxes, effectively undermining the very incentive it offers for potential migrants.

Finally, let us compare Japan to the United States, Bulgaria, and Germany in three core demographic dynamics: standardized population size, total fertility rates, and median age. Taking 1950 as the baseline, by 2010, the U.S. population has doubled; Japan has grown by 50% and peaked; Bulgaria has grown about 25% and fell back to the 1950 level; and the population of Germany has only modestly increased (Figure 7). Natural increase has declined in all four countries after 1950, however in the 1970s it stabilized in the United States in the positive range while it fell below zero in the other three countries.

Figure 7. Standardized population change in international comparison (1950=100%).



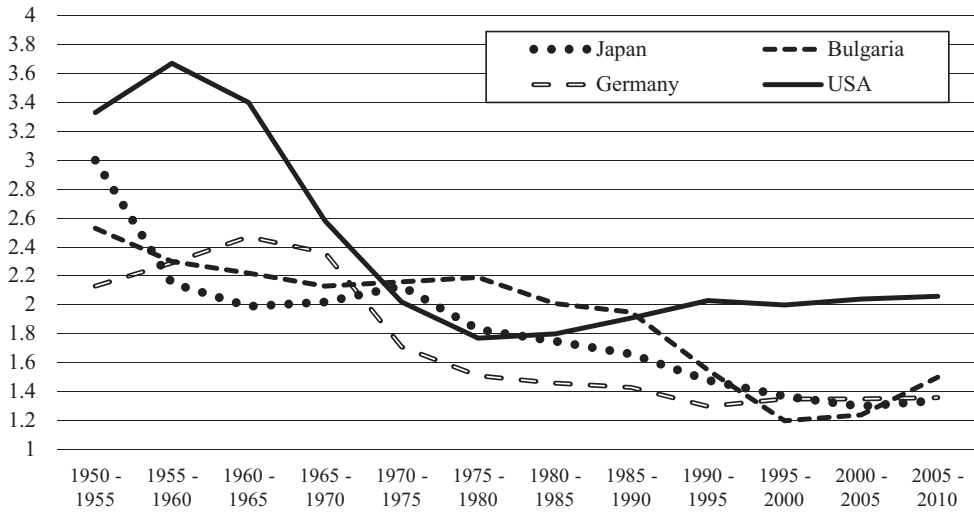
Source: UN: World Population Prospects: The 2015 Revision.

Total fertility rates declined and were around replacement level in all four countries in the mid-1970s (Figure 8). Again, following this period, the TFR has stabilized in the U.S. at just below replacement fertility, while it continued to fall in the other three countries. This, together with the corresponding trend in natural fertility, is clearly the result of immigration, which started to pick up in the U.S. around that time.

As a result of these fertility trends, and to a lesser degree of improving life expectancy at birth, median age has increased in all four countries between 1950 and 2010 (Figure 9). The increase was the steepest in Japan, because Japan had the youngest population among these

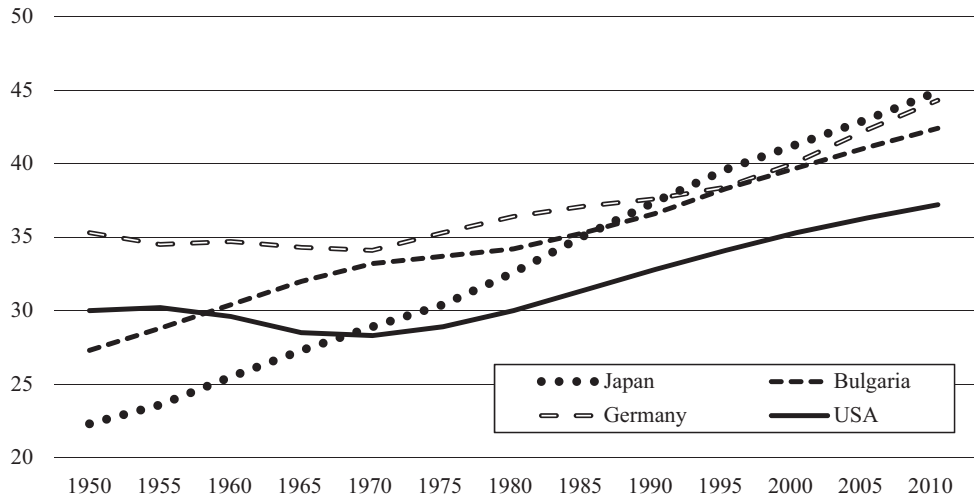
countries in 1950. In 2010, Japanese median age was very similar to that of Germany, with Bulgaria not much behind. The U.S. is again an exception, the American Baby Boom kept median age unchanged until the 1970s, but then the trend has become very similar to the other countries.

Figure 8. Total fertility rates in international comparison.



Source: UN: World Population Prospects: The 2015 Revision.

Figure 9. Median age in international comparison (1950=100%).



Source: UN: World Population Prospects: The 2015 Revision.

The importance of this comparison is twofold. First, as demonstrated on the example of the U.S., immigration makes a considerable difference in how population change unfolds. Immigrants were able to stabilize American fertility and natural increase rates, and have a suppressing effect on population aging at the national level. Research has also addressed the demographic impact of immigrants in new, rural destinations (Kandel and Parrado, 2006). The challenges of migrant integration are great, and the long history of immigration to the United States has definitely had its own ups and downs. Yet, immigration, even at a modest level, seems to be the best short-term remedy to turn national depopulation around.

Second, Germany and Bulgaria with very different economic, social and cultural characteristics and histories when compared to Japan and each other exhibited similar demographic dynamics. The fact that these global demographic trends occur in diverse environments provides a natural laboratory for policy makers to learn about a variety of initiatives other countries, regions or communities employ to address the same challenges. This could be particularly useful when one wants to collect examples of local projects. Training in demography should put more emphasis on culture-sensitive case studies to seek and identify small-scale solutions to address depopulation on many fronts.

Demography, a central component of development, is not destiny. It is simply an aggregate of individual and household level decisions that respond to various economic and social triggers, all identifiable by scientific methods. Demography undoubtedly affects the development of a place, but it is mediated by human agency, and that agency always offers the possibility of collective action to remedy negative trends.

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人口減少とその発展への課題：国際比較の視点から

ラースロー・クルチャー

人口減少は比較的新しい人口学的課題であるが、国レベルと地域レベルのいずれにおいても生じる可能性がある。この変化は、出生力の低下と移動による人口の流出によるものであるが、これらは、平均寿命の伸長と相まって人口の年齢構成にも大きな影響を及ぼす。人口減少とは、しばしば人口規模の絶対的な縮小のことを指すが、自治体や地域レベルにおいて人口増加の停滞がみられたり、人口増加が国レベルの平均を下回ったりすることによって人口の減少が不均一に生じる場合のように、相対的にみられる現象でもある。重要なのは、自然災害などのショックイベントによって生じる人口の減少と、経済的・社会的趨勢によって生じる継続的な人口減少を区別することである。地域の社会的・経済的な基盤が損なわれることがなければ、前者は、一時的な現象にとどまるであろう。

人口学は、当初から、その対象を発展・経済成長・社会的豊かさの文脈に位置づけていた。人口研究における初期の視点は、社会階層による人口規模や人口学的行動の違いに関連するものであった。そして19世紀になると、フランスにおける出生力の低下が最初の契機となり、相対的な人口減少に関する言説が広まっていった。人口転換理論が普遍的なパラダイムとして受け入れられたことにより、相対的な人口減少についての関心が国際的に高まり、1960年代から70年代にかけての家族計画政策の形成を支えるまでになった。先進国における出生力が置き換え水準を下回るようになると、第二の人口転換論が登場し、観念的あるいは文化的な要因による説明が提起されたが、そのすぐ後には、いくつかの国において絶対的な人口減少が始まった。

人口減少をめぐる主要な懸念は、経済に好ましくない影響をもたらす労働力の縮小に関するものが中心である。しかしながら、人口規模の縮小は、必ずしも労働力の損失につながるものではない。高齢化によって従属人口指数が変化し、社会保障や年金制度にとっての深刻な脅威となる。労働力の規模に関するマネジメントは、退職年齢や労働参加率をターゲットにすることが多いが、これらを操作する余地は限られている。労働力人口に対して最も大きな影響を与えるものは、おそらく、外国人労働者や移民であるかもしれない。

人口減少は、すでに数十年の間、国内の地域レベルで生じている。しかしながら、こうした人口減少は、単に経済的トレンドの自然なサイクルであるとみなされることが多く、とくに国レベルの現象になる前段階においては、この傾向が顕著である。人口減少をいち早く経験するのは農村部のコミュニティであり、とくに農業などの労働集約的産業が機械化されたり、あるいはグローバル経済下における生産システムの変化によって場所が変わる場合である。人口が減少する地域にとって、その基本的な人口学的文脈を形成するのは出生力の低下であるが、実際の人口減少はほとんどすべての場合、人口移動による変動が作用している。人口の流出による減少が財政や経済活動を圧迫し、それによってサービス

の整理や縮小が進み、結果としてさらに多くの人が地域を離れるという悪循環に陥ることもあり得る。

人口減少は経済に影響を与えるだけでなく、文化的にも重要な意味をもっている。出生力の低下の原因になっているとみなされる社会集団が批判的になることもあれば、非常に高い出生力をもつマイノリティ集団がそうなることもある。人口減少は、地域レベルでは、しばしば郷土愛という概念で語られる。すなわち、郷土愛が弱い地域では、継続的な人口流出が生じる一方で、強い地域では、コミュニティにとっての様々な困難を克服するうえでの経済的および人的キャパシティを保つことが容易になることも考えられる。

人口減少に取り組むうえでの政策的なツールは、多くの場合において、出生力の上昇、あるいは少なくとも出生率のさらなる低下を食い止めることや国際人口移動の管理を中心的な課題としているが、人口減少に対する普遍的な解決策があるわけではない。効果が目に見えて出現するまでには時間がかかるかもしれないが、出生力の低下に対応するために家族手当を充実させたり、男性も女性もワークライフバランスを保てることのできるような種々のプログラムに取り組むということも考えられる。また、外国人労働者や永住移民の受け入れを管理することによって、より短期での効果を得ることができるとは思われるが、大規模な新規移民の受け入れに慣れていない社会においては、これは容易なことではない。

地域レベルで生じる人口減少への対応として、コミュニティや自治体、中央政府によって様々なツールが試されてきた。これらの取り組みにおいては、農業や採掘産業といった伝統的な部門への補助金や、例えば観光産業といった比較的新しい産業分野を支援することによって、非都市部での雇用を創出することに焦点が置かれることが多かった。欧州連合において顕著な例として、地方のイメージを向上させるための取り組みが行われたりもしているが、これは、産業地域を、都市的な文化地域に変えるという難しいタスクである。

人口は、発展の中心的な要素であるが、それは定まった運命ではない。人口は、様々な経済的社会的なきっかけに対する個人や世帯レベルの意思決定の集合であり、これらはいずれも科学的方法によって把握することができる。人口は、まぎれもなく地域の発展に影響を与えるが、その影響は人間の行動によっても変化するものであり、常にその行動は、好ましくない状況を改善するための集団的な取り組みへの可能性をもっている。

(訳：中川雅貴)