



**Stockholm University Linnaeus Center on
Social Policy and Family Dynamics in Europe, SPaDE**

The Demography of Europe: Introduction
(Introduction to Book Volume by Springer)

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Working Paper 2012: 3

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Abstract: Over the past decades Europe has witnessed fundamental changes of its population dynamics and population structure. These changes pose major challenges to population studies, as conventional theoretical assumptions regarding demographic behavior and demographic development seem unfit to provide convincing explanations of the recent demographic changes. This book, derived from the symposium on “The Demography of Europe” held at the Max Planck Institute for Demographic Research in Rostock, Germany, in 2007 in honor of Professor Jan M. Hoem, brings together leading population researchers in the area of fertility, family, migration, life-expectancy, and mortality. The contributions present key issues of the new Demography of Europe and discuss research advances to understand the continent’s demographic development at the turn of the 21st century.

* This paper is also available in the *Stockholm Research Reports in Demography* series

Over the past three decades Europe has witnessed fundamental changes in its population dynamics and population structure. Fertility has fallen below the replacement level in almost all of the continent's countries, while childbearing behavior and family formation have become more diverse. Life expectancy has risen in Western Europe for both females and males, but has declined for men in some Eastern European countries. Migration from non-European countries to Europe as well as cross-border mobility within Europe have increased substantially. These changes pose major challenges for population research. The variety of their trends and patterns make it difficult to assess the direction, the speed, and the quantum of demographic changes and to draw general conclusions about Europe's demographic pathway. Conventional theoretical assumptions regarding patterns of demographic behavior and demographic development seem to be increasingly unfit to provide convincing and comprehensive explanations of the recent demographic developments. The dynamics of change and the diversity of demographic behavior call for further advances in demographic approaches and methods. This would facilitate the understanding of the complexity and interrelatedness of factors influencing demographic development. In addition, the growing political interest in demographic issues has increased the demands on demographers to provide substantive evidence of the causes and consequences of Europe's population development. This has increased the pressure to expand research towards assessing the impact of social, economic, and political factors on demographic behavior and demographic trends in Europe.

These issues have been a driving force behind much of recent demographic research in Europe. A large body of literature deals with various aspects of European population development and population dynamics, employing a variety of different approaches, different methodologies, and different aims. The articles in this book contribute to this literature. They focus on specific demographic issues relevant to the understanding of the diversity and of the complexity of Europe's demographic development. The chapters span across all the main demographic areas: fertility, family dynamics, mortality, and migration. The aim of the book is twofold: first, to present and discuss some features of population issues which are vital to the demography of Europe, and second, to address issues associated with researching these features. The book also offers examples which illustrate that the demography of Europe, that is, the demographic issues and demographic development of Europe as we know them, cannot be separated from demography as a science, that is, from the theoretical and methodological

approaches that underpin demographic research. The contributions also call attention to the need for cross-disciplinary research, for broadening theoretical perspectives and for advancing methodological approaches in order to better understand the complexity of demographic behavior and demographic development in Europe. In what follows we summarize the contributions in this book and embed them in the broader context of demographic development in Europe.

1. Fertility and Family Formation

For more than a decade, from 1994 to 2005, the total fertility rate (TFR) of Europe hovered around 1.45. Some countries had this low or even lower fertility for several decades; others experienced a drop of their fertility to low (1.7-1.5 TFR) or lowest-low (below 1.5 TFR) levels only in recent years. Only in a few countries has the TFR never fallen to low or lowest low levels. Despite the recent increase in the TFR in all major regions of Europe (Frejka and Sobotka 2008; Goldstein et al. 2009), the persistent below-replacement levels of the TFR have given rise to concerns about the consequences of low fertility for the sustainability of Europe's economic, social, and welfare systems.

In his contribution, *Peter McDonald* notes that Europe's entrenchment in low fertility poses a major challenge for demographic research. He highlights five areas on which demographic research should concentrate in order to improve our ability to predict fertility trends, to enhance the knowledge of the causes of low fertility, and to assess the consequences of it. First, he sees a need to develop better fertility measures based on detailed indicators of childbearing behavior in order to overcome the widely acknowledged weaknesses of standard demographic fertility measures and in particular the TFR. Developing new measures requires the use of longitudinal data and of methods which follow women's childbearing behavior over their life course (see also: Hoem and Mureşan 2011a,b; Hoem, Jalovaara and Mureşan 2011).

Second, McDonald argues for concerted efforts to examine the relationship between institutional factors and individual behavior. He calls for theoretical models and empirical methods which acknowledge institutional change explicitly and which capture cumulative impacts of institutional factors. Third, he feels that the impact of values on childbearing behavior is not yet understood adequately. Prevailing approaches are too simple to explore the

diversity of the effects of values on childbearing behavior, to grasp the strengths of values in the decision-making process, and to explain cross-national value differences and their impacts on fertility. The methodological repertoire should be broadened towards mixed-method approaches, that is, towards incorporating qualitative research methods in demography along with the quantitative approach normally in focus.

Fourth, demography suffers from a weakness in theories. Even though the attitude that demography is a science without theory may be exaggerated, the most common theoretical approaches in demography do not seem to grasp the diversity and directions of current fertility and family development in Europe. According to McDonald we need theories which capture change, at the institutional, at the value, and at the individual level. Fifth, demography should open up more towards policy-oriented research. It should focus on estimating the impact of policy packages on demographic behavior, taking into account the range, coherence, and perceptions of policies. There is also a need to further assess the reasons for equal or differential effects of policies on demographic behavior of different groups of the population.

According to McDonald these challenges can only be tackled if demography pushes for theory-based approaches, for cross-national comparative longitudinal (panel) data which allow investigations of the heterogeneity of childbearing decisions, for the advancement of methods which facilitate analyses of such data, and for a more consistent incorporation of qualitative methods in demographic research.

Following Peter McDonald's suggestion to explore the relationships between various aspects of policies and fertility, *Gerda Neyer* discusses the potentials of welfare-state and of policy approaches for fertility research in Europe. The low total fertility rates in Europe during recent decades have spurred suggestions that countries should implement policies in order to raise fertility. While such demands flourish in public discourses, demographers often find no or only small fertility-elevating effects of individual policies. This has led them to turn their attention to the welfare state instead, that is, to national configurations of social and family policies and their effects on fertility. Neyer argues that welfare-state and single-policy approaches complement each other. She points to two ways in which welfare-state oriented research can contribute to a better understanding of the linkages between policies and fertility. First, despite many recent changes of welfare policies, the configurations and main directions

of European welfare states have not undergone substantial transformations. This inertia opens up the possibility to assess the cumulative impact of policies and policy packages over time and over a person's life course. Second, the concept of the welfare-state regime as developed by Esping-Andersen interlinks welfare-state policies, the labor market, and the family. The "varieties of capitalism"-approach broadens this further in that it associates different types of welfare states with different labor-market structures and different educational systems. This permits researchers to see fertility behavior within a framework of interrelated institutions. Drawing on comparative work on ultimate childlessness by educational attainment in Sweden and Austria, Neyer demonstrates the usefulness of such an approach. It offers explanations of differentials in cumulative fertility outcomes that cannot be linked immediately to individual policies or single policy packages.

Analyses of individual policies provide insight into their effects on childbearing behavior, which makes it possible to distinguish between differential effects on the fertility behavior of various groups of women and of men. If the welfare-state configuration and the socio-economic context are considered in the analysis and/or in the interpretation of the research results, such analyses are also well suited to assess the potential effect of a policy in other contexts. Neyer gives examples of these features based on research findings from Sweden. Since analyses of individual policies provide a more nuanced picture of the effects of a policy on different social groups than more macro-oriented analyses, they are also useful for policy advice. Researchers can only make use of this potential if detailed data are made available that also reveal the effects of special regulations geared at specific social groups.

The low levels of the TFR in Europe are often attributed to the increase in the mean age at childbearing. Over the past 30 years, women in all European countries have delayed childbearing considerably. In almost half of the member states of the European Union, women's mean age at childbearing is currently 30 or above (European Commission 2011: 29). Demographers give several reasons for the postponement of motherhood: the expansion of the time spent in education, difficulties in the transition from education to work, changes in union-formation and marriage behavior, greater individualization, and growing cleavages between women and men in their attitudes towards parenthood. However, the considerable variation in women's age at first birth and in their mean number of children lead us to question the prevailing assumption that educational, economic, and social factors have a

universal, gender-neutral, and uniform effect on postponement (Andersson et al. 2009; Neyer and Hoem 2008; Van Bavel 2010; Kantorova 2004; Kreyenfeld 2010; Andersson, Kreyenfeld and Mika 2009). This has stressed the need for research which explores how institutional, economic, and cultural circumstances intertwine with the life course and with attitudes of women and men in shaping their childbearing decisions. Such research needs to go beyond the usual analysis of quantitatively measurable life course events; it needs to grasp how people perceive their own circumstances, what meaning they give to their own life course trajectories, their education, their employment, and their personal relationships, and how these influence their decision whether and when to have a child (Bernardi et al. 2008; Keim et al. 2009).

The chapter by *Karl Ulrich Mayer and Eva Schulze* is one of the few studies in demography which uses such a multi-dimensional framework and combines quantitative and qualitative methods to explore the reasons for postponement of first births, with an application to reunified Germany. The past division of Germany into two countries with different educational, economic, gender, and policy regimes makes it particularly well-suited for a study of the impact of educational, economic, and social factors on childbearing decisions. Analyzing the timing of first birth across cohorts, Mayer and Schulze depict the emergence of different patterns of postponement in East and West Germany. Compared to their West German counterparts, women in the former East Germany had their first child earlier, their educational attainment had no marked influence on the timing of their first birth, and they did not sequence marriage and childbearing to the extent that West German women did (see also: Kreyenfeld 2004; Bernardi et al. 2008).

Mayer and Schulze ask whether these different trajectories to motherhood in the two Germanies have left their imprints on the childbearing behavior of East and West German women after unification. Their narrative interviews confirm that they have. They document nicely the different motives and the different behavioral patterns in East and West German women's pathway to motherhood. The different histories of East and West Germany have led to lasting differences in women's perception of motherhood as an integral part of their life, in their expectations for reconciling work and childrearing, in their reliance on a stable partnership as a precondition for childbearing, and, correspondingly, in men's willingness to commit themselves to a family and to take up the responsibility of fatherhood.

The study by Mayer and Schulze demonstrates the gain in insight obtained through a research that combines quantitative life-course analysis with qualitative interviews. It highlights, first, that societal institutions do not only structure life courses, but that they also influence how people assess constraints and possibilities. Second, their study underlines that a society's past has repercussions on current individual decision making and life-course planning. Third, it emphasizes the need to explore family formation and demographic issues of the family from a couple perspective. Fourth, it exemplifies that childbearing decisions do not follow a pattern similar in all societies and also that women and men may consider individual and societal circumstances differently in their plans to form a family. Finally, it stresses the need to uncover the motives, the attitudes, the ambivalences, and the expectations which underlie the decision to whether or when to form a family and to have children.

The persistence of country-specific behavior over time suggests that there exist standardized or normatively regulated patterns of behavior that are particular to each society (Liefbroer and Billari 2010; Billari et al. 2011). Nevertheless, increasing intra-country variation in family and fertility matters indicate that norms become weaker and prevalent patterns of behavior become de-standardized. Explanations that the recent changes in European family and fertility patterns are the consequence of de-standardization figure prominently in demographic research. For example, many of the changes in the demographic behavior of Europeans are regarded as the outcome of increased individualization, of the dissolution of traditional family configurations, of the erosion of gender relationships and the increase in women's autonomy, or of the diffusion of previously uncommon behaviors within the population. In his contribution to this book, *Johannes Huinink* takes issue with the notion of de-standardization. He argues that the prevalent concept of de-standardization is too narrow and uni-directional to capture and explain changing life course patterns. He calls for a more nuanced notion of de-standardization which should distinguish between changes which are irreversible and changes which are transient, and he advocates considering *re-standardization*. Huinink demonstrates the need for a broader concept by looking at the changes in the transition to adulthood across cohorts and across countries. The transition to adulthood is a particular interesting demographic phase to study in connection with issues of de-standardization of behavior because it comprises several transitions: leaving the parental home and forming one's own household, first union formation, first marriage, first birth, finishing education, taking a first job, and so on. Concentrating on the age structure of

demographic events in the transition to adulthood, on the interrelationship and sequencing of these transitions, and on the diversity of demographic, educational, and work-related trajectories at the threshold to adulthood, Huinink shows that the changes in these transitions cannot be captured by a single concept of de-standardization. He finds that some of the changes observed across cohorts were only temporary, and that younger cohorts show a behavioral pattern similar to their parent or even their grandparent cohorts. In some cases, a new form of behavior replaced the previously prevalent form of behavior, so that it is more appropriate to speak of re-standardization than of de-standardization of behavior. Some behavioral patterns have become more diverse over time. But Huinink cautions against terming such changes de-standardization without further consideration. It could well be that these changes are also only transient and that the behavior will either reverse to the previous standardized form of behavior or end in a new form of standardized behavior. In light of these findings, Huinink pleads for the development of concepts of social change which are less concentrated on comparisons of behavioral states, and are built on assumptions about the logic of processes of change. Such an approach would also facilitate an assessment of whether processes of change occur simultaneously in different areas of behavior or whether change in one behavioral pattern lags behind change in another. This could provide insight into the demographic consequences of synchronic or a-synchronic processes of change and shed light on some of the so far unexplained issues of the demographic diversity of family and fertility patterns in Europe.

2. Longevity and Mortality

The low fertility and the changes in family patterns in Europe have not only attracted attention as such, but they have been increasingly discussed within the broader context of population aging due to the decrease in mortality and the concomitant rise in life expectancy. During the 20th century European mortality risks have fallen substantially and life expectancy has been rising steadily. Life expectancy has been increasing by two and a half years per decade in countries with the highest recorded life expectancy (Oeppen and Vaupel 2002; European Commission 2009: 19). The European Commission projects that in the member states of the EU life expectancy at birth will continue to increase over the next half century. By 2060 the European Commission reckons that life expectancy at birth in Europe will be 89 years for

women and 84.5 years for men (European Commission 2009: 36). According to the United Nations, Europe is the continent with the highest share of elderly (people aged 60 and above) in the world (Rau et al. in this volume). Given the increase in life expectancy, the low fertility rates, and the selective immigration, Europe is likely to retain its rank as the oldest continent for the foreseeable future (Rau et al. in this volume).

The aging of the population is often assumed to have severe repercussions, for example, for Europe's economic growth, its productivity, its care needs, and for the sustainability of its welfare state. Yet, research shows that on average Europeans do not only get older, they also stay healthy longer. *Roland Rau, Magdalena Muszyńska and James W. Vaupel* take this development as their starting point to discuss the development of the various faces of aging, of mortality, and of life expectancy in Europe. They concentrate mainly on four countries: Norway, Denmark, Sweden, and the former East Germany prior to and after unification. The variations among them show that even countries with similar welfare states, with similar gender patterns of employment, or with other similar aspects (such as Norway, Denmark, and Sweden) may have different developments of mortality and life expectancy. Life expectancy in Denmark has not followed the trend of the other Nordic countries: women and men in Denmark have lower survival rates and partly larger inequality in lifespan than women and men in the other countries. Moreover, due to the rapid increase in life expectancy in East Germany after German unification, the life expectancy for Danish women is now below the life expectancy in East Germany. Rau, Muszyńska and Vaupel point out that for all countries it is particularly the increase in survival at ages 65 to 80 which is remarkable, because improvements in life expectancy above age 65 are normally considered to be difficult to achieve. In 2005, about 50% of all women and men who reach age 65 can expect to survive to ages 82 to 84 (men) or 85 to 88 (women), and 10% to ages around their mid-90s.

The authors also show that the increase in healthy life expectancy has recently even exceeded the increase in total life expectancy. Even at age 60, women in the four countries studied can expect to live their life in full health for another 17 to 20 years. Rau, Muszyńska and Vaupel regard this as an opportunity to discuss the re-structuring of the standard patterns of education, employment, and retirement across the life course in order to tackle the social, economic, and welfare consequences of population aging.

The remarkable differences in life expectancy among and within European countries have inspired much research as to the causes of such differences. In his contribution *Jacques Vallin* examines them in detail and tests theoretical approaches to the epidemiological and health transitions which aim to explain the changes in life expectancy and mortality over time. The development of life expectancy in European countries since the 1950s has resulted in marked cleavages between Eastern and Western European countries. Life expectancy in most Eastern European countries now ranges from 65 to 73 years and in Western European countries from 78 to 82. As Vallin shows, this East-West divide and the greater differences in life expectancy in Eastern Europe are due to a convergence of and an increase in life expectancy in the West and to a more heterogeneous development in the East. In some Eastern countries, life expectancy even declined for some years and mortality among (male) adults rose significantly. Among the many factors which may account for such diversity, Vallin investigates geographical, gender, and occupational differences in mortality over the past decades. He concludes that differences in causes of death and differences in the gains from medical and health improvement may account for the regional, gender, and socio-cultural differences in mortality. Yet, neither the current differences nor the diverse developments of mortality patterns in Europe can be adequately understood without taking the historical trends in socio-economic or epidemiological development into account. Testing the theory of epidemiological and health transition Vallin shows that from a comparative perspective the development of the life expectancy in Europe can be characterized by sequences of diverging and converging movements. The cross-country differentials correspond to the different onsets and developments of the epidemiological transition in the countries. Similar relationships emerge when he examines the development of intra-country differences in life expectancy by region, sex, and socio-economic categories over time. Although the epidemiological transition theory alone does not suffice to explain all such differentials, Vallin assumes that the processes of divergence and convergence brought about by different stages or distributions of economic, social, and medical transition may continue in the future. To him, reducing the causes that bring about the differences in life expectancy and mortality constitutes one of the great political challenges in Europe.

3. Migration

During the last two decades European countries have also witnessed important changes in migration trends and patterns. Migration streams have increased (Sobotka 2009). Southern European countries have become a region of immigration and migration from Eastern to Western Europe has grown (Katseli et al. 2006: 13). The East-West labor migration in Europe is not a new phenomenon. East Europeans contributed to the economies of the West and North European countries as early as the late 19th century; some countries participated also in the post-war European labor migration. Another wave of the East-West migration took place in the late 1980s and early 1990s, both for political and economic reasons. Even though the guest worker programs underlying the labor migration of the 1960s and early 1970s were terminated, much of the ongoing labor migration within Europe is perceived as temporary (Castles 2006; Dustmann et al. 1996). The OECD estimates that between 28% and 60% of the migrants to Western European countries return (or leave) within five years of immigration (Dumont and Spielvogel 2008: 171f.). Migrants from Eastern Europe have typically short-term work contracts, and seasonal migration into agriculture, construction, and service sectors in Western Europe is common. The temporary nature of migration partly reflects the motives of migrants. Young people are willing to search income and to acquire new skills and experience abroad, which can later be used back at home. ‘Western experience’ and foreign language skills are seen as important dimensions of human capital valued at home. For families, working in the West offers an opportunity to accumulate savings in order to buy (or renovate) a house back at home or survive the times of economic hardship.

The question of what happens to temporary migrants after their return to their homeland has been a topic little studied in migration literature. The chapter by *David Lindstrom* helps to fill the gap by focusing on the occupational mobility of Mexican return migrants from the US, a case which shares many similarities with the intra-European migration. His analysis shows that return migrants have a higher likelihood of making occupational transitions than non-migrants in Mexico. Interestingly, however, while some migrants experience upward occupational mobility upon their return to Mexico, by contrast, another large group experiences downward occupational mobility at the time of return. The analysis of lifetime occupational mobility of migrants reveals similar patterns. While return migrants are more likely to invest in land and businesses and become self-employed than non-

migrants, the US migration experience increases the likelihood of long-term downward mobility for most return migrants. The author concludes that individuals who work in the US and return to Mexico are unlikely to experience any wage return on their US work experience and may in fact be penalized for their experience. The reason may be the deterioration of location-specific human and social capital because of being away from the Mexican labor market. Employers may also discount US migration experience because they perceive return migrants as 'risky' workers who may leave again.

The study by Lindstrom focuses on the Mexico-US migration, but the similarities with ongoing East-West migration in Europe are striking. The results suggest that the experiences of the East-West migrants may not be as rosy as young people and families hope. Working in the UK, Germany or France is seen by young Eastern Europeans as an investment in human capital (including learning a major European language). However, often migrants in construction or agriculture mostly work together with their countrymen or countrywomen and have limited contact to locals. They thus have little chances to improve their language skills and learn new things. Therefore, they may return home with little 'Western' experience and without location-specific human and social capital left at home. Still, there is reason to believe that the experiences vary by migrant groups, just as the Mexican case study also suggests. While temporary agricultural and construction workers may not benefit from working in the West in the long run, other groups, e.g. medical doctors, nurses and other highly skilled professionals, may benefit much from the work experience abroad. There are indications that the circulatory migration of highly educated professionals is based on different conditions than the temporary labor migration of low skilled workers, since highly skilled professionals may have better options of leave of absence from their jobs and since they are also the target group which EU policies aim at attracting (Castles 2006). Lindstrom's contribution illustrates the need for a broader perspective on migration, which sees migration as a sequence of temporary moves over the life course. Such an approach calls for better migration data in Europe, that is, for longitudinal individual-level data with information on migration as an integral part of a person's life course. As Andersson (2004) and Kulu and Milewski (2007) have shown, only such data can also contribute to better understand the linkages between migration and other demographic events relevant for the understanding of Europe's demographic pattern.

4. Methodological Advancement

There is a consensus among demographers nowadays that a real understanding of the demographic development of Europe is not possible if one only focuses on macro-level data. Aggregate data may reflect the current demographic status and, if time series are available, they may also give some indication of change, but they cannot provide much insight into what behavior has brought about the current status or induced the change over time. The suggestion made by McDonald in this book to include duration aspects in the calculation of the TFR is only one example of the increasing acknowledgement that individual-level data are needed in order to assess demographic processes (see also: Hoem and Mureşan 2011a,b; Hoem, Jalovaara and Mureşan 2011). To understand the causes and consequences of demographic change, longitudinal, individual-level data and appropriate analytical methods are regarded as necessary prerequisites (see also: Andersson and Neyer 2004; Neyer and Andersson 2008). The contributions by Mayer and Schulze and by Lindstrom illustrate the need for such data. These days, event-history models applied on the individual level are regarded as state-of-the-art methodology. In his chapter, *Niels Keiding* focuses on two issues of event-history analysis which most researchers are confronted with: the effect of non-standard sampling patterns and the concept of ‘local dependence’. Both issues pose specific problems. Niels Keiding describes the development in dealing with these features and points out that there are still unresolved issues. His contribution does not only underline the progress in event-history analysis over the past decades; it also shows the need to strive for further methodological sophistication in this area.

5. Summary and Acknowledgement

The contributions in this book were collected with the purpose of addressing highly relevant issues in the study of the demographic development of Europe. The chapters demonstrate not only the diversity of demographic issues in Europe, but they first and foremost show that much needs to be done, theoretically, methodologically, and empirically, to gain a better understanding of demographic trajectories and their linkage to other societal developments. The contributions were first presented at the symposium “The Demography of Europe” organized to honor Jan M. Hoem on his retirement as Director of the Max Planck Institute for

Demographic Research. The editors thank all the contributors to this book, the participants at the symposium, and the staff of the Max Planck Institute for Demographic Research for their support. The editors are very grateful to the reviewers of the different book chapters and to Karin Tesching for editorial assistance. Our special appreciation goes to Evelien Bakker and Bernadette Deelen-Mans of the Springer Verlag for their untiring support.

Our best wishes and primary thanks go to Jan Hoem. We are deeply grateful for having had the opportunity to be part of his research staff at the Max Planck Institute for Demographic Research, for the good and productive time we had together there, and for his continual and inspiring support thereafter. Several of the research questions and issues addressed in this book were also part of the research program on contemporary European fertility and family dynamics which Jan initiated and led at the MPIDR. We are happy to see the progress in this research area and we are even more happy to see that Jan still continues to work and to contribute to the progress in research on the demography of Europe (see list below).

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