

# Population ageing in a lifecourse perspective: developing a conceptual framework

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## **ABSTRACT**

Population ageing is a global trend that affects individual life plans, family arrangements, market structures, care provisions and pension schemes. We combine insights from demography and lifecourse research to understand better the causes of population ageing. Demography explains population ageing by describing changes in fertility, mortality and migration rates. Lifecourse research argues that these rates are interconnected because they are embedded in the lifecourses of individuals. An individual's experiences at an early age can influence behaviours at a later age, thereby creating continuity throughout the lifecourse. Additionally, lifecourse research underlines that social networks—such as families—and countries influence lifecourse. Thus, historical events and past experiences have already set the course for today's demographic changes. Moreover, the effects of policies that strive to influence population ageing will not be evident for years or even decades to come. This paper introduces a conceptual framework that explains how the lifecourse perspective can be applied to the phenomenon of population ageing and illustrates the framework through a case study of Germany. The case study highlights that insights from the micro-, meso- and macro-levels need to be combined to achieve a deeper understanding of population ageing. Scholars can use the framework presented in this paper as a guideline for merging arguments from demography and lifecourse research in future studies.

**KEY WORDS**—population ageing, demography, lifecourse, social inequalities, long-term effects, model, theory, Germany.

## **Introduction**

Population ageing is a global trend that demands our attention. To illustrate: the share of people aged 65 years and over among the world's population increased from 5 to 8 per cent between 1950 and 2010 (United

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Nations 2013). The progression of population ageing shows geographical differences, with many Western societies having started early and already having progressed far (Christensen *et al.* 2009; United Nations 2013). In Europe, the continent with the oldest population, the share of people aged 65 years and over reached 16 per cent in 2010 and projections suggest that it may increase to 29 per cent in 2050 (United Nations 2013). This demographic shift creates many challenges. It affects individual life plans, family arrangements, market structures, care provisions and pension schemes (Tinker 2002). Consequently, there is a broad interest in understanding the root causes and effects of population ageing among practitioners, policy makers and scholars (Christensen *et al.* 2009; Kvist 2015).

This paper utilises the lifecourse perspective to understand better the causes of population ageing. The lifecourse perspective suggests that individuals' experiences at one point in time can influence their lives at a much later point in time (Elder 1994, 1999; Mayer 1988). Similarly, social networks and social context influence how the lives of people progress (Bengtson, Elder and Putney 2005; Kohli 2007). Social networks are groups of people consisting of kin and close friends (Bengtson, Elder and Putney 2005). Social contexts are the frameworks made up of institutions and social conventions that surround individuals (Hua 2005). Among other things, they consist of cultures, market structures and welfare policies (Mayer 2002). When we consider population ageing from this perspective, three insights are striking. First, historical events and personal experiences in the past set the course for today's demographic change (Mayer 2004). Second, the results of today's interventions in demographic change will not be seen for years into the future (Kvist 2015). Third, explanations of and interventions into population ageing need to be specific for different countries and population groups (Börsch-Supan *et al.* 2009). These insights underline the importance of individuals' developments over time to our understanding of the population-ageing phenomenon.

This paper presents a conceptual framework for applying a lifecourse perspective to population ageing. Previous research has acknowledged the benefits of applying such a perspective and Hobcraft (2006) even describes it as a core innovation in demographic research. For example, Hurst *et al.* (2013) and Kalache, Aboderin and Hoskins (2002) underline that childhood conditions influence health in later life, which make them important factors in ageing populations. Moreover, Kvist (2015) argues that policy makers need to adopt a lifecourse approach to counter successfully the effects of population ageing. However, previous research has only provided anecdotal evidence on the connection between lifecourses and population ageing. Research has not yet explained, in a structured and detailed way,

how one can best apply the lifecourse perspective to the phenomenon of population ageing. We strive to fill this lacuna with this paper. First, the paper uses the demographic transition theory, which stems from the discipline of demography, to explain population ageing. To make the explanations more coherent, it focuses on the situation in Europe. Then, the paper outlines some central ideas of the lifecourse perspective and discusses how they enhance our understanding of population ageing. Finally, a case study of Germany is used to illustrate how the demographic transition theory and the lifecourse perspective complement each other to explain population ageing. Germany is useful for such a case study because it has the oldest population in Europe (United Nations 2013), and because it has an eventful history that strongly influenced its citizens' lifecourses (*e.g.* Blossfeld 1986; Mayer 1988).

### **The demographic transition theory and population ageing**

Demographers commonly use the demographic transition theory to explain population ageing (Chesnais 1990; Reher 2004). This theory outlines how social change affects fertility and mortality rates (Kirk 1996). As both rates change over time, population size and composition shift, and populations age (Kirk 1996; Lee 2003).

According to the classical version of the theory, demographic transition began with modernisation, which is a process of social change that includes industrialisation, urbanisation and an expansion of education (Van der Loo and Van Reijen 1997). In Europe, this process began in the 19th century (Lee 2003; Van der Loo and Van Reijen 1997). Pre-modern societies had high fertility and high mortality rates (Kirk 1996). The fertility rate represents how many children an average woman will have over her lifetime, if she 'passed through her childbearing years conforming to age-specific fertility rates of a given year' (Pampel 1993: 497). When the fertility rate declines, so does the number of young people (Christensen *et al.* 2009). Consequently, the proportion of older people in a population increases and, therefore, the population ages (Christensen *et al.* 2009). The mortality rate describes how many people in a population die each year (Tabeau, Van den Berg Jeths and Heathcote 2001). The higher the mortality rate, the lower people's life expectancies (Caselli and Vallin 1990). If the infant mortality rate increases in an otherwise unchanged population, then the proportion of older people increases and the population ages (Caselli and Vallin 1990). The same effect occurs when the mortality rate among older people decreases in an otherwise unchanged population (Caselli and Vallin 1990).

When the modernisation process began, the first demographic transition set in (Kirk 1996). Living conditions and hygiene improved and health care advanced, all of which are suggested to have reduced diseases and premature deaths (Lesthaeghe and Neels 2002). The mortality rate began to decline around this time, especially mortality during infancy and childhood (Coale 1984; Lee 2003). People presumably reacted to falling child mortality rates and to the newly diffused modern ideas by having fewer children and investing more in each of their offspring (Lesthaeghe 2010). Therefore, the fertility rate likewise began to decrease (Lee 2003). For example, marital fertility across Europe decreased by about 40 per cent between 1870 and 1930 (Coale and Treadway 1986).

Around 1950, Europe experienced a second demographic transition (Lesthaeghe 1995). People found it increasingly difficult to combine paid work and child care, and they placed more value on self-actualisation (Kirk 1996; Lesthaeghe and Neels 2002). As a result, they used birth control to postpone having children and to reduce further the number of children they had (Van der Kaa 1997). On average, the total fertility rate in Europe fell from 2.7 in 1950 to 1.5 in 2010 (United Nations 2014). The greatest decrease was in Eastern Europe with a decline of 1.5, and the lowest decrease was in Northern Europe with a decline of only 0.5 (United Nations 2014).

The migration rate is not an integral part of the demographic transition theory, but some researchers propose that it changes as the demographic transition progresses (Van der Kaa 2004). The migration rate represents the difference between the number of people who move into and out of a population (Lee 1966). Both an emigration of young people and an immigration of older people can increase the proportion of older people in a population (Bijak *et al.* 2007; United Nations 2000). Accordingly, both kinds of migration flow drive population ageing (Bijak *et al.* 2007; United Nations 2000). Zelinsky (1971) argues that modernisation not only triggered the first demographic transition, but that it also affected migration flows. Therefore, demographic transition and migration flows developed side by side, and possibly influenced each other (Zelinsky 1971). When modernisation set in, the first demographic transition began and migration flows from rural to urban areas increased (Zelinsky 1971). At the same time, international migration increased and then slowed down again during the second demographic transition (Zelinsky 1971). With the second demographic transition, a pronounced migration of unskilled workers from less-developed to more-developed countries began (Zelinsky 1971). However, other authors point out that migration is also driven by other developments, which they categorise into push and pull factors (*e.g.* Klein *et al.* 2009; Lee 1966). Push factors are unfavourable country characteristics

that motivate emigration, such as wars, famines and high unemployment rates (Lee 1966). Pull factors are favourable country characteristics that motivate immigration, such as a high standard of living or a stable political situation (Mayda 2010).

As a result of all these developments, populations in Europe have aged (Coale 2002). The process of population ageing has been slowly progressing in Europe for a long time and it increased in strength in the middle of the 20th century when the second demographic transition set in (Christensen *et al.* 2009). The main reason for this trend was an increase in life expectancy combined with a drastic decrease in fertility (Christensen *et al.* 2009). In contrast, migration was not a major driver for population ageing in Europe at this time (Christensen *et al.* 2009). Today, scholars debate whether the immigration of young people into the European Union could be stimulated to prevent the current trend of population ageing and maintain the population size (United Nations 2000). However, calculations show that such immigration would, at best, only slow down population ageing to a small degree (*see e.g.* Bijak *et al.* 2007; Coleman 2002; United Nations 2000).

## **The lifecourse perspective and population ageing**

Lifecourse scholars follow the lives of individuals over time (Elder 1994). The term ‘lifecourse’ describes the progression of lives from birth to death as a sequence of social roles (Elder 1994). The experiences an individual has which have a strong impact on the lifecourse are called ‘life-events’ (Settersten and Mayer 1997). Examples for such life-events are the birth of one’s children, death and migration – that is, those events that demographers accumulate to obtain fertility, mortality and migration rates (Chesnais 1992; Settersten and Mayer 1997). This overlap between demography and the lifecourse perspective means that together, both may help to better explain population ageing (Hobcraft 2006). In the following section, we explain some central ideas of the lifecourse perspective at the micro-, meso- and macro-level. The ideas we focus on are the ones that tie in with demographers’ explanations of population ageing.

### *A lifecourse perspective at the micro-level*

The micro-level captures the situation of individuals (Coleman 1986). It hosts a central idea of the lifecourse perspective: the one of *lifecourse effects*. Lifecourse effects imply that individuals’ experiences can have effects years or even decades into the future (Elder 1999; Mayer 1988).

These experiences can, therefore, shape the progression of further life-courses (Elder 1999; Mayer 1988). For example, children that develop unhealthy lifestyles – including *e.g.* smoking, drinking alcohol and being overweight – are particularly likely to receive disability pensions when they are old (Harkonmäki *et al.* 2007). Lifecourse effects are relevant for understanding population ageing, because they highlight that fertility, mortality and migration rates are interrelated. The life-events of childbirth, death and migration are all embedded in the lifecourse, which means that life-course effects can connect them to each other. On the one hand, one life-course effect can influence all three life-events. On the other hand, one of the life-events can have lifecourse effects on the other events. Complications during childbirth, for example, can limit future fertility or even have fatal outcomes. This insight suggests that fertility, mortality and migration rates should be jointly considered and the dynamics between them should be explored when discussing population ageing. This insight, moreover, suggests that interventions into population ageing that target one of these rates might have unintended side-effects on the other two rates.

Like the notion of lifecourse effects, the idea of *social inequalities in the lifecourse* contributes to our understanding of population ageing. This idea emphasises the fact that there is not one standard lifecourse (Mayer 2004; Settersten 2003). Instead, lifecourses differ across social groups, that is, across genders, generations, levels of socio-economic status, occupational groups and ethnic groups (Minkler and Estes 1991; Settersten 2003). The differences extend to the progression of lifecourses, the prevalence of life-events and the character of lifecourse effects (Elder 1999; Settersten and Mayer 1997). For instance, individuals with lower educational levels are more likely to take up physically demanding jobs, which can give rise to health problems and ultimately shorten life expectancy (Ferraro and Shippee 2009). The idea of *social inequalities in the lifecourse* indicates that explanations of population ageing need to be differentiated. Such explanations need to acknowledge social inequalities in a country and explore how much the rate and drivers of population ageing differ across social groups.

### *A lifecourse perspective at the meso-level*

The meso-level contains intermediate institutions such as families and social networks (Hagestad and Uhlenberg 2005; Reid, Sutton and Hunter 2010). The lifecourse perspective captures the meso-level in the notion of *linked lives* (Bengtson, Elder and Putney 2005). The idea behind *linked lives* is that people experience their lives while interacting with the people around them (Bengtson, Elder and Putney 2005). Hence, whatever happens to one person also affects the individuals in their proximity, such

as kin and close friends. One life-event can therefore impact several people at the same time, and change several lifecourses at the same time (Bengtson, Elder and Putney 2005). In other words: the lifecourses of people can be linked (Bengtson, Elder and Putney 2005). For example, if one person migrates for work, their entire family may also migrate to keep the family together (Bonney and Love 1991). This idea of *linked lives* brings more complexity to explanations of population ageing. It indicates that the root causes for changes in fertility, mortality and migration rates do not lie only with the people whose lives led to changes in the rates. Instead, the root causes can also lie within the social network.

### *A lifecourse perspective at the macro-level*

The macro-level refers to the social context that is made up of societies and countries (Coleman 1986). Like social networks, social context also influences how lifecourses progress (Hareven 1994). Lifecourse scholars label this fact *lives in time and place* (Settersten 1999). This notion entails that characteristics of the country, such as culture, labour market structures and welfare state design, influence lifecourses (Settersten 1999). Mayer (2002, 2004) has demonstrated that social context modifies the occurrence of life-events. For instance, some Western countries introduced fertility policies that explicitly aim to increase the number of births (McDonald 2006). Buchholz *et al.* (2009) showed that social context also influences to what extent social inequalities shape an individual's lifecourse. For example, some welfare states grant universal access to health-care services, which can partly level the health status in a population, thereby making it less dependent on social-economic status (Chung and Muntaner 2007; Korpi and Palme 1998). The notion of *lives in time and place* also indicates that lifecourses change when historical events occur (Settersten 1999). For example, in his much acclaimed study *Children of the Great Depression*, Elder (1999) describes how the economic crisis of the 1930s impacted the residents of Oakland, California. Because of the Depression, many people lost their jobs, experienced deprivation, adjusted their lifestyles and took on new life goals (Elder 1999). When seeking to understand population ageing, scholars should therefore consider the characteristics of the country in question and keep an eye on historical events.

Figure 1 summarises the insight into population ageing gained from demography and lifecourse research. It shows that individuals differ in their characteristics, which leads to social inequalities in lifecourse effects and in childbirth, death and migration. Moreover, Figure 1 displays the influence of social networks on lifecourse effects. The aggregated life-events then describe populations according to their fertility, mortality and migration

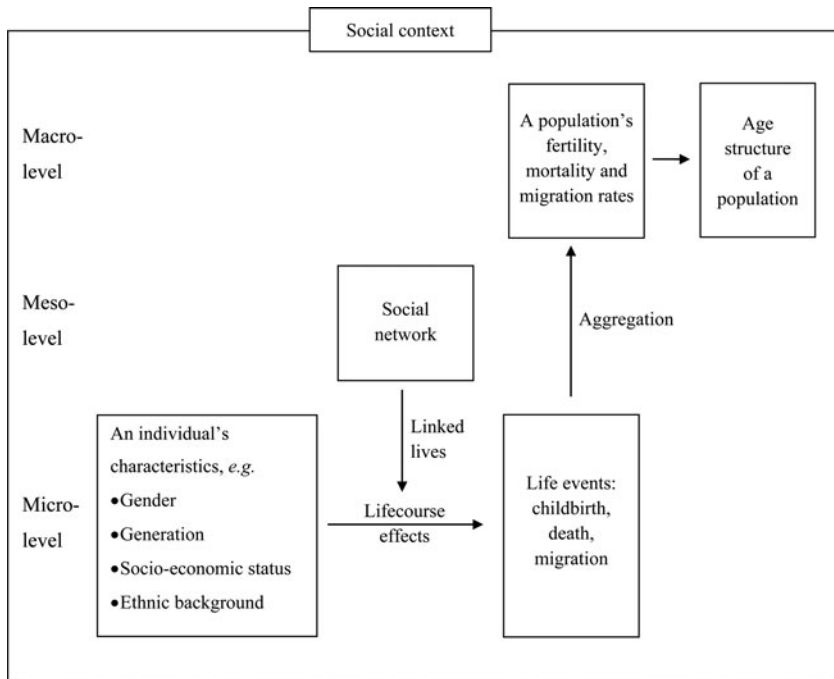


Figure 1. A three-level model explaining lifecourse influences on the age structure of a population.

rates. Taken together, these rates influence how populations age. All these mechanisms together take place in the social context.

### Understanding population ageing in Germany

In 2010, Germany had the second oldest population in the world, surpassed only by Japan (United Nations 2013). In 1950, every tenth German was aged 65 years or older. In 2010, every fifth German was 65 years old or older, and demographers predict that by 2050, one-third of Germans will be 65 years or older (United Nations 2013; see Figure 2). Considering this immense demographic shift, Germany is an excellent exemplar for studying population ageing.

What makes Germany particularly interesting for our study is that its demographic shift is deeply entangled with historical change. In Germany, the first demographic transition began slowly during the 18th century (Knodel 1983) and it gained momentum during the following centuries, with the formation of the German confederation (19th century), the German Empire (1871–1918)



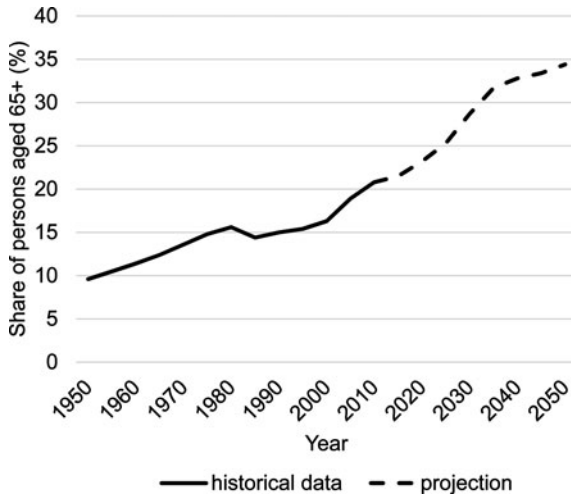


Figure 2. The share of people aged 65+ years in the German population, 1950–2050. *Notes:* This figure combines data for both East and West Germany. The projections use constant fertility rates. *Source:* United Nations (2013).

and finally the Weimar Republic (1919–1933) (Evans 1997; Hagen 2012). However, lives in Germany changed dramatically under the rule of Adolf Hitler (1933–1945), who created the Third Reich and led Germany into World War II (Bauerkämper 2014; Evans 1997). During World War II, Germany suffered 2.5 million casualties, almost 2 million soldiers went missing in action and 210,000 German citizens died in concentration camps (Osborne 2005). Additionally, migration increased during this time as Germans fled the country, with some of them returning after the war had ended (Benz and Distel 1992). As a result, the German population shrank in size and its composition fluctuated (Destatis 2011). After 1945, the Allied Forces of France, the United Kingdom, the United States of America and the Soviet Union separated Germany into occupational zones (Deighton 1998). This separation ultimately led to the creation of two states in German territory: the democratic Federal Republic of Germany (FRG) in the West and the communist German Democratic Republic (GDR) in the East (Deighton 1998). The two states were reunited in 1990 (Evans 1997). During the decades since 1945, as Germany recovered from the effects of World War II, the second demographic transition set in, and the process of population ageing gained momentum (Evans 1997; Sobotka 2008; United Nations 2013).

To gain a deeper understanding of population ageing in Germany, the following explanations will focus on the years from 1945 onwards. These

years will be split into four historical periods: the aftermath of World War II (1945–1949), the era of Germany's separation (1949–1990), the years after the re-unification (1990–2008) and the era of the 2008 economic crisis (2008–present). We will discuss how the lifecourse perspective explains the progression of population ageing during each of these periods. In doing so, we will discuss phenomena under the heading of the period where they originated, even if their lifecourse effects carried on to other periods. [Table 1](#) provides an overview of the findings.

### *The aftermath of World War II (1945–1949)*

During the years following World War II, the German population was starting to recover from the effects of the war and people began to put their lives back together again (Evans 1997). As a result, migration flows increased. Many Germans who had fled the country during the war returned, with some of them bringing newly founded families from abroad (Benz and Distel 1992; Evans 1997). Additionally, German soldiers who had fought abroad came back and, after some time, German prisoners of war returned (Wierling 2001). Likewise, Allied soldiers who had fought in Germany and people who had been prisoners of war in Germany returned to their home countries (Evans 1997). Moreover, from this time on, the Allied Forces had soldiers stationed in Germany, some of whom married German women who later migrated to the soldiers' home countries (Munz and Ulrich 1998). The return migration after the war illustrates the notion of *lives in time and place* (Settersten 1999), and the joint migration decisions illustrate the notion of *linked lives* (Bengtson, Elder and Putney 2005). However, because people of all ages migrated, the impact of migration on population ageing is not clear.

Once the country started to stabilise and the men returned from war, the baby boom set in (Wierling 2001). This increase in birth rates started gradually in West Germany in 1945 and then suddenly in East Germany in 1949 (Wierling 2001). The baby boom exemplifies the notion of *lives in time and place* because it was driven by historical events (Settersten 1999). In the middle of the 20th century, the baby boom countered population ageing (Christensen *et al.* 2009). As the baby-boom generation aged, however, it aggravated the progression of population ageing (Christensen *et al.* 2009). A generation is a group of people who were born around the same time, experienced historical events at the same ages, and consequently developed similar worldviews and lifecourses (Elder 1975; Mannheim 1928).

From 1945 onward, the survivors of World War II carried their war experiences with them (Mayer 1988). These experiences had profound *lifecourse*

TABLE 1. *How a lifecourse perspective explains population ageing in Germany*

Period and lifecourse perspective	Incident	Population ageing
The aftermath of World War II:		
Lifecourse effect	Life expectancy shorted by war	–
Lifecourse inequalities	Generational differences	+/-
Linked lives	Migrants bring their families	+/-
Lives in time and place	Return migration of soldiers, prisoners of war and refugees	+/-
	Baby boom	–
The era of Germany's separation:		
Lifecourse effect	Migrants keep fertility rates of country of origin	–
Lifecourse inequalities	Ethnic differences	+/-
	East–West differences	+/-
	Gender differences	+/-
Linked lives	Migrants bring their families	–
	West: welfare state links lives of spouses	+/-
Lives in time and place	East: emigration of youths during first years	+
	West: immigration of guest workers	–
	East: fertility increased by good child-care system and guaranteed employment	–
	West: fertility decreased by difficult work–life balance	+
	East: mortality increased by poor health-care system	–
After the re-unification:		
Lifecourse effect	Migrants keep fertility rates of country of origin	+/-
Lifecourse inequalities	Ethnic differences	+/-
Linked lives	Migrants bring their families	+/-
Lives in time and place	Immigration from Eastern Europe	+/-
	East: life expectancy increased by improved health-care system	+
	East: fertility decreased by unemployment and poorer child-care system	+
The era of the 2008 economic crisis:		
Lifecourse effect	Migrants keep fertility rates of country of origin	–
	Various future impacts of the 2008 crisis	+/-
Lifecourse inequalities	Ethnic differences	+/-
Linked lives	Migrants bring their families	–
Lives in time and place	Immigration of Southern European youths	–
	Fertility decreased by unemployment	+

Notes: +: population ageing increased. –: population ageing decreased. +/-: no clear or uniform influence on population ageing.

effects, which impacted the survivors' working careers, family formation and health (Benz and Distel 1992; Kesternich *et al.* 2014; Mayer 1988). Therefore, the lifecourse of the generation who survived World War II

differs markedly from the lifecourses of other generations (Mayer 1988). This insight evokes the argument of *social inequalities in the lifecourse* (Settersten 2003). Notably, the trauma, poor living conditions, malnutrition and injuries obtained during the war deteriorated the survivors' health – in both the short and long term (Benz and Distel 1992; Kesternich *et al.* 2014; Mayer 1988). As a result, the life expectancy of World War II survivors decreased, which slowed down population ageing. However, it is unclear how the overall progression of population ageing developed between the end of the war and 1949, because fertility and mortality changes coincided with the strong migration flows into and out of the country. Overall, the population in the newly defined area of Germany increased within that time, totalling 44 million in 1946 and 48 million in 1950 (Statistisches Bundesamt 1952).

### *The era of Germany's separation (1949–1990)*

When Germany was split in two, the lives of people in the East and the West diverged (Wierling 2001). In the East, the GDR emerged as a communist state with a dictatorship (Schwarzer 1999). It adopted a planned economy, which guaranteed work for all, it strived to even out social inequalities and it strongly interfered in its citizens' lives (Bouvier 2002; Evans 1997). Thus, it pursued the idea of planned, uniform lifecourses. In the West, the FRG emerged as a democracy (Deighton 1998; Evans 1997). It adopted a market economy, which allowed for social inequalities and even facilitated them, *e.g.* through occupational groups having separate social insurances (Korpi and Palme 1998; Mayer 2004). Thus, there was a range of lifecourse patterns in the FRG. This difference between East and West Germany exemplifies *social inequalities in the lifecourse* (Mayer 2004).

During the first years of the GDR, East Germany saw an emigration flow into the West (Vogt 2013). Until 1960, about 3.8 million individuals migrated from East to West Germany, while only 400,000 individuals migrated from the West to the East (Fassmann and Munz 1994). This migration flow was so high that it shrunk the East German population (Munz 1994). Many of the migrants were young, educated people (Vogt 2013), which means that the emigration flow contributed to an ageing of the East German population. However, the strength of the impact is unclear because of a lack of age-specific migration statistics. Since the migration flow was a reaction to the development of the GDR, it illustrates the notion of *lives in time and place* (Settersten 1999). However, this migration stream abruptly stopped when the intra-German border closed in 1960, making it difficult to leave the country (Vogt 2013). From this time on, the GDR was mainly a migration destination for ethnic Germans from

other communist countries in Eastern Europe (Fassmann and Munz 1994). After a while, the population that lived in the GDR began to rejuvenate (Eurostat 2014b). For example, the old-age dependency ratio in the GDR increased from 20.7 in 1960 to 26.3 in 1975 and then dropped to 19.6 in 1989 (Eurostat 2014b). This development was the result of GDR policies, and therefore is an example of *lives in time and place* (Settersten 1999). On the one hand, the GDR had a sub-standard health-care system and it focused its social provisions on youths and middle-agers (Vogt 2013). As a result, life expectancies in the GDR were significantly lower than in the Western part of Germany (Vogt 2013). On the other hand, the GDR had a job guarantee and well-developed child-care services that allowed mothers to strike a work–life balance (Bouvier 2002). Thus, women could have their desired number of children without having to compromise their career (Bouvier 2002). Moreover, the state allotted young couples their own apartment earlier if they had children (Bouvier 2002). This policy was an additional incentive to have children at a young age (Bouvier 2002). Together, these GDR policies counteracted the process of population ageing and turned it into a rejuvenation process from the 1980s on (Eurostat 2014b).

In the West German FRG, the organisation of paid work strongly influenced the progression of population ageing. The FRG welfare state provided only some care services for children and dependent older people, while expecting women to take on significant care tasks for their kin (Pfau-Effinger 2005). Nevertheless, to ensure women's financial security, social insurance transferred social rights from working spouses to their stay-at-home wives, thereby pulling mothers out of the labour market (Meyer 1998). This welfare state arrangement *linked the lives* of spouses (Bengtson, Elder and Putney 2005). At the same time, it also made it hard for women to combine paid work with having children (McDonald 2006), and many reacted by having fewer children than they desired (Bernhardt 1993; Rosenfeld, Trappe and Gornick 2004). As a consequence, the total fertility rate remained under the replacement level, amounting to only 1.45 in 1975 and declining even further to 1.4 in 1989 (Bernhardt 1993). Such low fertility rates contributed to a shrinking and ageing of the West German population (Castles 2003; Coleman 2008). This mechanism illustrates the argument of *lives in time and place* and it underlines *social inequalities* in that lifecourses follow gender-specific dynamics (Minkler and Estes 1991; Settersten 1999, 2003).

Germany's recruitment of *guest workers* slowed down the process of population ageing (Coleman 2008). Germany recruited these migrants in the late 1950s and onwards, mainly from Italy, Turkey, Greece and Yugoslavia (Bauerkämper 2014). By 1973, there were about 2.6 million

labour migrants in Western Germany (Schönwalder 2006). This migration stream is an example of *lives in time and place* (Settersten 1999). The German government intended these people to work temporarily in the growing German industrial sector and then return to their home countries (Schönwälder 2006). However, it soon became obvious that many of these migrants were going to stay, and their families followed them to Germany (Bauerkämpfer 2014). This migration for family reunion is another example of *linked lives* (Bengtson, Elder and Putney 2005). The first and second generations of migrants showed *lifecourse effects* in that their fertility rates were influenced by their countries of origin (Feichtinger and Steinmann 1992; Milewski 2010). Between 1975 and 1993, the fertility rate of native West Germans lingered at around 1.3 (Nauck 2007). During the same time, the fertility rates of German residents of Turkish decent declined from 4.3 to 2.5, for people of Italian, Greek and Portuguese decent they declined from around 2.5 to West German levels, and only for people of Spanish decent did they decline from 2.0 to below the West German level (0.6) (Nauck 2007). These ethnic differences in fertility rates exemplify *social inequalities in the lifecourse* (Settersten 2003). Overall, the influx of labour migrants slowed down the processes of population decline and population ageing in Germany, but was not sufficient to stop or reverse them (Milewski 2010; Munz 1996). In 1973, Germany tightened its immigration laws, which reduced the number of new immigrants (Schönwalder 2006).

#### *After the re-unification (1990–2008)*

After the fall of the Berlin Wall in 1989, the two parts of Germany were reunited in 1990 (Evans 1997). The organisation of social provisions, such as pension insurance, was expanded from West Germany to also include the East of the country (Wiesenthal 2003). On the one hand, the health-care system in the West had been more advanced, which means that the transfer of this model improved the health status of Eastern German citizens and increased their life expectancies (Vogt 2013). Consequently, population ageing deepened (Vogt 2013). On the other hand, child-care services in West Germany were less developed than in the East, and a transfer of their organisation made it harder for East German women to combine paid work and child care (Evers, Lewis and Riedel 2005; Witte and Wagner 1995). Women in East Germany considered this development and the newly emerging unemployment in the East problematic, and their fertility rate dropped as a consequence (Witte and Wagner 1995). This change also enhanced the process of population

ageing. Exemplifying the principle of *lives in time and place* (Settersten 1999), these developments aligned lifecourses in the East and the West.

Shortly after the re-unification of Germany, the Soviet Union dissolved and communist regimes across Eastern Europe fell (Deighton 1998). As the Eastern European countries transformed and stabilised, many of them joined the European Union and thereby gave their citizens better opportunities to migrate within Europe (Deighton 1998; Miera 2008). As a result, the influx of Eastern European migrants into Germany increased (Kogan 2011). For example, the number of Central and Eastern Europeans<sup>1</sup> that were registered in Germany increased from less than 300,000 in 1989 to 716,000 in 2008 (Destatis 2009; Haug 2004). This migration stream is another example of the notion of *lives in time and place* (Settersten 1999). Many of these migrants were ethnic Germans that permanently settled in Germany, or people of other ethnicities that came to Germany as seasonal workers (Kogan 2011; Miera 2008). Like in the case of the guest workers, the ethnic Germans often migrated as families, thus illustrating the notion of *linked lives* (Bengtson, Elder and Putney 2005; Dietz 2000; Kogan 2011). Where the migrants maintained the fertility rates typical for their country of origin, they displayed *lifecourse effects* (Elder 1994) and the ethnic differences illustrated the idea of *social inequalities in the lifecourse* (Mayer 2004; Settersten 2003). Because these families can consist of individuals of all ages, their impact on population ageing is diffuse. The seasonal workers at least temporarily increase the number of young and middle-aged people in Germany.

### *The era of the 2008 economic crisis (2008–present)*

In 2008, a global economic crisis developed, changing economies and societies (Van Kersbergen, Vis and Hemerijck 2014). Many people lost their jobs and amassed debts, leading to lifestyle changes; some people moved back in with their parents or grandparents to save money (Komp *et al.* 2013). Although it is still too early to make definitive statements on how the social change triggered by this crisis will play out, some trends are already visible.

First, Eastern and Southern Europe, as well as the Republic of Ireland, saw particularly drastic increases in unemployment rates, which motivated many to leave these countries in search of employment elsewhere (Kattel 2010; Komp *et al.* 2013; Petmesidou and Guillen 2014; Walsh, Carney and Léime 2015). This migration stream is one more example of how *lives* are tied to *time and place* (Settersten 1999). Some of these migrants came to Germany (Destatis 2015). As a result, the migration stream in Germany changed from a net emigration of 56,000 individuals in 2008 to a net



immigration of almost 430,000 individuals in 2013 (Destatis 2015). Youths are especially likely to migrate because of the economic crisis (González-Ferrer 2013; Komp *et al.* 2013; Walsh, Carney and Léime 2015). Even though there are no migration statistics by age, it seems likely that a considerable number of the recent migrants to Germany are youths. If these young migrants act like previous generations of migrants to Germany, then they might migrate together with their families and display fertility rates typical for their countries of origin. They could, thereby, slow down population ageing in Germany and exemplify the notions of *linked lives*, *lifecourse effects* and *social inequalities in the lifecourse* (Bengtson, Elder and Putney 2005; Mayer 2004; Settersten 1999, 2003).

Second, unemployment can motivate people to delay their plans to start a family (Gordo 2009). As a result, fertility rates might drop and the German population would age even faster. Such a development would be another example of *lives in time and place* (Settersten 1999). However, even if we do not yet know how exactly societies will change in the wake of the crisis, the notion of *lifecourse effects* (Elder 1994) tells us that the experience of the crisis will continue to shape lives for decades into the future.

## Discussion and conclusion

Populations around the globe are ageing, and this trend will continue in the decades to come (Christensen *et al.* 2009). To address the increasing interest in understanding population ageing, this paper combines insight from demography and the lifecourse perspective. It develops a conceptual framework that illustrates how both approaches inform our understanding of the demographic shift. The framework is used to examine population ageing in Germany, which is the country with the second-oldest population in the world (United Nations 2013). Population ageing in Germany was driven by a combination of international and national historical events, negotiations within families and the experiences of individuals.

From a theoretical perspective, four implications stand out. First, demography and lifecourse research complement each other in their explanations of population ageing. We echo Hobcraft's (2006) call to utilise both approaches when studying populations. Scholars can use the framework presented in this paper as a guideline for how to do this. Second, dynamics at the individual, family and societal levels are intrinsically linked as drivers of population ageing. This finding expands upon Coleman's (1986) statement that societal-level changes occur via individual-level mechanisms. We suggest that future studies on demographic shifts look for explanations at all three levels. Third, social groups differ in their impact on population



ageing. Hence, there is no one-size-fits-all explanation for how individuals' behaviours drive population ageing. Instead, we need to consider social inequalities within countries when discussing demographic trends. Finally, the mechanisms behind population ageing differ across countries. Explanations for demographic change, therefore, cannot simply be transferred from one country to another. Instead, we need to account for country-specific dynamics when giving such explanations.

The arguments put forth in this paper also have practical implications. They suggest that measures to counter the effects of population ageing must be designed with a longitudinal understanding in mind. For example, policies encouraging older people to work need to account for employment histories (Kvist 2015). Ideally, such policies would start early in the lifecourse, *e.g.* by facilitating the education of youths, and the labour market participation of middle-agers (Kvist 2015). Moreover, intervention into population ageing needs to account for the side-effects of its actions. Lifecourse effects connect the life-events of childbirth, death and migration, which determine the progression of population ageing. Therefore, welfare policies that intervene into any of these life-events can inadvertently affect the other two events. For example, pronatalist policies can have such unintended effects among low-educated women. Some pronatalist policies might strive to increase fertility rates by facilitating a work–life balance for women (McDonald 2006). However, women with low educational levels would mostly stream into low-skilled jobs, which are often physically demanding and can reduce life expectancies (Dannefer 2003; Siegrist and Marmot 2004). This would increase mortality rates.

Despite its merits, this study also has some limitations. These limitations arise from the geographic focus of this article. The framework was developed using information from Europe. Therefore, it captures the situation in one continent only and would have to be adapted for studies of countries outside Europe. Moreover, the case study looks at the mechanisms in only one country. This approach generates in-depth knowledge about the dynamics in Germany, but it does not generate sufficient information for detailed statistical analysis or for generalisations across countries. It would, therefore, be worthwhile if future studies conducted similar investigations for additional countries and undertook statistical analyses that quantify the mechanisms we described. Finally, this paper considers events at the individual, family and country level, but it omits the international level. This international level is particularly important when it comes to migration. Migration simultaneously affects the age structures in the countries of destination and origin. For example, the immigration of guest workers into the FRG in the 1950s and 1960s slowed down population ageing in West Germany (Bauerkämper 2014; Coleman 2008). However, at the same

time it reduced the number of youths and mid-agers in *e.g.* Turkey and Italy, which in turn aged the populations in these countries (Eurostat 2014a). Consequently, migration is not a panacea for population ageing, but instead shifts the phenomenon of population ageing from one country to another. It would, therefore, be worthwhile if future studies investigated how the process of population ageing is entwined across countries.

All in all, population ageing is a global phenomenon that will further increase in importance over the next decades. To understand this development more fully, we combine insights from demography and the lifecourse perspective. The resulting conceptual framework underlines the importance of long-term effects, social inequalities, negotiations within families and country differences for population ageing. Including these aspects has theoretical and practical implications. Thus, future studies and practitioners can benefit from applying the lifecourse perspective when considering ageing populations.

### Acknowledgements

We thank Anna Hjälms for her helpful comments and suggestions. This paper is partly based on ideas discussed in Komp and Johansson (2015).

### NOTE

- 1 This geographical area comprises the ten Central and Eastern European accession countries to the European Union, as of 2004: Bulgaria, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovakia, Slovenia and the Czech Republic (Haug 2004).

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*Accepted 18 June 2015; first published online 20 July 2015*

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