
**Conflict or solidarity?
Intergenerational relations
in the face of population ageing.**

A comparison of Germany and Japan.

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Summary

This dissertation investigates whether population ageing is associated with a distribution-based intergenerational conflict. While comparing two pioneers of ageing, Germany and Japan, the analysis attempts to show tendencies that are relevant for a wider set of countries amid their own demographic developmental paths.

Studying intergenerational relations on both the societal and the family level, this analysis is more nuanced than previous studies. A two-dimensional typology is proposed to define four ideal scenarios of intergenerational relations, of which intergenerational conflict is one case (consisting of weak solidarity on both the societal and the family level).

Narrowing down the scope of analysis from the aggregate to the family and individual level, intergenerational solidarity is first presented based on National Transfer Accounts data. This discussion shows how public and private (financial) transfers secure the lives of individuals over the life cycle with elderly persons being net receivers of public transfers and net donors of private transfers.

Onwards, the evolution of intergenerational solidarity is discussed in the context of political, economic and institutional factors, such as family.

On the societal level, this study draws on the literature of labour market dualisation, Rueda's insider-outsider model, and Mannheim's concept of political generations. Based on data from the International Social Survey Programme, spanning over 20 years (1996-2016), policy preferences regarding government expenditure on old-age are found to differ with regard to age, cohort and employment status. Results show that intergenerational societal solidarity has remained strong in Germany but has vanished in Japan.

On the family level, intergenerational relations are studied based on theories of saving and transfer giving, together with the concepts of social care and de-familialisation policies. Using data from the Survey of Health, Ageing and Retirement in Europe and the Japanese Study of Aging and Retirement, covering 11 (2004-2015) and 6 years (2007-2013) respectively, financial and non-financial transfer giving between generations is scrutinised. Results show strong solidarity within families for both countries.

In comparison, Germany appears to find itself in a more favourable position to sustain its unwritten contract of intergenerational sharing consisting of the public and private sector. In Japan, signs of a political generation are emerging, whose interests differ significantly from those of older generations regarding the role of the welfare state. Developments in Japan may have repercussions for the design of the welfare state in years to come.

This work is dedicated to Claus, my most inquisitive reader, best friend, and dear father.

I wish you could read this and we'd have our usual discussion, just as we used to.

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List of Abbreviations

Abbreviation – original term (translation into English/German/Japanese)

AFD – Alternative für Deutschland (Alternative for Germany)

BMFSFJ – Bundesministerium für Familie, Senioren, Frauen und Jugend (German Federal Ministry for Family Affairs, Senior Citizens, Women and Youth)

CESR – Center for Economic and Social Research at the University of Southern California

ENSR – Elderly/non-elderly spending ratio

EUR – Euro

GDP – Gross domestic product

GESIS – Gesellschaft Sozialwissenschaftlicher Infrastruktureinrichtungen (German Social Science Infrastructure Services)

ILO – International Labour Organization

ISCED – International Standard Classification of Education

ISSP – International Social Survey Programme

JILPT – Japanese Institute for Labour Policy and Training

JSTAR – Japanese Study of Aging and Retirement

LDP – Liberal Democratic Party of Japan (Jiyū Minshutō)

NHK – Nippon Hōsō Kyōkai (Japan Broadcasting Corporation)

NPO – Non-profit organisation

NTA – National Transfer Accounts

NSR – New social risks

NSRSR – New social risk spending ratio

OECD – Organisation for Economic Co-operation and Development

PPP – Purchasing power parity

RIETI – Research Institute of Economy, Trade and Industry

SHARE – Survey of Health, Ageing and Retirement in Europe

UN – United Nations

UNDP – United Nations Development Programme

US – United States (of America)

USD – United States Dollar

WVS – World Values Survey

I Introduction

I.1 Global and historical context

In their widely cited publication from 2004, “The End of World Population Growth in the 21st Century”, demographers Wolfgang Lutz, Warren Sanderson, and Sergei Scherbov made a case that has become widely known: if in demographic terms, the 20th century was the century of population explosion – with the world’s number of human inhabitants quadrupling from 1.6 to 6.1 billion – the 21st century is that of population ageing (Lutz, Sanderson, and Scherbov 2004). At the end of the 1970s, more than half of the world’s population had lived in countries with intermediate fertility of 2.1 to 5 births per woman and almost a quarter lived in countries with a fertility rate above 5. In the former half of the current decade, 46 percent of the world’s population was living in countries with a fertility rate below the replacement level of around 2.1 children per woman, a proportion that is projected to rise to 69 percent by 2045-2050 (UN 2017). At the same time, world average longevity has increased from around 60 years in the late 1970s to around 70 years in 2010-2015, and it is expected to rise to 75 years by 2045-2050 (UN 2017). Low child mortality, low fertility and high longevity are the factors that cause population ageing.

This megatrend – certainly the result of favourable developments such as improved medical care and increased living standards – comes with new questions about how society ought to be organised and how living standards and wealth can be sustained or further improved and distributed. A population explosion during the last century led to fears of “hunger, economic collapse, and ecological catastrophe” (Lutz, Sanderson, and Scherbov 2004, p.3), all of which are challenges not yet solved at least for the majority of the world. Demographic ageing has added questions about the sustainability of pension and healthcare systems and provoked worries that those countries affected are entering an era of social, political, and economic stagnation. “Demographic changes will make the 21st century like no other”, Lutz, Sanderson and Scherbov argued, and “forecasting these changes, understanding their consequences, and formulating appropriate policies will, indeed, be challenging” (Lutz, Sanderson, and Scherbov 2004, p.3).

On a global level, these challenges could still be called “luxury problems” as they arise from favourable developments as mentioned above. Indeed, demographic ageing is a phenomenon largely confined to rich countries. Demographic transition theory argues this is no coincidence but that instead ageing is strongly interlinked with economic development (Kirk 1996; Lesthaeghe 1983; van De Kaa 2002). As the theoretic explanation goes, a population boom tends to foster an economic boom

once the largest birth cohorts enter the workforce, where a large pool of producers and consumers ideally constitutes a virtuous cycle of economic growth. During this part of the so-called demographic transition those at working-age start to invest more into the education of their offspring, among other things leading to increased cost of children and lowered fertility. Once the population boom time's birth cohorts who fed the economic boom, reach retirement the economy will once again profit from them. This time, however, not because of their labour productivity but because of the wealth they have accumulated, which they will either redistribute to their offspring or otherwise make it available in terms of liquidity for the financial industry. At the same time, however, their increased longevity is becoming a burden for working-age individuals financing their life at old-age. The world's rich countries, mainly consisting of the OECD, have entered this latter phase of economic and demographic environment where the proportion of old-age individuals has been increasing for some time (UN 2017). Considering the theoretical literature and the projections above, however, population ageing will not remain limited to the richest parts of the world. Rather, the developing and emerging world of today will follow suit. And possibly, one will be able to take the trajectories of today's ageing societies as textbook examples for future political strategies. With demographic ageing happening right now, much still needs to be learned about how societies evolve in the light of this megatrend. I am hoping that this dissertation will contribute to the understanding thereof.

I.2 Questions of demographic ageing

Is population ageing associated with a distribution-based generational conflict? Various academic works have posed this question in recent years without reaching a conclusive answer (Streck 2007). Some of the inconsistencies relate to the perspectives adopted. While some scholars have focused on a policy spending bias towards the growing old-age groups (Holtz-Eakin, Lovely, and Tosun 2004; Myles 2002; Sinn and Uebelmesser 2002; Tremmel 2006a), others have emphasised that intrafamilial transfers tend to flow from the older towards younger members of a society (Kluge 2009; Kohli 1999a, 2004, 2006; Künemund and Rein 1999; R. Lee 2003a; Ogawa, Mason, Chawla, and Matsukara 2010; Wilkoszewski 2006, 2011). While some works have pointed at age-specific voting behaviour with the elderly thereby reigning over the young (Berry 2014; Button 1992; Campbell 2002b; Binstock 2004), others insisted that age is not a variable that significantly determines a person's political attitudes or voting behaviour (Attias-Donfut and Arber 2000; Davidson 2014; Kohli 2006).

Chiefly three developments, which have so far largely been confined to democratic and industrialised societies, make the possibility of a distribution-centred generational conflict a topical question: population ageing, universal suffrage, and the establishment of a modern welfare state (Streck 2007). In the simplest of scenarios, other things being equal, their combination hints at a growing

proportion of the population that is economically dependent while keeping its political influence because of their right to vote. And since pay-as-you go-pension systems are based on the assumption of a fairly stable ratio of elderly versus working population, demographic ageing would increase the burden on the young and/or working-age population (Holtz-Eakin, Lovely, and Tosun 2004; Myles 2002; Sinn and Uebelmesser 2002; Streeck 2007; Tremmel 2006a). Against this background, Streeck brings up the following question:

“The more the population share of the elderly rises, the more difficult it gets to imagine them as passive recipients of social benefits. If politics is to produce a binding answer to the Lasswellian question of ‘who gets what, when and how?’, then the ongoing demographic shift is opening up a worrying possibility of a shift from a welfare-state based generational contract towards an intergenerational conflict” (Streeck 2007, p.281, own translation).

A crucial question that follows from Streeck’s thoughts is the distinction of intergenerational solidarity and intergenerational conflict: where does one end and where does the other start? Can there be an overlap between the two or are they mutually exclusive societal scenarios? To understand this, it also needs to be asked what the subject of conflict or solidarity is. Such question over the subject of conflict or solidarity, in turn, regards the legitimate demands the old can have towards the rest of society and vice versa. Hence, “which part of the welfare-state based generational contract would need to be renegotiated” (Streeck 2007, p. 282). Potentially, this regards all spheres of public policy. Streeck names the transport system, labour market, health care and housing as examples, all of which face different challenges in light of demographic ageing, eventually leading to the question of who has to pay for it. Busemeyer et. al. (2009) have singled out the social policy sphere around unemployment benefits, pensions, health care and education. Esping Andersen (Esping-Andersen et al. 2002; 2002) focuses on education policy, Tremmel (2006a) emphasises the labour market while those works with an economic focus often look more broadly at taxation (Holtz-Eakin, Lovely, and Tosun 2004; Sinn and Uebelmesser 2002), and others have mentioned the welfare state as a whole (Lynch 2006; Myles 2002; Preston 1984; Streeck 2007; Thomson 1989).

Esping-Andersen (2002) argues, however, that an intergenerational competition over resources is not inevitable. Though the “conventional intergenerational contract is becoming problematic” (Esping-Andersen 2002, p.51) and “it is young adults who are mainly affected by unemployment, eroding wage levels, and by new more vulnerable household arrangements” (Esping-Andersen 2002, p. 35). One of his chief policy suggestions is to increase investment into child-centred education as this would allow for stronger labour market performance of those targeted, which could also prevent later old-age poverty. Regarding resource allocation between generations, Esping-Andersen argues that “there is no golden rule that dictates that the welfare of one implies the misery of the other. [...] Spending on the elderly may, of course, crowd out resources for the young but such a scenario can be avoided” (Esping-Andersen 2002, p.51).

So far, though, there has no consensus been reached over whether there is a distribution-based generational conflict altogether. Some have pointed at the direction of transfers and a distinction of their nature into public and private ones. Whereas public transfers, organised through the welfare state, typically have an upward direction from the younger working-age groups to the retired ones, private intrafamilial transfers are on aggregate trending downwards in the form of bequests and inter vivo transfers (Kluge 2009; Kohli 1999a, 2004, 2006; Künemund and Rein 1999; R. Lee 2003a; Ogawa, Mason, Chawla, and Matsukara 2010; Wilkoszewski 2006, 2011). These patterns have sometimes been interpreted as intergenerational solidarity undermining notions of conflict (Attias-Donfut and Arber 2000; Davidson 2014; Künemund and Rein 1999; Vanhuyse, Pieter; Goerres 2012). One side of this argument is not only the existence of intrafamilial transfers but also the very nature of ageing: every young person expects to be old one day and in an egoistic anticipation, or out of motives such as social norms, love or mere altruism, one would prefer to cooperate in making transfers oneself (Davidson 2014; Kohli 1999a).

In addition, the mere existence of a welfare state including pensions and care schemes may set free capacities for the working population, so that the younger age groups can also be seen as beneficiaries: the more generously the welfare state is treating old-age individuals, the more freely tend working-age group individuals, who would otherwise need to support their parents' generation to a stronger extent, to be able to make use of their own time (Kohli 1999a; Ogawa, Matsukura, and Chawla 2012). A welfare state expansion in this regard over the last decades has especially increased the working potential for women, who have typically been occupied with unpaid care work more than men (Attias-Donfut and Arber 2000; Ogawa, Matsukura, and Chawla 2012).

Furthermore, other fault lines in society have been found to be more pronounced than the one defined by age: typically, social inequality within generations and across gender are mentioned, and since these are the dimensions that really manifest inequality, the intergenerational level is of minor importance (Attias-Donfut and Arber 2000; Binstock 2004; Davidson 2014; Vanhuyse, Pieter; Goerres 2012; Streeck 2007).

However, all these contestations do not refute the possibility of there being an intergenerational conflict altogether. Two obvious counter-arguments to the above-discussed points would be these: Claiming that one specific conflict is not as large as another or mitigated by some other dynamic is different from saying that it does not exist. And even if one assumed that currently, such a conflict does not exist at all this would be insufficient for expecting it also not to emerge in the future.

I.3 Gap in the literature

To some extent, wording may be to blame for the disagreement over the relevance of an intergenerational conflict. Since the term “conflict” is vague, it often remains open to interpretation whether “intergenerational conflict” means an outspoken battle where people take to the street and polemicize, or rather an implicit, silent trade-off in decision-making that (some) people may not even notice (Attias-Donfut and Arber 2000; Busemeyer, Goerres, and Weschle 2009; Preston 1984; Goerres 2009; Streeck 2007; Thomson 1989; Tremmel 2006a; Sobotka 2010). This distinction is important as depending on the understanding of “conflict” appraisals have taken different directions.

Over time, the term “generational conflict” has already made a sharp turn. Not long ago, it was used to express disagreement over values between the old members of society and the young (Kohli 2006; Streeck 2007): for instance, Western countries experienced fierce debates in the late 1960s amid the cultural and sexual revolution; and inside the family union, a conflict between parents and growing-up children often arises based on different expectations about how one should lead his life. More recently, though, “generational conflict” and similar terms have been used in another context: instead of describing a battle over values they now mean one over distribution of resources (Attias-Donfut and Arber 2000; Preston 1984; Streeck 2007; Thomson 1989; Tremmel 2006a).

Operationalising a distribution-based generational conflict in terms of individual opinions over the role of the welfare state, Busemeyer et. al. (2009) have used the term “weak cleavage” to describe relations between generations. Thereby, they acknowledge that even in the absence of political frontlines, there may be age-correlated preference stratification. This approach as well, though, has brought about conflicting results. Using data of the International Social Survey Programme’s 1996 wave, Busemeyer et. al. (2009) have analysed opinions on the policy fields unemployment benefits, pensions, health care and education, discriminating by age and occupational status. Generally, the result is that retirees favour higher government spending on pensions and health care but less expenditure on education, while younger respondents have opposite preferences. With the Population Policy Acceptance Study of 2003, Wilkoszewski (2006) finds for Germany that the median age for those opposing higher child benefits is about five years above that of those who would favour a spending increase. These results are in line with regressions of support for higher public spending on pensions and age, where Hicks (2001), Blekesaune and Quadagno (2003), and Kohli (2006) have found weak but at least positive correlations. Logan and Spitze (1995) found that older people with more children are also more likely to support spending programmes on the younger generations.

Other works, however, even when using earlier waves of the same International Social Survey Programme as Busemeyer et. al. in their work, have questioned such results on the basis that the age

dimension is not strong enough an indicator for the support of respective policies (Papadakis and Bean 1993; Bean and Papadakis 1998). Along this line, Andreß and Heien (2001), also using the International Social Survey Programme, argue that a single dimension such as age is not only insufficient to explain policy preferences but that this strategy also easily leads to neglecting the specific context of any country, such as its cultural, political or economic institutions. Arts and Gelissen (2010) came to a similar conclusion.

The inconclusiveness over the interplay of demographic ageing and intergenerational relations points at a gap in the literature. On the one hand, many of the quantitative works in this field that compare a larger set of countries with regression techniques have come at the cost of a lack of country contextualisation. On the other hand, most studies so far have focused on one single dimension to explain intergenerational relations, be it voting behaviour, private and/or public transfers, generational accounting, or individual attitudes. Approaches with both, a close look at the country context and regression techniques of more than one dimension of intergenerational relations, have so far, to the best of my knowledge, not been in the focus of attention. Yet, such an approach may shed some light on the question whether and in what way there is a distribution-based generational conflict surging in the light of ageing, and if so, what are factors pushing or mitigating it. Hence, this work shall deliver both, comparative research with a high degree of country contextualisation and a consideration of more than one dimension of intergenerational relations. Both these parts will be argued and explained in more detail below.

I.4 Dimensions and definitions

A piece of work that seeks to understand how intergenerational relations evolve in the light of demographic ageing needs to be clear on what it understands under the term generation. A concept that comes to mind for the analysis of intergenerational relations is that of Mannheim (1964), who coined the term in a sociological way and defined “political generations” as those who are shaped by a common experience, consciousness thereof and a shared attitude or even some degree of organisation. Since the above-discussed literature has made it appear doubtful whether the conditions for such political generations are fulfilled in today’s industrialised countries, this dissertation will use a different terminology. Crucially, once developments over time are accounted for, three concepts shall be distinguished. Firstly, individuals can be grouped by the point in time of their birth. This is defined as birth cohort. A second approach is the age that individuals have at the point in time of analysis or surveying. Thirdly, individuals can be grouped by their position in the social sequence of reproduction and ageing. Here, typical categories are children, parents, grandparents and so on, which broadly coincide with an individual’s age-varying positions on the labour market, such as be-

ing at education/training-age, working-age, or pension/old-age. I will be using the term “generation” for this lattermost meaning.

Further, it is important to understand the term “generational contract”, as alluded to by Streeck (2007). According to his understanding, a society’s “welfare-state based generational contract” is to be thought of as a set of policies and institutions ensuring that different age groups or generations are financed and supported by one another through the public sector, where every individual over the life course will form part of those age groups or generations that are predominantly being supported (education/training-age), as well as those mainly giving support (working-age) and eventually again those that are mostly enjoying the support of the others (pension/old-age).

In order to then understand the social environment for such intergenerational policies, which are to sustain the “welfare-state based generational contract”, it would lead to unsatisfying results to repeat previous studies like those cited above. Instead, research with this aim must fulfil the following three conditions: Firstly, to solve at least some of the contradictory results discussed above, it needs to employ more than one indicator of intergenerational relations. Secondly, to pay justice to the strong role the family as an institution is likely to play in any intergenerational context, analysis needs to not only distinguish the societal from the family level, but understand the interaction between intergenerational solidarity on the family level and on the societal level. Thirdly, to avoid conceptual misunderstandings and misleading conclusions, changes across age, period and cohort need to be accounted for. Based on these considerations, I will take an integrated approach consisting of two dimensions indicating intergenerational relations, one taking place on the societal level and one on the family level. As will be argued in more detail below, the former will be termed “family solidarity”, while the latter will be called “societal solidarity.”

In order to proceed to the analytical part of this work, definitions of these two dimensions will be necessary. The first definition shall be termed “intergenerational societal solidarity”, and the second shall be called “intergenerational family solidarity.” In the remainder, the following concepts shall be worked with:

- *Definition 1: The term intergenerational societal solidarity depicts a relation of solidarity between two or more generations or age groups on the societal level.*
- *Definition 2: The term intergenerational family solidarity depicts a relationship of solidarity between two or more generations or age groups on the family level.*

Though these two basic definitions appear simple, the assumptions on which they rest require some explanation. Often – including many of those mentioned above – studies that analyse intergenerational relations on a societal level use the term conflict, while those focusing on the family level tend

to use the term solidarity. Because of this tendency, one might expect that while conflict is something that mostly takes place at a more abstract level between persons who possibly do not even know each other, solidarity is the glue that keeps together those who are already in a close relationship. Of course, however, there may be and indeed is solidarity on the societal level, as much as there may also be (a distribution-based) conflict on the family level. To avoid the misunderstanding that conflict be a phenomenon of the societal sphere and solidarity one of the familial, this work will operate with the term solidarity for both dimensions, societal and familial.

The interplay between the societal and the familial dimension must be seen in this light. For example, on the societal level, while the welfare state is ensuring intergenerational solidarity, the pressures coming from demographic ageing may pose a challenge to this solidarity. Reasons may be questions over the just or sustainable allocation of resources and burdens. On the family level, in turn, solidarity is to be thought of as a strong tradition since the family is the unit inside which humans tend to be the closest to one another and where they might be the most likely to help each other. Therefore, in case intergenerational solidarity is challenged on the societal level, such a development may be mitigated on the family level by means of solidarity there. Such reasoning makes intuitive sense from a rational choice point of view: if it is observed that on a societal level, there is the threat of a lack of sustainability of the welfare state-based intergenerational contract, family members are wise to support each other in a solidary way as a sort of insurance against the risk of a solidarity collapse on the societal level. In other words, intrafamilial intergenerational solidarity may serve as a bulwark against a possible collapse of societal intergenerational solidarity.

I.5 Case selection

Though the context of industrialised countries will be accounted for as much as possible, this work will focus on two cases, Germany and Japan. The most obvious reason for this choice is their role as pioneers of demographic ageing. With a median age of 46.2 years (Germany) and 46.5 years (Japan), the two countries are countries where ageing has advanced the most worldwide (UNDP 2017). Hence, whatever results come about in this work will be relevant for a wider set of countries that are facing similar development and challenges already today or will in the future.

In addition, as will be shown below and in more detail in the next chapter, both countries share many commonalities in respect to various political and economic characteristics on the one hand; but on the other hand, they have been reacting to their demographic pressures in rather different ways. This combination of similar challenges within different institutional contexts constitutes a suitable test case to understand how the welfare state and its public policies, but also the labour market, the economy as a whole, and the family influence intergenerational relations.

Among the similarities between Germany and Japan is the vast change of the age composition over the last decades, which is largely due to prolonged low fertility following a short-lived fertility boom as well as high and increasing longevity. As of Japan's official estimate from 2012, the proportion of the population aged 65 or older is projected to increase to 38.8 percent in 2050, while the proportion of the working-age population will fall from 62.1 to 51.5 percent (Statistics Bureau Japan 2014). Germany's estimate as of 2014 projects the population share of those aged 65 or older to reach a share ranging between 31.8 and 33.1 percent in 2050. The proportion of the working-age population is expected to decline from 66.1 percent in 2012 to a value between 55.6 and 56.8 percent by 2050 (Statistisches Bundesamt 2014). Another similarity between Germany and Japan, and in accordance with the general OECD trend, regards an ongoing trend of dualisation on the labour market, into regular and non-regular employment, as will be shown in more detail in later sections. Also in line with the OECD trend, both countries have been experiencing changes in living arrangements and the composition of families, with a trend towards smaller family units and single households. More generally, both Germany and Japan are liberal democracies that, following the destruction of the Second World War, have advanced to become some of the richest and most high-skilled economies in the world. In addition, both countries have traditionally adhered to a male-breadwinner family regime, which is only successively changing towards more gender-equal constellations.

In the course of population ageing, however, the two countries' spending focuses of the welfare states differ significantly. While Japan's welfare state has significantly expanded over the last decades and today strongly favours old-age recipients, Germany's expenditure structure has been adjusted and is today more balanced across age groups. The following chapter will show this in more detail. Further differences regard various social policies, such as eldercare or spending on families. For instance, Germany's expenditure on families as a share of GDP is about twice as high as that of Japan, hinting at a relatively higher financial burden for families in Japan compared to Germany. Regarding eldercare, in turn, whereas Japan introduced its long-term care insurance scheme in 2000 based on the ten years older German model, Japan took a step further. As opposed to Germany's, Japan's scheme does not allow family members to provide formal eldercare and cash in for this service instead of relying on professional carers doing the job. This hints at a higher degree of defamilialisation in Japan in the case of eldercare, which will be argued in further detail in chapter IV. Furthermore, the extent of some developments – whether the speed of population ageing as a whole or the change in female employment, living arrangements or dualisation – differs between the two countries. Japan tends to be the country where various changes have been more abrupt or rapid: among other developments, as will be shown in the next chapter, the age composition of Japan's population has been in transformation notably more rapidly than that of Germany. Similarly,

the typical patterns of living arrangements, which in Japan were marked by three-generational households or nuclear families, have been evolving towards more diverse patterns at a higher pace. Dualisation on the labour market (Häusermann, Silja; Schwander 2012; Peng 2012), another phenomenon happening across industrialised countries, has not only happened at a high pace but has also brought about a higher proportion of labour market outsiders in Japan compared to Germany.

Against this background, the results from comparative analysis of Germany and Japan will shed light on the challenges of countries with institutions similar to those of the two subjects of this analysis in particular but also to all countries whose populations are generally ageing. As noted above, Germany and Japan share similarities in terms of their standards of living, their basic political systems, and their major demographic trends. But they differ from each other in the magnitude or speed of various crucial developments as well as their policy responses to the challenges notably brought about by population ageing. Results from this comparison, hence, will shed light on what societal challenges tend to come about in the light of demographic ageing in general, but in particular, it shall also become clearer how certain institutional conditions may coincide with certain patterns of intergenerational relations.

I.6 Outlook

With the aforementioned in mind, the overarching research questions are:

- 1) Under what circumstances is population ageing associated with weakened intergenerational solidarity regarding the distribution of resources?
- 2) What are the conditions under which the family as an institution may mitigate or resolve challenges to solidarity that are taking place on the societal level?
- 3) Do weak intergenerational solidarity and strong intergenerational solidarity have to be understood as mutually exclusive scenarios, or may it be possible that both coexist?

The remainder of this work will be structured as follows. Chapter II will give an overview of fundamental indicators showcasing the basic demographic and institutional developments in Germany and Japan, and as much as the available data allow, they will be placed in the OECD context. On an aggregate level, intergenerational solidarity will be discussed using National Transfer Accounts data. At the end of this chapter, an analytical framework will be established, on the basis of which the following two analytical parts of this dissertation will be carried out. Chapter III will focus on intergenerational relations on a societal level. In this context, the welfare state regimes and labour market developments in each country will be discussed in the light of the relevant welfare state literature and the insider-outsider theory. Based on the hypotheses derived thereof, I will apply regression

techniques to data from the 1996, 2006, and 2016 waves of the International Social Survey Programme (GESIS 1999, 2008; ISSP 2016; NHK 2018). The independent variable will measure individual attitudes towards what role the welfare state should have amid demographic ageing. Chapter IV will move the focus from this societal level to the family sphere. Discussing the predominant family regimes and their developments until today, as well as regimes of eldercare and the welfare state's engagement in terms of family policies, theories of giving will be applied to derive hypotheses over the making and receiving of private transfers. The data for this analytical part, which will also consist of regression techniques, are coming from the longitudinal studies Survey of Health, Ageing and Retirement in Europe (Börsch-Supan 2017a, 2017b, 2017c, 2017d, 2017e) and the Japanese Study of Aging and Retirement (RIETI 2010, 2012, 2013a, 2013b, 2013c, 2017). In the case of SHARE, data from 2004, 2007, 2011, 2013, and 2015 are available. For JSTAR, there are data from 2007, 2009, 2011, and 2013. The main independent variable being made intrafamilial intergenerational transfers, solidarity on the family level will be tested. Based on these results, the cases of Germany and Japan will once again be discussed on the basis of the analytical framework developed earlier. The conclusion will also provide policy recommendations as to how intergenerational solidarity may be secured under certain conditions.

II Demographic development and foundations

II.1 Basic demographic indicators

Table 1 shows key demographic indicators for Germany¹ and Japan.² In the absence of international migration of sufficiently high proportions, population ageing occurs when three conditions are in place – high longevity, low fertility and low child mortality. While the latter measure tends to be similarly low across industrialised countries (You et al. 2015), the former two are more relevant in this context. In both countries, the fertility rate has been below replacement levels of around 2.1 per woman for decades (Espenshade, Guzman, and Westoff 2003). Other things being equal, this leads to a lowering population share of young persons. In addition to low fertility, high and increasing longevity raises the population share of older persons. In both countries, this trend is stronger than on average in the OECD, while it is even more pronounced in Japan than in Germany.

A factor that may, and in the case of Germany indeed does, contribute to a mitigation of population ageing is immigration. In Germany, the proportion of foreign nationals in the population increased from 7 percent in the early 1980s to 8 percent in the first half of the current decade (OECD 2017a). Between the early 2000s and the five year range 2010-14, the average annual inflow of foreign nationals relative to the total population increased from 0.8 to 1.2 percent, though with a higher share in the years of 2013 and 2014 amid the recent influx of refugees. This share was set to increase further in 2015, though this is not presented in table 1, where the five-year averages of the time from 2000 to 2014 are shown. In Japan, in turn, the foreign-national population share also increased between 2000 and 2014, though at a much lower level from 1.5 to 1.6 percent.³ This is because the inflow of foreign nationals hardly increased since 2000; the inflow of foreign nationals relative to the total population remained below 0.3 percent and in fact even slightly decreased. However, though migration has mitigated the speed of population ageing in Germany, including this topic would go beyond the scope of this work. As a result, this topic shall be disregarded here, which in turn, should be borne in mind while reading.

¹ The values before 1990 for Germany refer only to West Germany.

² In most tables with timelines and wherever applicable, data is shown as five-year averages. The purpose is that by doing so, a longer time span can be shown on one page, allowing for a better understanding of the trends analysed.

³ In an attempt to address the labour shortages in some sectors, including and especially eldercare, Japan has since 2006 been actively attracting an influx of foreign care workers, mostly by means of bilateral agreements with South East Asian countries. To date, however, the numbers of attracted workers are too low to balance out the undersupply in the care sector let alone halt the shrinking of the population (see for example: Vogt 2018).

Table 1: Demographic indicators, Germany and Japan, percent (unless otherwise stated).

	1980-84 avg	1985-89 avg	1990-94 avg	1995-99 avg	2000-04 avg	2005-09 avg	2010-13 avg
<u>Age dependency ratio (0-20 and 65+ as share of working-age population)</u>							
Germany	37.71	34.77	36.30	37.97	38.96	39.62	39.41
Japan	39.56	38.99	37.95	37.40	38.32	39.95	41.65
OECD av.	44.14	42.71	41.66	41.07	40.48	40.06	40.05
<u>Youth dependency ratio (0-20 year old as share of working-age population)</u>							
Germany	43.78	36.61	34.07	34.26	33.64	32.19	30.16
Japan	49.67	46.02	40.12	34.74	32.15	30.78	30.46
OECD av.	59.77	55.12	51.05	48.25	45.59	43.22	41.60
<u>Old dependency ratio (65+ year old as share of working-age population)</u>							
Germany	20.06	19.15	23.22	26.26	29.35	33.14	34.51
Japan	15.79	17.90	21.04	25.01	29.97	35.76	40.94
OECD av.	19.27	19.42	20.37	21.46	22.42	23.63	25.20
<u>80+ year old population share</u>							
Germany	2.85	3.44	3.89	3.79	3.98	4.71	5.30
Japan	1.56	2.03	2.68	3.37	4.23	5.59	6.86
OECD av.	2.03	2.33	2.68	2.90	3.17	3.65	4.07
<u>Life expectancy at birth (in years)</u>							
Germany	73.54	74.92	75.86	77.28	78.60	79.96	80.80
Japan	76.78	78.28	79.28	80.30	81.68	82.54	83.05
OECD av.	n.a.						
<u>Period total fertility rate (Source: Human Fertility Database 2015)</u>							
Germany	1.48	1.42	1.32	1.34	1.37	1.38	1.41
Japan	1.76	1.68	1.51	1.40	1.32	1.31	1.39
OECD av.	n.a.						
<u>Inflow of foreign population as percentage total population (latest data cover 2010-14)</u>							
Germany	n.a.	n.a.	n.a.	n.a.	0.78	0.70	1.22
Japan	n.a.	n.a.	n.a.	n.a.	0.28	0.26	0.24
OECD av.	n.a.						
<u>Population share of foreign nationals</u>							
Germany	7.15	7.30	8.16	8.91	8.74	8.19	8.71
Japan	0.70	0.74	1.01	1.16	1.45	1.67	1.63
OECD av.	n.a.						

Source (unless stated otherwise): OECD (2017c), own calculations.

Despite the differences in migration, the population share of those aged 80 years and above has increased to levels considerably higher than the OECD average in both countries, though particularly

so in Japan. These trends are mirrored in the indicators age dependency ratio, youth dependency ratio and old-age dependency ratio. A dependency ratio indicates the numerical relation in which the likely financial dependants such as young or old persons stand to the working-age population. A higher dependency ratio means a lower share of working-age persons that can financially sustain the dependants. It is important to note, however, that such dependency ratio do not necessarily represent the true proportion of dependants since the criterion for classification is age and does not factor in the productivity of an economy.⁴ Nevertheless, dependency ratios give a first indication of not only the age composition of a society but also the financial consequences thereof. The youth dependency ratio has been decreasing throughout the OECD average since at least the 1980s, but low fertility in Germany and Japan has reduced the ratio there considerably further. In a similar way has the old-age dependency ratio in Germany and Japan increased faster than on average in other industrialised countries. Compared to the OECD average, Japan's old-age dependency ratio is now 60 per cent higher and that of Germany is still more than one third higher. In Japan, it is especially the speed of ageing that is striking. Other than in Germany, where the old-age dependency ratio was above the OECD average already in the 1980s, Japan's value used to be well below that. These developments have led to an increase in the total age dependency ratio (including both the young and old relative to the working-age population) in Germany and Japan, though not yet in the average of the OECD. In other words, Germany and Japan's low population proportion of young dependants is outweighed by a respectively higher share of old dependants leading to an overall increasing total dependency ratio. This relative increase of financial dependants tends to put additional financial pressure on the working-age population and, other things being equal, renders intergenerational transfers over the lifecycle increasingly important. The advanced stadia of ageing and an increasing share of dependants makes Germany and Japan two especially relevant cases of comparative analysis.

II.2 Labour force participation

In order to know the real situation of dependants as dependency ratios increase amid population ageing (see 2.1), it is crucial to know how high a population share across age groups is actually engaged in paid work, which is shown in table 2. In terms of actual labour force participation (not distinguishing between full- or part-time or various forms of non-regular employment), Germany's employment rate has been rising until the latest available data in 2013 while that of Japan has been on the decline since the mid-1990s. In terms of sex and age, Germany's young labour participation has

⁴ For a discussion of effective working years over the life cycle especially in the context of ageing in the European context, see Ebbinghaus (2016).

been decreasing slightly while that of older people has slightly increased, both of which is the case for either sex. The most notable change, however, is labour participation of women aged between 30 and 64 years. The labour force participation rate of 50-64 year old women almost doubled to 66 percent between 1980 and 2014, while that of women aged 30-49 increased by almost one half to 83 percent. Female labour participation is also the most notable change in Japan though the increase has been less drastic, with rates now well below the German ones. On the other hand, Japanese female labour participation was higher than Germany's in the 1980s. Also in Japan, labour force participation for young men (15-29 years) has decreased slightly, though that for young women has increased. In general, however, part-time and non-regular employment is much more common among females than males in both countries, which partly explains lower incomes among females (see chapter III). Different from Germany, Japan's labour participation rate of elderly persons has decreased considerably since 1980. This is especially the case among elderly men though the

Table 2: Labour force participation, Germany and Japan, percent.

	1980-84 avg	1985-89 avg	1990-94 avg	1995-99 avg	2000-04 avg	2005-09 avg	2010-14 avg
Labour force participation rate (by sex and age, as share of total population in age group) (Source: National Labour Force Surveys, taken from ILO 2017)							
Germany	55.20	55.52	58.52	57.72	57.30	59.04	60.08
Men Total	71.46	70.98	70.76	67.94	65.74	66.26	66.34
15-29 years	69.49	69.51	67.79	65.17	64.05	64.67	63.65
30-49 years	97.01	96.43	96.18	95.43	95.18	95.41	94.76
50-64 years	71.93	68.13	66.22	64.81	67.28	73.20	78.63
65+ years	6.34	4.98	4.54	4.30	4.28	5.42	7.06
Women Tot.	40.76	41.76	47.36	48.24	49.34	52.18	54.10
15-29 years	58.02	59.14	59.91	56.45	55.94	57.25	57.64
30-49 years	57.75	60.88	72.27	76.08	79.46	81.06	82.51
50-64 years	33.81	33.99	38.95	44.01	49.42	57.82	65.87
65+ years	2.86	1.96	1.70	1.66	1.72	2.46	3.32
Japan	63.42	62.78	63.70	63.36	61.36	60.26	59.34
Men Total	79.48	77.46	77.72	77.44	74.86	72.88	70.88
15-29 years	61.60	61.40	62.97	62.97	61.11	59.61	58.83
30-49 years	97.47	97.22	97.87	97.82	97.25	96.76	96.32
50-64 years	87.54	86.15	88.25	88.79	87.15	87.48	88.01
65+ years	39.46	36.08	37.60	36.42	31.44	29.50	29.10
Women Tot.	48.26	48.86	50.40	50.02	48.72	48.46	48.60
15-29 years	46.92	49.01	52.05	52.78	53.14	54.05	54.32
30-49 years	60.17	62.30	64.17	64.67	66.10	68.73	71.42
50-64 years	49.72	50.69	54.14	55.17	55.45	58.01	61.94
65+ years	15.84	15.54	16.28	15.30	13.46	12.98	13.62
OECD av.	n.a.						

Source: National Labour Force Surveys, taken from ILO (2017).

decrease has been taking place from a much higher level of participation and it remains higher overall compared to Germany. This is not surprising considering the old-age-biased welfare expansion in Japan (see chapter III), rendering it possible for more persons than in earlier years to cease to work at old age. Overall, labour force participation statistics call the above-discussed concept of dependency ratios into question to some extent: especially for Japan, a considerable portion of the elderly

are still engaged in paid work so that these persons, despite their age cannot strictly be called financial dependants, though there is no information about their income or work contract and they may already be recipients of pensions.

Table 3 shows two further indicators for the labour market division by gender. One is the gender pay gap, which is here defined as the median earnings for full-time jobs. Both countries show a trend of a closing gender gap. In Japan, it has decreased from 42 percent in the early 1980s to 27 percent in the early 2010s. Though this decline is considerable, it has not reached the level of Germany, which

Table 3: Work and gender differences, Germany and Japan, percent.

	1980-84 avg	1985-89 avg	1990-94 avg	1995-99 avg	2000-04 avg	2005-09 avg	2010-14 avg
<u>Gender pay gap (in median earnings for full-time jobs)</u>							
Germany	n.a.	n.a.	23.81	20.91	20.36	17.70	15.93
Japan	41.93	41.29	39.13	36.06	32.67	31.31	27.01
OECD Total	n.a.						
<u>Average weekly working hours by gender (% of all working men/women at any age)</u>							
Germany, men, 0-19h	0.92	0.89	1.46	2.53	3.52	5.02	5.72
men, 20-39h	1.91	25.72	51.63	45.04	41.30	30.35	26.75
men, 40h+	97.17	73.39	46.91	52.43	55.18	64.63	67.54
women, 0-19h	13.43	8.17	11.92	15.37	19.02	21.26	20.29
women, 20-39h	19.94	39.42	56.92	54.72	52.65	46.67	45.71
women, 40h+	66.63	52.41	31.16	29.90	28.34	32.08	34.00
Japan, men, 0-19h	n.a.	n.a.	n.a.	n.a.	2.74	3.07	3.40
men, 20-39h	n.a.	n.a.	n.a.	n.a.	17.00	17.28	20.03
men, 40h+	n.a.	n.a.	n.a.	n.a.	79.70	79.12	75.88
women, 0-19h	n.a.	n.a.	n.a.	n.a.	8.93	9.45	10.41
women, 20-39h	n.a.	n.a.	n.a.	n.a.	25.22	42.64	45.07
women, 40h+	n.a.	n.a.	n.a.	n.a.	29.13	47.42	43.85
OECD T., men, 0-19h	2.47	2.31	2.41	2.59	3.01	3.65	4.28
men, 20-39h	10.01	16.62	19.45	17.40	18.98	19.63	20.75
men, 40h+	85.16	79.52	76.26	78.24	77.33	76.72	74.97
women, 0-19h	8.31	8.93	9.08	9.32	10.22	11.19	11.70
women, 20-39h	24.39	30.99	32.83	31.45	34.99	37.36	38.00
women, 40h+	59.14	54.32	52.43	54.08	52.81	51.44	50.30

Source (unless stated otherwise): OECD (2017c), own calculations.

decreased from 24 percent in the early 1990s to 16 percent in the early 2010s. Another dimension of marked gender differences on the labour market are the average weekly working hours. In Germany it can be seen that the proportion of working men (of any age) with weekly average working hours of 40+ hours has decreased from almost 100 percent in the early 1980s to just over two thirds in the early 2010s. Meanwhile, work hours akin to part-time jobs have become more common over the decades.

In addition for women in Germany, average weekly work-hours of 40+ hours have in fact become less but lower average workloads more common. The reason is that although compared to earlier decades, a higher share of women is employed, those who are working are often working part-time or less. This trend for Germany is also in line with the general development in OECD countries, though Germany's diversity – meaning that a relatively high share is to be found in each category of average weekly work hours – has risen above the OECD average. For Japan, data is only available from the early 2000s onwards, and those for women in those first years that are accounted for do not add up to 100 percent. Nevertheless, a trend can be seen that differs to some extent from that in Germany and the OECD: the share of men in Japan who work on average 40+ hours per week has been declining, though with 76 percent it is still at a higher level than in Germany or the whole OECD. In turn, the average labour workload among working women has increased, with 44 percent working 40+ hours per week. In Japan, where full-time work includes overtime work on a more or less regular basis (Boling 2015), this is a sign of an increased integration of women into the labour market.

II.3 Family indicators

II.3.1 Fertility, marriage, divorce

Table 4 shows the most relevant basic family indicators to highlight family-demographic developments. One common trend is the conversion of crude marriage rates and crude divorce rates over time. Though in Germany, the crude divorce rate has slightly decreased since the 1980s, the marriage rate has fallen faster. In Japan, both rates have been converging. In Japan, considerably more than in Germany, this family-demographic trend coincides strongly with the low fertility shown above. Almost no children are born out of wedlock in Japan, while childbearing outside marriage has become an even more common pattern in Germany than it was already in the 1980s. Hence, to a much stronger extent than in Germany, the postponement and the abstention from marriage (Raymo 2014; Adam et al. 2011) are factors that are closely correlated with low fertility in Japan.⁵

The custom that giving birth only happens within a legal union is a cultural factor that distinguishes Japan from many other industrialised countries (Raymo 2014), though it has to be noted that the share of marriages in Japan triggered by unintended pregnancy is also estimated to be high (Castro-Vázquez 2015). On the other hand, the share of never-married women has been increasing. In the age-group of 25-29 it increased from 18 percent in 1970 to 60 percent in 2010, and among those aged 35-39 it increased from 6 to 23 percent during the same period (S. Fukuda 2013). Raymo (2014) estimates a further increase of never-married women even at age 50 from 5.5 percent for the 1950

⁵ For rich overviews of the fertility developments in either country, see Kreyenfeld & Konietzka (2017) for Germany and Europe, and Fukuda (2016) for Japan.

birth cohort to 23.5 percent for those born in 1990. Once married, about a third of unions end in divorce in Japan today (Raymo 2014). Moreover in Germany there has been an increase in the number of divorces per 100 newly married couples per year. In West Germany, it had been at around 20 in the early 1980s, reaching a peak near 45 in the mid-2000s. Then, as a result of the former West German divorce regulations being applied to the former East German states, divorce procedures were delayed, after which the value has, similarly to Japan, reached about one third by 2014 (Bundesinstitut für Bevölkerungsforschung 2017). Not included in divorce statistics are break-ups of non-married couples.

Table 4: Family indicators, Germany and Japan (percent, unless otherwise stated).

	80-84 avg	85-89 avg	90-94 avg	95-99 avg	00-04 avg	05-09 avg	10-13 avg*
<u>Crude Marriage rate</u> (per 1,000 people)							
Germany	6.28	6.64	5.74	5.20	4.76	4.58	4.68
Japan	6.50	5.86	6.14	6.28	6.08	5.72	5.28
OECD average	n.a.						
<u>Crude divorce rate</u> (per 1,000 people)							
Germany	2.08	2.28	1.84	2.22	2.50	2.32	1.78
Japan	1.38	1.34	1.46	1.80	2.24	2.02	1.88
OECD average	n.a.						
<u>Share of unmarried births</u> (percentage of all births; for Japan not 5-year avg. but each 1 st year until '99)							
Germany	14.06	15.84	15.10	18.64	25.88	30.96	34.30
Japan	0.80	0.20	1.10	1.20	1.82	2.06	2.20
OECD average	n.a.						
<u>Living arrangements</u> (of all households; source: (Statistisches Bundesamt 2016), (Statistics Bureau Japan 2016), for Germany not 5-year avg. but each 1 st year with the latest value from 2015).							
Germany: One-gen hh.	n.a.	n.a.	n.a.	63.7	66.2	67.9	70.8
Middle gen. with children	n.a.	n.a.	n.a.	34.50	32.10	30.60	28.10
Middle gen. with parents	n.a.	n.a.	n.a.	0.90	0.90	0.90	0.60
Three generations	n.a.	n.a.	n.a.	0.90	0.80	0.60	0.50
Japan: Single household	19.83	20.79	23.09	25.60	27.60	29.47	n.a.
Middle gen., no children	13.72	15.48	15.48	17.36	18.89	19.64	n.a.
Middle gen. with children	42.10	39.99	37.30	34.24	31.89	29.85	n.a.
Middle gen. with parents	2.15	2.20	2.21	2.26	2.26	2.24	n.a.
Three generations	14.58	13.85	12.15	10.47	8.52	6.97	n.a.
OECD average	n.a.						

Source (unless stated otherwise): OECD (2017c), own calculations.

Other than fertility, later and/or fewer marriages as well as higher divorce rates and break-ups are affecting living arrangements and therefore the circumstances under which family members can support each other. In general, both countries are experiencing an increase of family arrangements beyond the nuclear family. To better understand this trend, the origins of the family as an institution will be discussed later (see chapter IV).

II.3.2 Living arrangements

Germany and Japan, though from different cultural spheres, share fundamental commonalities in their traditional family structures. Both countries have traditionally considered the family as the natural first provider of welfare, whereas intrafamily welfare services such as care for young and old dependants or housework would typically be provided by wives (Ogawa et al. 2012; Palier 2010; Boling 2015). The male-breadwinner model was endorsed by Confucian beliefs in Japan and by Catholicism in Germany, but the basic principles are similar in this regard (Boling 2015). Even to date, there is a legal duty to provide care for old-age family members in need of care (Ogawa et al. 2012; Ostner 2010). One important difference, however, is the traditionally much higher occurrence of three-familial households in Japan compared to Germany (Raymo 2014; Bundesinstitut für Bevölkerungsforschung 2016a).

The trends in living arrangements are shown in table 4. Though the statistical offices of the two countries are measuring living arrangements in slightly different ways – with Germany not distinguishing between single households and other types of one-generation households in the same dataset – the available data can nevertheless show the most important differences and developments. In Germany, the share of one-generation households has been the most common form of living arrangements, and between 1995 and 2015 its share of all households increased further, from 64 to 71 percent. Among two-generation households, nuclear families (i.e. couples living with children) are much more common than couples living with an elderly parent, the latter type of living arrangement making up an almost insignificant share of below 1 percent. Similarly, the share of three-generation households, with an adult generation member, his, her or their offspring, and his, her or their parent(s) has been a rare type. In 1995, its share stood at 0.9 percent, and it had decreased to 0.5 percent by 2015. Furthermore, other official data not represented in table 4 document a decline of the share of households in which under-age children are living, falling from 27 percent in 1991 to 20 percent in 2014. At the same time, at the expense of the nuclear family, which was the classical post-war family model in Germany (Bosch and Jansen 2010), the share of single households has been increasing (Bundesinstitut für Bevölkerungsforschung 2016b). However, the emergence of single households is not equal to a retreat of the nuclear family as such, since a large proportion of the former is made up by elderly persons living alone after that person's partner has passed away.

In Japan, the occurrence of single households has also increased vastly. In the early 1980s, its share had been 20 percent, but it rose to 29 percent in the mid-2010s. This trend is mostly to be explained by a shift of crucial life-course events such as marriage and fertility. As the above-mentioned low share of unmarried births shows, marriage and fertility in Japan is correlated even closer than in many other countries, so that a delay of one typically coincides with a delay of the other. However,

forming a single household upon moving out of the parental home at young adult-age has not become a common pattern in Japan. Between 60 and 70 percent of never-married adults aged 20-34 in the 2000s still lived with their parents (S. Fukuda 2009). The result that single-households have become more common in general appears to be a result strongly shaped by those population groups beyond young adult-age. In turn, the strong decrease in three-generational households in Japan is also a result of low fertility, as childless adults (or those with only one child) are unlikely to live together with two older generations (Suzuki 2013). Japan's traditional family model has been the three-generation household with grandparents, parents and children living under one roof and assisting each other in their respective lives (Ogawa et al. 2012; Raymo 2014). In 1965, 24 percent of all private households consisted of adult children and their parents living together, regardless whether the adult children had their own children or not. By 2005, this share has dropped to 9 percent. The share of three-generation households, a subset of the former, dropped from 22 to 7 percent. Meanwhile, the share of single households has almost quadrupled from 8 to 29 percent (Statistics Bureau Japan 2016). On the other hand, according to the International Survey of Lifestyles and Attitudes of the Elderly, 21 percent of persons aged 65 years and above were still living in three-generation households in 2005 (Ogawa et al. 2012). This figure has been on the decline but is still very high in an international context, as for example in Germany, it stood at only 1 percent at the same time (Ogawa et al. 2012). Nevertheless, the decline of Japan's three-generational household, from 15 percent of all households in the early 1980s to 7 percent in the mid-2010s, is considerable and likely also explained by a value and policy shift. Ogawa et.al. (Ogawa, Matsukara, and Chawla 2011) observe in the Japanese National Survey on Family Planning that when Japan's government, after a successive expansion in care policies, shifted some care responsibilities back to the family in the 1980s (see chapter IV), a value change could be seen: the proportion of middle-aged women, who considered the familial provision of eldercare for parents or parents in law to be a "good custom" or "natural duty as children", had dropped and continued to fall further afterwards. At the same time, the share of mothers under age 50, who expected to rely on receiving care services from their children once they would reach old-age, has declined from almost two thirds in 1950 to just over 10 percent in 2004. Ogawa et.al. conclude from this that "Japanese children's utility as a source of old-age security for their parents had almost disappeared by the beginning of the twenty-first century" (Ogawa, Matsukara, and Chawla 2011, p.481). Overall, the nuclear family has become less common as a form of living arrangement since the 1980s, with its share of all households declining from 42 to 30 percent. Possibly relevant for intergenerational solidarity such as family care, the share of three-generational households has also been on decline in Japan. However, when compared to Germany, where the share of three-generational households has been below 1 percent over dec-

ades, three-generational household have remained a relatively typical living arrangement in Japan until today.

II.4 Economic development

The development of demographics, social policies, regime transition and relations between generations cannot be properly understood without accounting for the economic context in which these are taking place. Developments in Germany and Japan over the past decades share commonalities

Table 5: General economic development, Germany and Japan.

	1980-84 avg	1985-89 avg	1990-94 avg	1995-99 avg	2000-04 avg	2005-09 avg	2010-14 avg
<u>GDP per capita (US-Dollar)</u>							
Germany	12,076.65	16,000.42	21,361.26	24,967.26	29,643.23	36,117.93	43,724.44
Japan	10,435.08	15,066.01	20,840.03	24,081.79	27,419.52	32,184.07	35,678.24
OECD	10,258.41	13,911.39	17,963.49	21,948.84	26,862.73	33,078.57	37,527.15
<u>Real GDP growth (%)</u>							
Germany	1.19	3.78	2.76	1.67	1.02	0.63	2.06
Japan	3.58	5.16	2.15	0.79	1.39	-0.28	1.46
OECD	2.28	3.78	2.29	3.11	2.53	1.09	1.96
<u>Income inequality (Gini Coefficient)</u>							
Germany	n.a.	n.a.	n.a.	n.a.	n.a.	0.29	0.29
Japan	n.a.	n.a.	n.a.	n.a.	n.a.	0.34	0.33
OECD	n.a.						

Source (unless stated otherwise): OECD (2017c), own calculations.

but are also marked by differences. As shown in table 5, both Japan and Germany have experienced an increase in GDP per capita, which is in line with the OECD trend. Yet the two countries differ in terms of real GDP growth. Germany experienced a dip in the early 2000s when the costs of German reunification became apparent, upon which deep structural reforms followed (see chapter III), as well as in the latter half of the same decade amid the global financial crisis. Since the beginning of the current decade, however, Germany's real growth has been relatively high, especially considering weakening growth in the Eurozone, Germany's most important trade partner. Real GDP growth in Japan was very high until the early 1990s when the burst of a speculation bubble marked an end to an extended growth period. The following years have often been called "the lost decade(s)" because real GDP growth has since been significantly lower than it used to be. However, Japan's growth data has to be seen in the context of an ageing (and shrinking) workforce and a shrinking total population. In both countries, the general increase in GDP per capita has not contributed to a reduction in income inequality, expressed by the Gini coefficient. Income inequality is slightly higher in Japan than in Germany.

Intergenerational and intragenerational differences are also important in terms of poverty. Table 6 shows the development of two measures of relative (income) poverty. In general, poverty has increased in both countries by either measure. When poverty is defined as earning less than 60% of median income after taxes and transfers, which is the typical standard, Germany's poverty share increased from 30% to 35% within two and a half decades. In Japan, the share had been only 23% in the late 1990s but has increased at a significantly higher pace to 36%. The relative poverty shares are

Table 6: Poverty risk, Germany and Japan, percent.

	1980-84 avg	1985-89 avg	1990-94 avg	1995-99 avg	2000-04 avg*	2005-09 avg**	2010-13 avg***
<u>Poverty share, post tax/transfers (defined as less than 60% of mean income)</u>							
* for GER only 2000, 2004; for JP only 2000, 2003; ** for GER only 2008, 2009; for JP only 2006, 2009; *** for GER only 2011, 2012; for JP only 2012.							
Germany	n.a.	30.30	29.30	31.90	34.45	35.45	35.75
Japan	n.a.	n.a.	n.a.	23.10	29.60	34.35	36.60
OECD av.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<u>Poverty share across age groups, after tax/transfers (disp. income less than 50% of median)</u>							
* for GER only 2008, 2009; for JP only 2006, 2009; * for GER only 2011, 2012; for JP only 2012.							
Germany all	n.a.	5.60	5.50	7.20	7.60	9.00	8.75
0-17 years	n.a.	5.90	5.20	8.00	8.80	9.10	8.60
18-25 years	n.a.	7.90	6.50	11.10	12.90	14.05	12.45
26-40 years	n.a.	4.60	4.20	5.50	6.50	8.20	8.50
41-50 years	n.a.	2.40	2.70	5.20	4.30	5.85	5.55
51-65 years	n.a.	4.30	3.80	5.90	6.10	8.25	9.10
66-75 years	n.a.	6.80	8.80	8.60	8.70	8.65	7.90
76+ years	n.a.	11.40	13.70	11.10	10.40	13.55	12.15
Japan all	n.a.	12.00	n.a.	13.70	15.30	15.85	16.10
0-17 years	n.a.	10.90	n.a.	12.10	14.50	14.95	16.30
18-25 years	n.a.	10.50	n.a.	14.20	16.60	18.05	19.70
26-40 years	n.a.	9.40	n.a.	10.60	12.60	12.35	12.90
41-50 years	n.a.	9.50	n.a.	10.20	11.70	12.15	14.10
51-65 years	n.a.	13.30	n.a.	13.40	14.40	14.85	14.40
66-75 years	n.a.	22.80	n.a.	21.10	19.60	18.00	17.00
76+ years	n.a.	23.40	n.a.	26.20	23.60	23.65	21.30
OECD Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source (unless stated otherwise): OECD (2017c), own calculations.

much lower once it includes only those who earn less than 50% of the median income. While this standard is internationally less common, the data are available by age groups. In Germany, the poverty share compared to the 1980s has increased in every age group since, but the increases have been higher among young persons at working age. On the other hand, relative poverty is still most common among the oldest age groups when measured as disposable income being less than 50% of the median. Also in Japan, relative poverty is most common among those aged 76 years or above. However, compared to the 1980s, this age group is the only one whose poverty share has fallen ra-

ther than risen. The poverty share among those aged 18-25 years, in turn, almost doubled to 19.7%. For all age groups, Japan's relative poverty share is higher than that in Germany.

A trend of increasing pressure can also partly be observed at the household level. Table 7 shows data indicating the development of the financial position of private households. In Germany, mean disposable household income has doubled since the 1980s. As a result, Germany's household net sav-

Table 7: Household finance indicators, Germany and Japan.

	1980-84 avg	1985-89 avg	1990-94 avg	1995-99 avg	2000-04 avg	2005-09 avg*	2010-14 avg**
Mean disposable household income (local currency, current prices, annual value)							
* for GER only 2008, 2009; for JP 2006, 2009; ** for GER 2010, 2011, for JP 2012.							
Germany (€)	n.a.	11,467	14,598	17,139	19,330	22,563	23,333
Japan (¥)	n.a.	2,437,726	n.a.	3,308,561	3,214,918	2,922,722	2,783,000
OECD Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<u>Household net savings rate (of household income, percent)</u>							
Germany	n.a.	n.a.	n.a.	10.20	9.70	10.17	9.43
Japan	n.a.	n.a.	n.a.	9.44	3.81	1.36	1.14
OECD Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<u>Household debt share of total financial assets (percent)</u>							
Germany	n.a.	n.a.	n.a.	105.81	113.09	103.22	95.62
Japan	n.a.	n.a.	n.a.	138.30	139.27	134.69	129.70
OECD Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

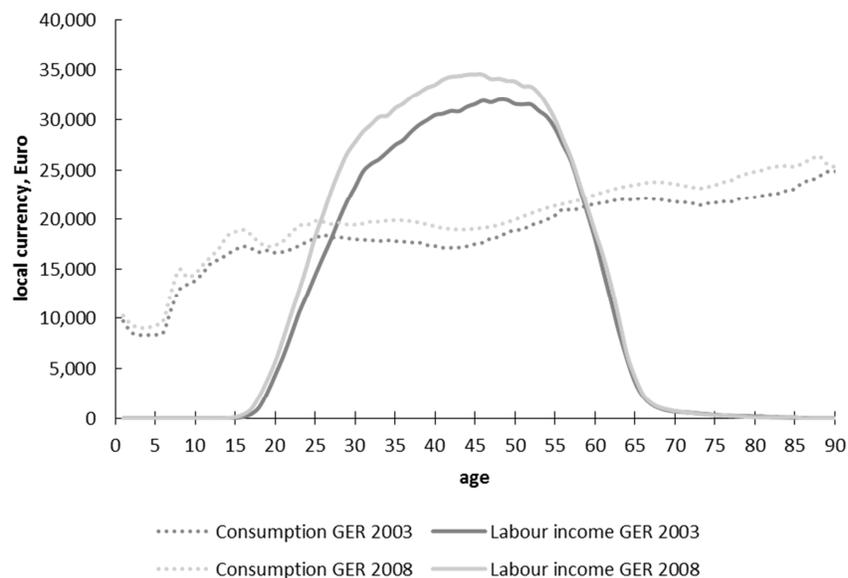
Source (unless stated otherwise): OECD (2017c), own calculations.

ings rate remained constant, which implies a boost in consumption. In Japan, in contrast, the five-year averages of mean disposable household income have been falling since a peak in the latter half of the 1990s. An important reason is the effect of the burst of a speculation bubble in 1990, after which economic growth significantly fell and Japan's previously strongly seniority-based pay regime on the labour market was successively replaced by non-regular employment without ensured wage increases (JILPT 2017). As a result, the household net savings rate in Japan fell significantly from 9.4% in the 1990s to 1.5% in the 2010s. One interpretation of this significant decline is that in order to enable a largely unchanged standard of living, households have increasingly been waiving on future consumption. Japan's decreased household debt share (as a share of total financial assets) over the same period shows that financial prudence has been partly shifted from higher saving to lower debt-taking. Japan's increasing poverty shares and decreasing disposable income, as well as the slightly rising Gini coefficient hints at rising intragenerational inequality, also to a stronger extent than in Germany.

II.5 Intergenerational solidarity

The previous sections have shown that amid population ageing, other things being equal, intergenerational sharing becomes an increasingly important dimension of social life and politics. A macro dimension of this is captured by National Transfer Accounts (NTA). NTA forms an internationally harmonised database of intergenerational transfers based on the logic of macroeconomic national accounting (R. Lee and Mason 2017). It includes private and public transfers, takes the individual as its unit of analysis, and allows an interpretation of the financial position of an average person over the lifecycle. NTA operates in two accounts, called lifecycle deficit and age reallocations. The former is defined as the difference of labour income and consumption at any given age: if consumption is greater than income, the lifecycle deficit is positive. In turn, the age reallocations account, whose total sum is by definition equal to the lifecycle deficit, consists of public transfers, private transfers and asset-based reallocations. Receiving transfers is counted as an inflow, equivalent to consumption, while making a transfer is an outflow equivalent to income. In the age reallocations account, the item public transfers includes government-run transfers such as pensions, healthcare and education, while private transfers are made between individuals, such as intrafamilial support. Asset-based reallocations, including saving and other forms of wealth, are a balancing item: when individuals save they generate outflows while dissavings are defined as inflows.

Figure 1: Consumption and income in Germany, per capita.

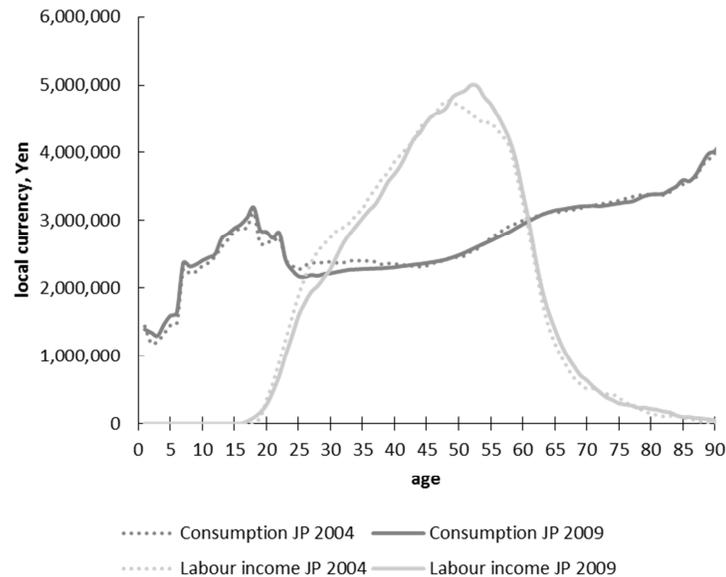


Source: Kluge (2012, 2014), own calculations.

On a rather general level, all countries can be expected to have a similar shape: At young age, an individual consumes more than he/she produces; at working age, a person starts to generate surplus

income; and at old age, he or she again turns into individual deficit. Important cross-country differences can be seen in the points in time of transition from deficit to surplus and vice versa as well as in the magnitude of that surplus. Once more cross-sections of one country are taken into account, developments of the lifecycle deficit and age reallocations can be observed over time, and therefore be judged in the context of institutional or demographic changes occurring at certain points in time or periods. Two cross-sections are available for each country: 2003 and 2008 for Germany, and 2004 and 2009 for Japan. The insights from looking at only two cross-sections may seem limited, especially since the years around 2008 and 2009 are marked the beginning of the global financial crisis. However, firstly, most budget adjustments by governments followed in the years after, and secondly, albeit only offering a narrow time frame, even accounts of two cross-sections show basic regularities in both countries.

Figure 2: Consumption and income in Japan, per capita.

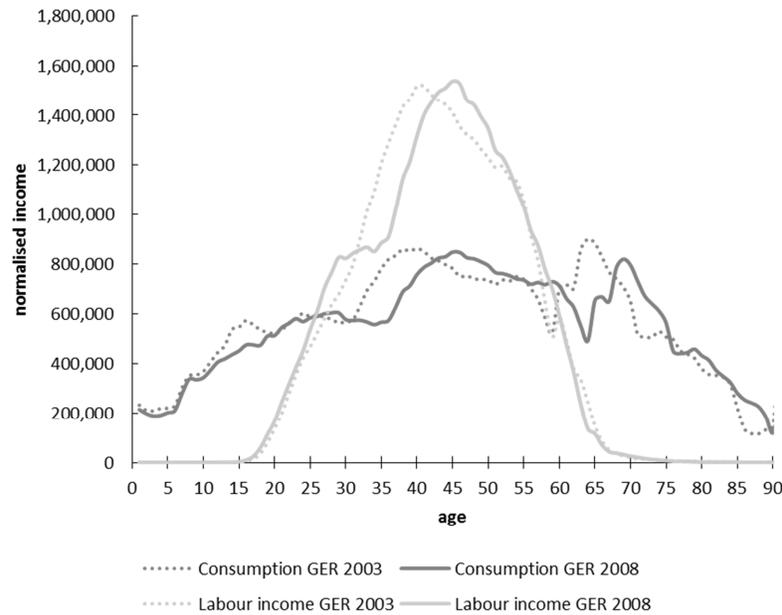


Source: Ogawa et. al (2012, 2014), own calculations.

Figure 1 shows income and consumption per capita in Germany in the years 2003 and 2008, while figure 2 shows the same for Japan in the years 2004 and 2009. It is evident for Germany that the average ageing person tends to consume more during the life cycle. At birth, consumption is higher in the years following and at late youth years it is higher too. At old age, consumption tends to increase in 2008. Income starts to exceed consumption at age 27 in 2003 and at 26 in 2008, peaks around age 40 and falls below consumption at age 58 in 2003 and 59 in 2008. Figure 2 shows a similar shape in Japan, though two important differences can be seen. Firstly, the age of gaining financial independence did not decrease between 2004 and 2009, as it did in Germany, but increased instead. The average person's income in 2004 started to exceed consumption at age 26, but in 2009 this only start-

ed at age 29. The age of turning into a deficit at old age remained unchanged at 60 years. Peak income was also postponed from age 47 in 2004 to age 51 in 2009. Consumption at old age was increasing with every additional year of age in either cross-section.

Figure 3: Consumption and income in Germany, aggregate, normalised by avg. income of 30-49 year olds.

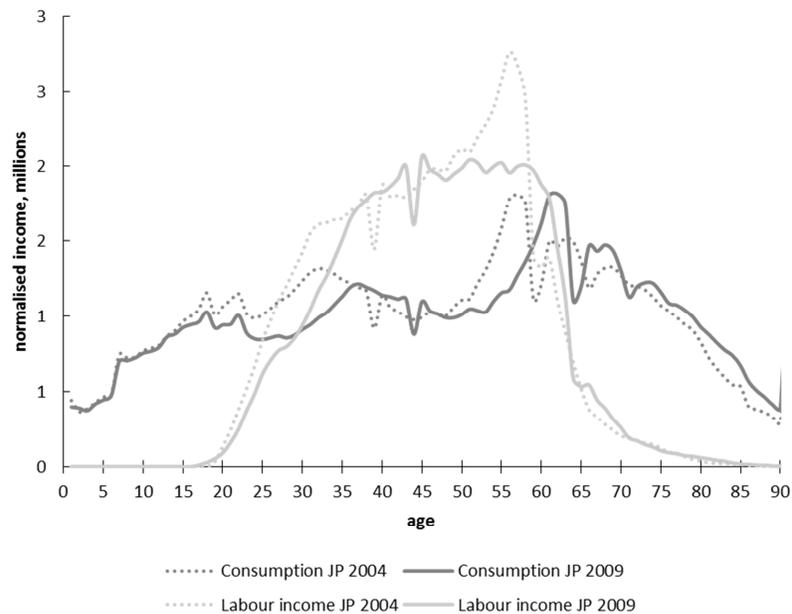


Sources: Kluge(2012, 2014), own calculations.

Figures 3 and 4 show the respective two cross-sections on an aggregate level for either country. This means that the per capita value for each age group has been multiplied with the number of persons in each age group. To enable comparison, all cross-sections have been normalised by the average income of the 30-49 year olds in the respective cross-section, as is common practice when working with NTA (R. Lee and Wilmoth 2013). Especially in Japan, shown in figure 4, the importance of the size of certain age groups can be seen. The hike in the light dotted line, depicting income in 2004, consists of the first babyboomers born around 1947-49. While their earnings had an important effect on the total income of the economy, their retirement starting from around 2009 has dragged income downwards (shown in the lower hike in dark dots) and will continue to do so. Another large cost factor to society consists of those persons in the latter half of their 80s, mostly due to consumption of health services as will be shown further below. Germany's change over the five years is less dramatic than Japan's, though cohort effects on both income and consumption can also be seen: the hike in income in the late 30s (light dotted line, 2003) is shifted towards the early 40s (dark dotted line, 2008), if one compares the two cross-sections. One consumption hike in Germany in each cross-section (shifting from the early 60s in 2003, dark dots, to the mid-60s in 2008, dark line) is also made

up by the same cohort, those born in the early/mid 1950s. The consumption level of those aged 85 years and above in Germany is relatively lower than that in Japan.

Figure 4: Consumption and income in Japan, aggregate, normalised by avg. income of 30-49 year olds.

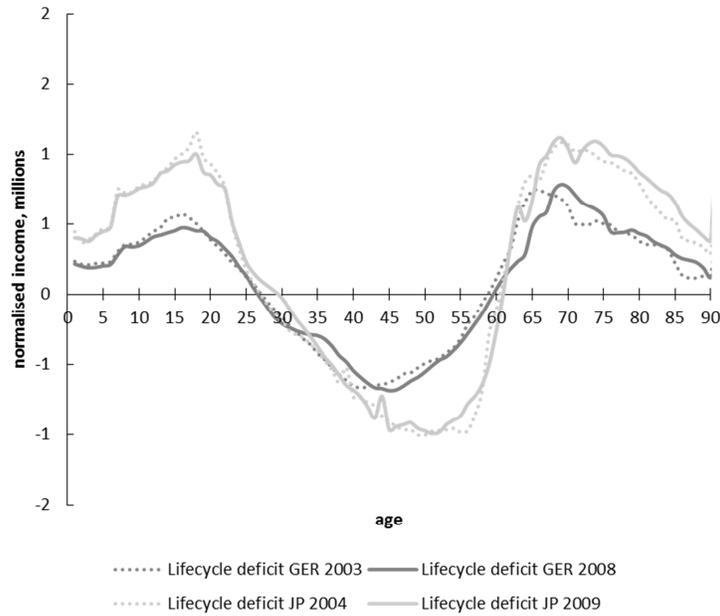


Source: Ogawa et.al (2012, 2014), own calculations.

Figure 5 shows the lifecycle deficit – the difference of consumption and income – in aggregate values over the lifecycle. In both countries, deficit at young age peaks in the late teenage years, which mostly marks the final years of schooling. At old age, both countries show a hike around the late 60s, but Japan has an even higher peak for those aged around 90 years or more. Regarding this peak from around age 90, which occurs in both countries, it has to be noted that this is not only explained by increasing health consumption. In addition, 90+ years is an age category including all individuals aged 90 and older. Hence, the strong hike is also due to this group being larger than other groups only including persons of one same year of age. Another reason is rising healthcare expenditure at older age, as will be shown below in figures 12 to 14. In figure 6, showing the lifecycle deficit for all ages, it can be seen that while the overall lifecycle deficit is positive in both countries (consumption exceeding income overall), it is relatively lower in Germany and decreased slightly between 2003 and 2008. In Japan, it is higher and increased between 2004 and 2009. When there is an overall lifecycle deficit in an economy, the negative remainder must be either financed by debt or wealth. A society with an increasing deficit is, in the absence of economic growth or other factors, therefore becoming less wealthy. Figure 7 shows the change of the lifecycle deficit by age groups. In both countries, the increase is positive and highest among young persons, indicating that financial independence is becoming more difficult in Germany and Japan. In Germany, but not in Japan, increasing

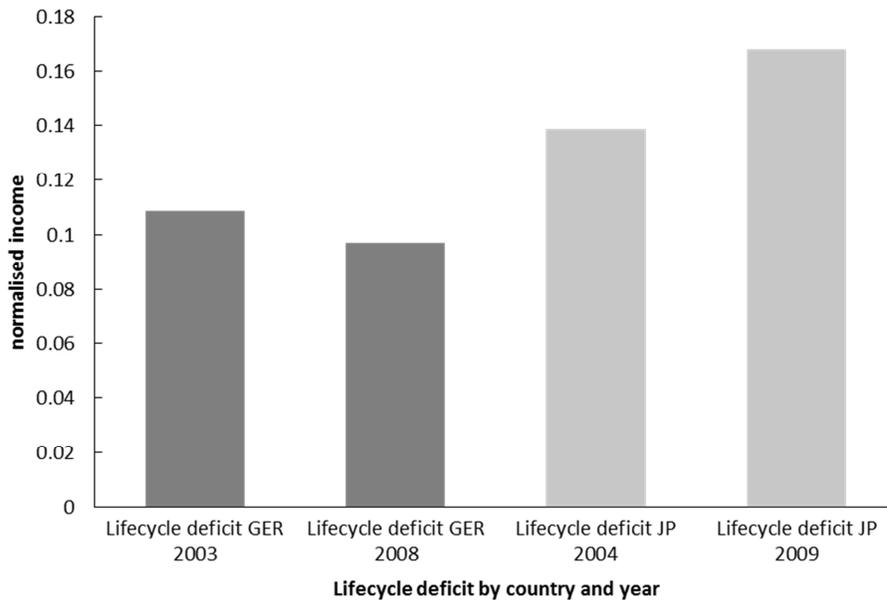
incomes (leading to a decrease in lifecycle deficit) compensate for the increasing deficits of other age groups.

Figure 5: Lifecycle deficit, aggregate, normalised by average income of 30-49 year olds.



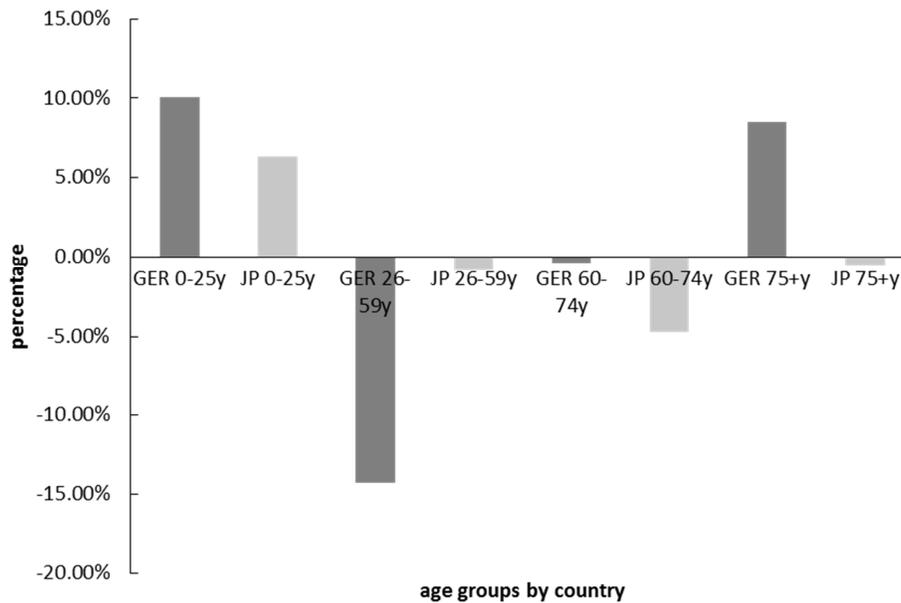
Sources: Kluge (2012, 2014), Ogawa et.al (2014, 2012), own calculations.

Figure 6: Lifecycle deficit, aggregate, all ages, normalised by average income of 30-49 year olds.



Sources: Kluge (2012, 2014), Ogawa et.al (2014, 2012), own calculations.

Figure 7: Lifecycle deficit change by age group in Germany (2003-08) and Japan (2004-09).



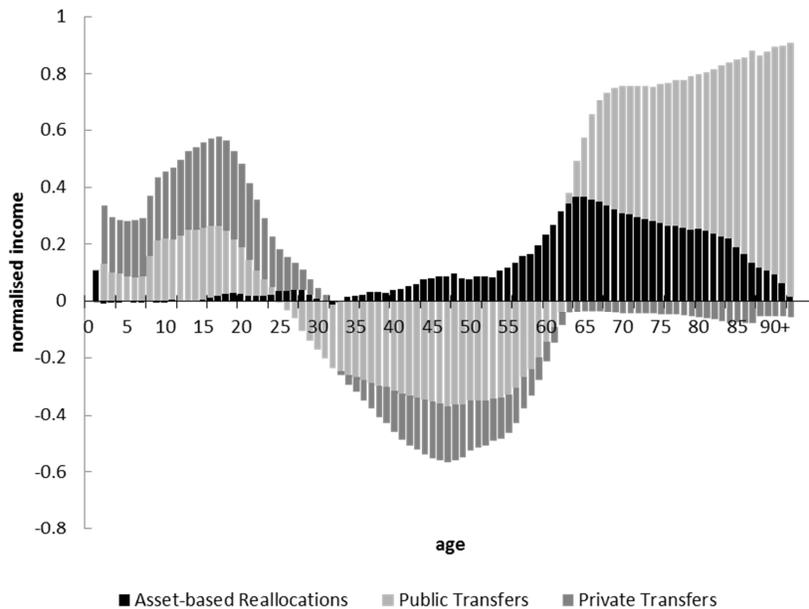
Sources: Kluge (2012, 2014), Ogawa et.al (2014, 2012), own calculations.

Figures 8 to 11 show age reallocations in Germany (figures 8, 9) and Japan (10, 11) in a normalised format, with all values being divided by the average income of the 30-49 year olds of the respective country. In both cross-sections of either country the working-age population is a net giver of both public (light grey) and private transfers (dark grey), while asset-based reallocations (black) shows a net inflow, which is equivalent to net dissaving. Net dissaving is highest upon retirement in both cross-sections of either country, which indicates consumption smoothing in the years of transitioning from living of labour income to mainly living of pension income. The largest portion of inflows in asset-based reallocations in both countries consists of private pensions, typically employment-based.⁶ Another major factor, also in both countries, is the consumption of private savings. Net dissaving, including the receipt of private pensions and consumption of private savings, generally decreases with increasing age, in other words: assets are increasingly used up. The consumption of wealth is related to private transfer outflows. In Germany in 2003 (figure 8), starting from age 31 the average individual generated a net outflow of private transfers. Even at a very high age, persons in Germany on aggregate were giving private transfers to younger age groups. In 2008 (figure 9), a similar pattern persisted, though the net outflow of private transfers shows a sudden decrease from age 86. This decrease, in turn, coincides with an abrupt decrease in the net inflow of asset-based

⁶ While public pensions are categorised under public transfers, employment-based pensions and other private pension plans come under asset-based reallocations. In turn, whole life insurances count as asset-based reallocations, but term life insurances are not included as in this case they are considered risk pooling and not intergenerational transfers (Mason et al. 2006).

reallocations and public transfers (light grey). In other words, making intergenerational transfers appears to be related to receiving intergenerational transfers. The data for Japan show a similar picture in this sense. In 2004 (figure 10), the average Japanese person made a net outflow of private transfers until age 76, after which private transfers turned into a net inflow. The turn of being a net giver to a net receiver of private transfers coincides with the stronger decrease of the inflow of asset-based reallocations as well as public transfers. In 2009 (figure 11), the average person in Japan turned into a net receiver of public transfers only from age 81, but at the same time the decreases in inflows of public transfers and asset-based reallocations were less steep. In more general, the share of public transfers of all in- and outflows are higher in Germany than in Japan. This is equivalent to the larger size of the welfare relative to GDP in Germany compared to Japan, as shown above based on OECD data. Different sources of transfers being substitutes for each other, a lower share of public transfers renders private transfers and wealth more important. This raises questions over the connection of intergenerational and intragenerational inequality. Though NTA does not provide data of income and wealth inequality within one age group, the implications are straightforward: where in the (partial) absence of a redistributing welfare state the individual private income position is more important for intergenerational solidarity, the effect that population ageing has on the wealth of a society depends to a greater extent on social and economic differences within a society.

Figure 8: Age reallocations in Germany, 2003.



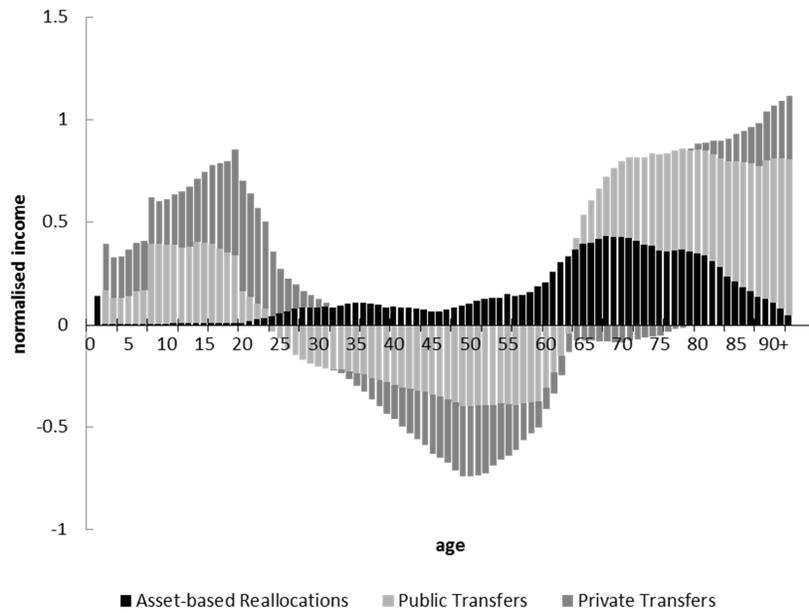
Sources: Kluge(2012, 2014), own calculations.

Figure 9: Age reallocations in Germany, 2008.



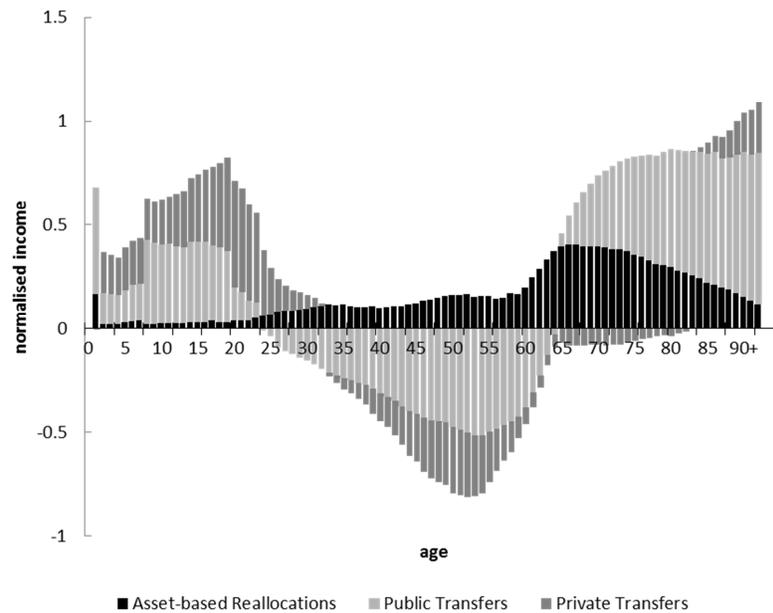
Sources: Kluge(2012, 2014), own calculations.

Figure 10: Age reallocations in Japan, 2004.



Source: Ogawa et.al (2012, 2014), own calculations.

Figure 11: Age reallocations in Japan, 2009.

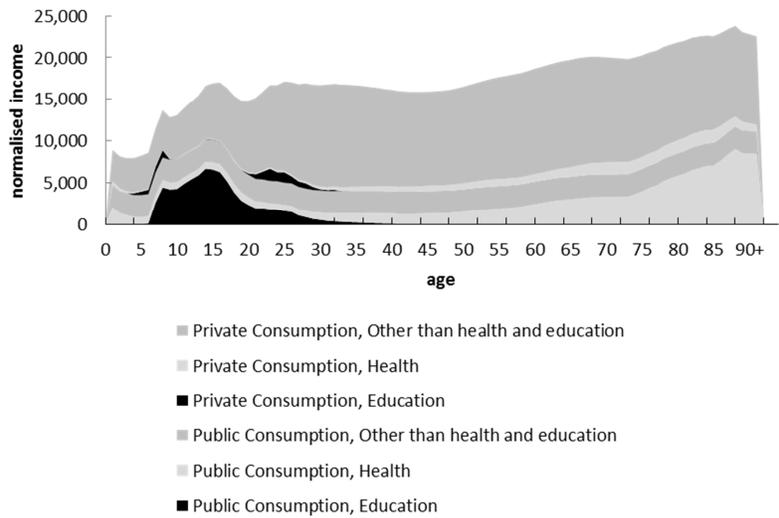


Source: Ogawa et.al (2012, 2014), own calculations.

In order to see how the available resources are being used across age, figures 12-15 show consumption by item. Three items that strongly vary across age are distinguished here: education, health and others, whereas “others” includes domains such as housing, durables and for Japan also long-term care. Each of the three items are distinguished by the spending agent, which can either be “private” (the individual), or “government” (the welfare state). Since changes over time between the two cross-sections are modest, only the latter cross-section of each country is displayed here. Figure 12 depicts Germany’s consumption by item per capita in 2008. At any given age, “private other consumption” (full grey colouring, top one of the two areas with the same tone) is the largest or one of the largest items of consumption. At young child age, public consumption of health (light grey, bottom) and other (full grey, bottom) combined are almost as high as other private consumption. From age 6, public education (black, bottom) becomes an item of considerable relative weight, whereas private consumption of education (black, top) is more relevant at university age (early 20s) but never forms a major part of total consumption. Private consumption of health increases relatively constantly from reaching adulthood, but remains a minor item across the life course. Public consumption of health increases strongly at old age, significantly contributing to the general trend that consumption increases with age. Considering the aggregate level (figure 13), hence accounting for the size of each age group, the total cost of the healthcare and education systems become apparent. In Germany in 2008, the highest total consumption occurred among those aged between 42 and 47 years, as well as those aged 67 to 69. The latter form the cohort born between 1939 and 1941, the

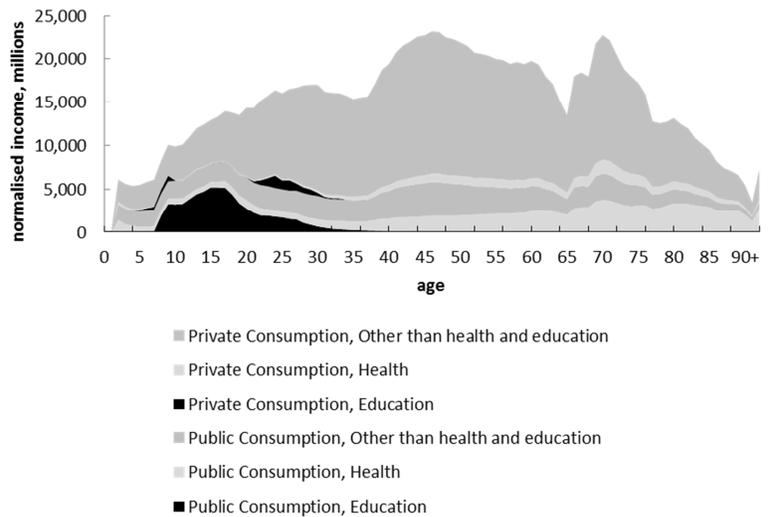
former, in many cases, are the children of the latter. In 2008, the birth cohort of 1939-41 had retired a few years earlier and, and at their age there was also a per capita increase in public health consumption (light grey, bottom), the hike in figure 13 shows a cohort effect. Vice versa, while per capita (public health) consumption is highest at old age, old persons did not exert strong pressure on aggregate total consumption in 2008 because of the then relatively small age group size of the older among the elderly. Also at young age, the total (aggregate) cost of public education consumption (black, bottom), mostly benefitting young persons, is considerably lower than public health consumption (light grey, bottom), which tends to be consumed to a higher extent with increasing age.

Figure 12: Consumption by item in Germany, per capita, 2008.



Sources: Kluge(2012, 2014), own calculations.

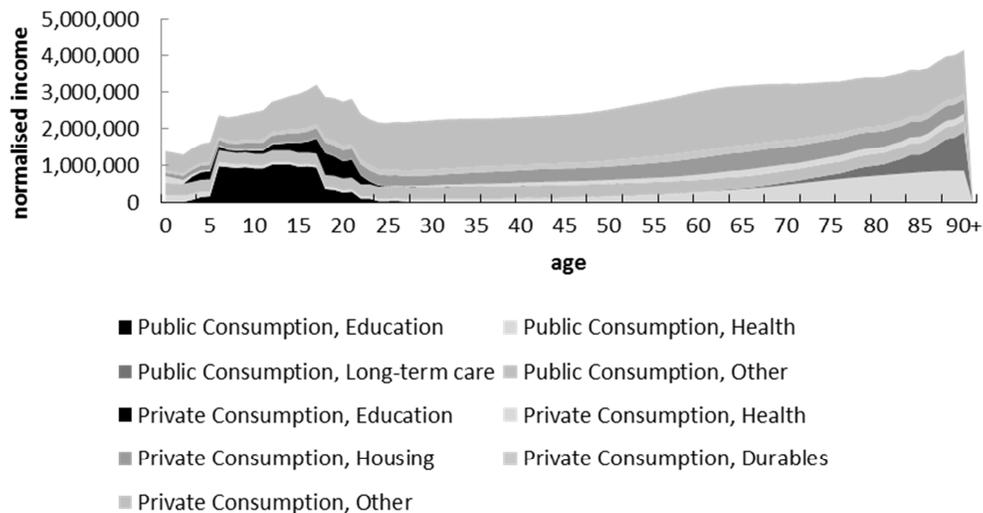
Figure 13: Consumption by item in Germany, aggregate, 2008.



Sources: (Kluge 2012, 2014, Ogawa, Matsukura, and Chawla 2012, 2014), own calculations.

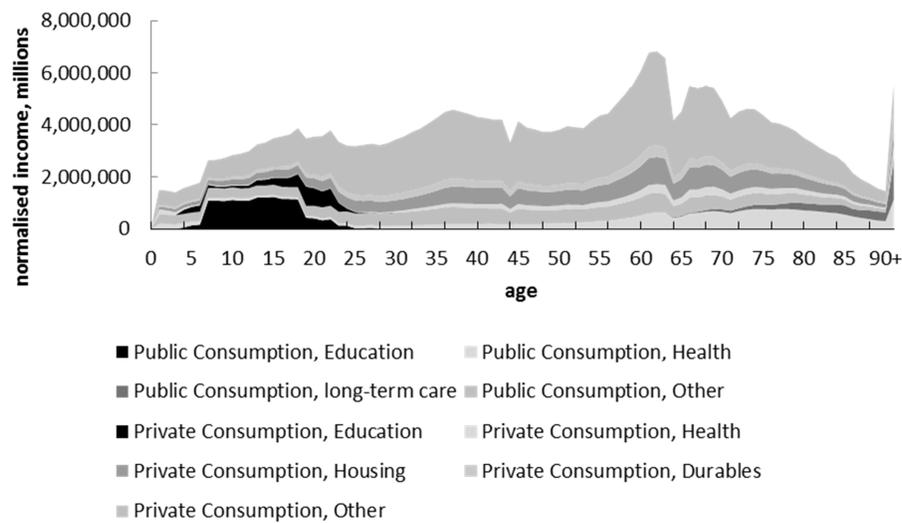
Figure 14 shows per capita consumption in Japan for the year 2009. Though the pattern appears similar to that of Germany at first sight, there are marked differences. The hike at young adult age is considerably more pronounced in Japan, mostly owed to public education consumption (black, bottom) and, compared to Germany, also to a larger extent due to private education consumption (black, top). The strong increase in public ‘other’ consumption (full grey, bottom) with age is to a considerable extent explained by Japan’s long-term care insurance, which is included in this item. In Japan in 2009 on an aggregate level (figure 14), consumption of those aged 59-61 (born between 1948 and 1950) hikes, which is the cohort effect of the baby boomers. Those born between 1966 and 1973 (aged 36-43 in 2009) are in many cases the children of the baby boomers, the so-called second baby boomers. Though the per capita consumption level of the second baby boomers is not higher than that of those slightly older or younger (see figure 14), their aggregate consumption shows a hike in figure 15. Projecting such cohort effects to the future, the ageing of these two large cohorts will exert pressure on the welfare system. This is especially the case since aggregate public health consumption increases strongly for the above-mentioned cohorts. Given the combination of high longevity, low fertility and the spending composition of welfare state, as was already shown in tables 1 and 2 above, other things being equal, the pressure on the welfare state in decades to come can be expected to be even stronger in Japan than in Germany.

Figure 14: Consumption by item in Japan, per capita, 2009.



Source: Ogawa et.al (2012, 2014), own calculations.

Figure 15: Consumption by item in Japan, aggregate, 2009.



Source: Ogawa et.al (2012, 2014), own calculations.

II.6 Preliminary findings

As consumption per capita increases with age, while income decreases from retirement onwards, an ageing population is confronted with increasing costs for the whole economy. In other words, the working-age population has to generate additional income in order to keep consumption levels constant. Where this condition cannot be fulfilled, either consumption has to be reduced or the remaining gap between income and consumption has to be filled by issuing new debt or using up wealth. Therefore, a society where these factors are at play at the same time will tend to get less wealthy in the face of ageing. The discussion of descriptive statistics of Germany and Japan in this chapter shows this to be the case for both countries, though to a stronger extent in Japan. It has also been shown that in Japan, more than in Germany, in addition to the welfare state, individual families are shouldering considerable shares of the costs of ageing. This is especially noteworthy considering the strong welfare state expansion in Japan over the last decades, which nevertheless could not prevent the older elderly in Japan from turning into net receivers of both public and private transfers in their early 80s. In Germany, in contrast, people at old age are net receivers of public transfers but remain net givers of private transfers. This is an important difference: young persons, well-off or precarious (see chapter IV), can on aggregate count on less support from their oldest elderly family members in Japan compared to Germany, at least from a certain high age. This is one aspect of a weakened base for intergenerational support.

The need for this support, however, appears to be stronger in Japan than in Germany. This is also shown in that in Japan, the age from which an individual becomes financially independent has in-

creased over the two cohorts shown here. If the reason for this development were increased spending on education, which may turn into higher productivity at later age, a postponement of financial independence would seem less alarming. However, the most important reason for this shift is lower income among labour market entrants. The lifecycle deficit of young persons in Germany has also increased because of lower income levels of young adults; however, the age of reaching financial independence did not change. The total lifecycle deficit for Germany slightly decreased while that in Japan increased.

In either country, these trends make intrafamilial intergenerational support increasingly important. But several factors appear to render just such support more difficult. One is, though only shown in the descriptive statistics but not in NTA data (see chapter IV), socioeconomic inequality. Where it is the individual or his or her family rather than the welfare state providing support, those materially worse off tend to be burdened with higher costs relative to their individual financial position. In other words, intragenerational inequalities, as shown above can be expected to be one determinant regarding the extent to which members of the working-age population can shoulder increased financial pressure due to ageing on the one hand and increasing precariousness among those at younger age on the other. Richer families will be able to provide levels of support that poorer ones cannot. This can be expected to be an important factor for those individuals at younger old-age who are net providers of intrafamilial (private) transfers. Another factor is low fertility and childlessness. As discussed above, those individuals at old age with fewer or no children lack important sources from which they could receive intergenerational private transfers if in need, which is more likely to happen at higher old-age. In Japan, as shown above, the older individuals among the elderly are net receivers of private transfers. An additional possible factor undermining intrafamilial intergenerational support is the change in living arrangements. A decrease in average household size is taking place in both countries, consisting of a decrease in the share of two- and three-generational households but an increase in the share of one-generation household and also single households. More individualistic living arrangements may have an effect on intrafamilial support too, which will be analysed at a later stage (see chapter IV).

Judging from this discussion of fundamental institutional, familial, and demographic indicators, it appears that Japan's demographic pressure is even stronger than that of Germany. At the same time, however, it is shown that both countries are in the same boat once they are considered in an international context of OECD countries. Considering the financial flows shown in the NTA database in combination with the trends in population composition by age, it can be said that in both Germany and Japan, there is increased pressure on the working-age generation taking place, calling the (unwritten) generational contract of pay-as-you go pension systems and intergenerational sharing in the

private realm into question: the increased burden on the most economically productive age group is at least a challenge in financial terms. To what extent the above-discussed developments also provide fertile ground for – or are already constituting – intergenerational conflict and solidarity remains to be scrutinised in later sections. In the remainder, it shall be analysed how political (welfare state), economic (labour market) and societal (family) factors in either country contribute to an easing or intensifying of demographic pressure.

II.7 Scenarios of intergenerational relations

Against the above-discussed background of demographic ageing amid its various institutional influences, several scenarios of intergenerational relations are possible. The definitions of intergenerational societal solidarity and intergenerational family solidarity made in the beginning (see chapter I) help frame such scenarios in a more nuanced way than various previous works have done. Though this dissertation is not making an attempt to normatively judge intergenerational justice or the moral and/or social desirability of specific public policies, it is trying to deliver a framework by which one can understand the social environment for what shall be called intergenerational policies, which ensure intergenerational solidarity on a societal level. In other words, this framework shall serve to understand the conditions under which the aforementioned “welfare-state based generational contract” can be sustained or strengthened. By intergenerational policies, I simply understand those public policies that are predominantly favouring one generation while most of its burden is borne by one or more other generations. Examples are wholly or partly public-sector financed pensions plans, health plans, long-term care insurance schemes, or education programmes. For the purpose of this study, intergenerational policies do not include mere regulations, such as laws requiring family members to care for each other. The reasoning behind this is that although regulations that require family members or the alike to support each other across generations is a crucial instrument of the state to insure solidarity, such a tool is essentially reducing solidarity to the intrafamilial level. Hence, no societal solidarity is enhanced, which is why such regulations are not considered an intergenerational policy here.

Bearing this in mind, figure 16 shows the matrix based on the two dimensions of intergenerational relations. If there is found to be strong “intergenerational family solidarity” in a country, a willingness among generations to render intergenerational support can be assumed to be present in principle. However, solidarity in this case takes place inside the family and not on a societal level. Therefore, to understand how the concept of intergenerational support may translate from the private and intrafamilial into the societal and social policy sphere, the notion of “intergenerational societal solidarity” is important: for example, if there is less public support for intergenerational policies,

there is less political potential to translate possible intergenerational support into the public welfare state level. Figure 16 displays the basic matrix and the interpretation of its outcomes.

Figure 16: Matrix of intergenerational solidarity, potential for solidary policies.

		Family level	
		Strong	Weak
Societal level	Strong	Strong basis for intergenerational policies (1)	Welfare state can compensate for lack of family support (3)
	Weak	Little potential for intergenerational policies (2)	Open intergenerational conflict, collapse of solidarity (4)

One basic assumption here is that public and private transfers are at least partial substitutes for each other, which is supported by other studies (Albertini 2016; Ogawa, Matsukara, and Chawla 2011; Albertini, Kohli, and Vogel 2007). Another crucial assumption is that with rising dependency ratios, intergenerational support is needed. And from a policy planner’s perspective, intergenerational policies through the welfare state are generally preferable to intrafamilial transfers because the former eases socioeconomic inequalities more effectively. In this light, the matrix in figure 16 denotes four societal situations under which the conditions for the enactment or protection of intergenerational policies can be expected to differ.

Concisely, in scenario 1, family solidarity is strong, and societal solidarity is also strong, so that there is private intergenerational support happening, and also potential support for public policies that integrate generations. In scenario 2, the weak state of societal solidarity indicates that there is likely little support for intergenerational policies, while the presence of strong family solidarity shows that the family as an institution is playing an important role. Hence, there is a familialisation of intergenerational solidarity. In scenario 3, there is strong solidarity on the societal level, but only weak intra-family solidarity, which means that though no strong intergenerational familial support is happening, there appears to be potential support for an engaging welfare state. Scenario 4, in turn, is the case of open intergenerational conflict where there is only little support taking place on the private level and there is no apparent support for intergenerational policies either.⁷ Hence, following this logic, intergenerational conflict would be a result of a combination of two states of societal and family solidarity, so that the picture of the presence or absence of generational conflict or solidarity becomes more nuanced.

This approach to intergenerational relations and intergenerational policies in the light of demographic ageing has several advantages. One is that while it gives a hint at the combinations of inter-

⁷ While it may appear at first sight that scenario 1 is to be considered superior to 2, 2 to be superior to 3 and so on, this is not necessarily the case. For instance, a country may show little support for intergenerational policies because there is just no need for such policies as everybody is taken sufficient care of. Hence, this matrix cannot in principle make statements over the desirability of each scenario without further information.

generational societal solidarity and family solidarity under which a current “welfare-state based generational contract” might or might not be politically sustainable, questions as to how such a situation came about are outside this framework in a narrow sense, and can possibly be answered with a range of approaches that are theoretically independent of this matrix. Another advantage is that this approach is in principle suitable to everything from a single-case study to a comparison of a larger set of countries, depending on the theory, case-specific contextualisation and data one uses.

However, this framework’s scope of research has limits. Through empirical analysis using definition 1 (see chapter I), it can be shown whether societal solidarity between generations is strong or weak. Through empirical analysis based on definition 2, the same can be shown regarding actual solidarity on the family level. What cannot be tested is which of the two tendencies – societal or family solidarity – is stronger. Hence, it will not be shown in this work whether in any given situation, intergenerational societal solidarity is stronger or weaker than intergenerational family solidarity. The total extent of either is also hard to be measured. Regardless of these limitations, however, critical appraisal of intergenerational relations and conclusions can be drawn. For example, if in one country (or both) empirical analysis shows the existence of a generational conflict, or strong solidarity on both dimensions, such results allow for cautious policy recommendations. For instance, where societal solidarity is strong, a welfare state expansion in terms of intergenerational policies appears feasible. This may be especially advisable where either family solidarity is weak or familial solidarity is strong but poverty among certain age groups is relatively common so that they could benefit from the support of a strong welfare state. Where societal solidarity is weak, in turn, there appears little room for expansion of intergenerational policies, indeed the opposite may be advisable. In any case, it would require further scrutiny in a next step as to what kind of policy expansion or adjustment would be advisable, for example regarding pensions, healthcare, old-age care, or family policies. Such analysis, however, would go beyond the scope of this work. Rather, this work with its contextual analysis and its more general analytical framework can be understood as a point of departure from which more detailed policy measures could be designed.

In the remainder of this work, the concept of “intergenerational societal solidarity” shall form the analytical basis for chapter III, in which solidarity between generations on the societal level shall be tested. The concept of “intergenerational family solidarity” will be the foundation for chapter IV, where forces driving support between generations inside the family will be investigated.

III Analysis 1: intergenerational societal solidarity

III.1 Theory

III.1.1 Theory of political preferences

III.1.1.1 Why care about preferences?

The endeavour to analyse how intergenerational relations evolve on the societal level in the light of demographic ageing has been approached from various perspectives. While some researchers (Kotlikoff 1988; Haveman 1994) have focused on the fiscal burden of today's individuals and future generations, other studies have explored age-relevant differences in government spending (Lynch 2006; Myles 2002; Preston 1984; Streeck 2007; Thomson 1989) or differences according to age or cohort with regard to projected lifetime income, voting behaviour or poverty risk (Esping-Andersen and Sarasa 2002; Esping-Andersen et al. 2002; Holtz-Eakin, Lovely, and Tosun 2004; Sinn and Uebelmesser 2002; Sobotka 2010; Tremmel 2006b, 2006a; Tepe and Vanhuysse 2010). Another branch has been researching how stated preferences on government spending, reported in social science surveys, differ with regard to certain individual characteristics, one of which is age (for example: Busemeyer, Goerres, and Weschle 2009; Sørensen 2013; Wilkoszewski 2011).

While this work falls into the latter category, it also seeks to incorporate some of the focuses of the former such as age-based spending biases of the government. In addition, this work seeks to introduce dualisation, a field of study that has so far mostly been applied on the intragenerational level only, to the intergenerational level (as will be explained further below). In essence, it is the attempt here to understand how an individual's socioeconomic position, notably but not exclusively his or her employment status, as well as the welfare state's treatment of the group he or she forms a part of, is associated with certain attitudes⁸ towards the welfare state's role in intergenerational policies.

The main reason for the focus on preferences is that they constitute a crucial expression of inter-human relations. Ignoring preferences and only concentrating on government spending and/or socio-economic determinants of government (pension) policies would allow singling out patterns of advantage and disadvantage. But whether patterns of disadvantage and vulnerability are recognised as problematic requires knowing about the attitudes or preferences of the people. Hence, social solidarity, or conflict, is closely linked to attitudes or preferences between those groups who are directly or indirectly in a solidary or conflictive relation with each other.

⁸ The terms attitudes and preferences are used interchangeably in this work.

In addition to this theoretical argument, studies have shown that political attitudes that voice support for certain policies tend to have a positive impact on actual government spending on such policies (Burstein 2003; Brooks and Manza 2007). Systematically coding academic publications with regard to their findings in this respect, Burstein (2003) finds that the impact of public opinion on policy outcomes is substantial and increases with the salience level of a certain policy case. Another finding is that the impact of public opinion remains strong once the influence of political organisations and economic elites are accounted for. Brooks and Manza (2007) compare attitudes towards the role of the welfare state in 16 OECD countries and find that internationally, government spending levels in a given policy field correlate positively with according public opinion levels towards that policy field. Using the International Social Survey Programme's cross-sectional data (though enriched with national-level survey data), the authors establish causality, but nevertheless show a striking association between public support for policies and the actual existence of these.

III.1.1.2 Rational-choice framework

In the realm of the study of (policy) preferences, it has been found that although the concept of the rational actor is often a suitable framework to explain preferences; its applicability is limited once a rather narrow concept of rationality is used (Kitschelt and Rehm 2006; Druckman 2004; Ringe 2005; Wildavsky 1987; Wilkoszewski 2011).⁹ For instance, individuals may have altruistic preferences (Wilkoszewski 2011) or simply lack information or other capacities and therefore not know their real preferences (Kitschelt and Rehm 2006). In addition, based on experiments, Druckmann (2004) shows how contextual factors such as deliberation and competition between social groups as well as individual attributes such as expertise affect the extent to which individuals are prone to manipulation. He concludes that the better informed actors are about a certain topic, the more robust will their opinion be against changes in the framing of a question about that topic. Ringe (2005) shows similar results. Alesina and Giuliano (2011), comparing preferences for redistributive policies across the US, European and Asian countries, find that not only gender, age and employment status are important determinants but also personal experiences, cultural factors, and ideology, not all of which could easily be explained by rational self-interest.¹⁰

⁹ A methodological problem regarding the analysis of preferences extracted from surveys, as will be done in the analytical section of this chapter, is that of actors adhering to social desirability in their response behaviour (Krumpal 2013). While this problem will not be solved here, it shall nevertheless be borne in mind as a possible response bias and limitation of the findings.

¹⁰ Other explanatory variables are institutions, which also do not appear to follow notions of rationality. Alesina and Giuliano show this in terms of regional differences, for example that respondents in Asian countries on average show a lower preference for redistribution compared to those from Europe. One explanation, borrowed from Esping-Andersen (1999), is that family ties are stronger: "Thus in societies where the family performs these functions the preferences for government intervention are different (i.e. there is less demand for it) than in countries where the family does not perform such functions" (Alesina and Giuliano 2011, 20).

Nevertheless, various studies of policy preferences at least implicitly operate on the assumption of a narrow rational choice model where actors want to maximise their personal economic wellbeing (Busemeyer, Goerres, and Weschle 2009; Marx 2014; Wilkoszewski 2011; Sørensen 2013; de Mello et al. 2016). Studying the association of new social risks (see below in this chapter) and policy preferences, Kitschelt and Rehm (2006) emphasise the following when studying policy preferences of larger groups:

“As long as critical minorities in each risk class have a keen understanding of their risk conditions and of the policies that improve their risk exposure, we should find systematic statistical relations between aggregate group characteristics and policy preferences, even if the vast majority of citizens has a poor understanding of their interests that makes them voice policy preferences in a randomized fashion. A minority of “rational information misers” is all that’s needed in order to produce what looks like rational relations at the level of population aggregates” (2006, 54)

Against the background of such conceptions (though formulated earlier than the specific work of Kitschelt and Rehm mentioned above), Esser, leaning on Lindenberg (1985), has proposed the so-called RREEMM concept, which stands for the “Resourceful, Restricted, Expecting, Evaluating, Maximizing Man” (Esser 1993, 238). This approach to understanding human behaviour constitutes a third way qualifying the often too strict assumptions of the (narrowly rational) homo economicus (especially regarding cognitive capacities and the availability of information) and the homo sociologicus (which according to Esser tends to lack a selection mechanism to explain behaviour). According to RREEMM, a typical person makes (the arguably best forward-looking and expecting) selection according to the information available, though various factors are restricting the actor’s capacity to do so.

This work shall consider rationality in the same light as Esser: while (a narrow sense of) rationality is understood as economic rationality where people maximize their economic self-interest, it is not considered to be the only and perhaps not even the most important determinant of human behavior. In turn, those characteristics that manifest economic rationality, again in accordance with Kitschelt and Rehm, are expected to be socioeconomic traits such as employment status or income, and other characteristics that position an individual into society in terms of their financial or social class. Other characteristics, such as political interest or ideology, may or may not work against this narrow self-interested rational drive of preferences.

In the remainder of this section, the theoretical discussion shall therefore focus on those traits that in the process of demographic ageing, under given institutional arrangements and developments, make certain groups (more) vulnerable. In addition, the institutions allowing or impeding such vulnerability will be discussed, all with regard to what preferences individuals are expected to have against this background.

III.1.2 Political generations

III.1.2.1 Mannheim's concept and related works

In the study of intergenerational relations and policy preferences, Karl Mannheim's (1964) concept of political generations is a natural point of departure. Though it was not explicitly designed for demographic ageing, it was meant to generally explain under what circumstances a generation may form a common conscience and interest and as a result become a political actor in order to influence political decision-making. Mannheim theorised that amid constantly and inevitably happening societal change, three major conditions must be met for the emergence of such a "political generation." Firstly, there must be common challenges during their formative (younger) years, secondly, there must be a common source of discontent, and thirdly, there needs to be a certain degree of organisation within the generation so to form a group.

Originally written in 1923, the concept has been subject to criticism on various grounds. May (2010) argues that generations often do not self-identify as such but are labelled by outsiders such as scientists, which appears at odds with the condition of political organisation. Another point she raises is that social or societal influences are mostly diverse and the lifecycle of major events driving these typically consist of short time periods so that it is hard to form a collective conscience on such a basis. Taking the example of Germany, May finds no indication of there being any politicised generation in a twist with another generation but that instead, intergenerational relations were intact. In opposition to those observing generational conflict on the societal level, May hypothesises that in principle, intergenerational relations do not evolve around the welfare state but the family. In addition, Zinnecker (2003) has considered the concept too broad for empirical analysis.

Nevertheless, Mannheim's work has become a cornerstone of generational research (Pilcher 1994) and over decades been used for analyses differentiating groups by either age, generation or point in time of the analysis over decades (Johnson and Falkingham 1988; Thompson 1991; Wilkoszewski 2006, 2011; Higgs and Gilleard 2010; Sackmann 2004; Ryder 1965). Ryder (1965) crucially expanded the concept by considering generations as cohorts, hence such groups that share a similar point of entry such as birth, marriage or similar life-changing events, and illustrated how cohort replacement is a driver of societal change. Building on Mannheim and Ryder, Sackmann (2004), who provides an overview of various conceptualisations of generations and cohorts, argues that one crucial factor for a generation to form a common conscience are, next to demographic trends, the characteristics of the welfare states and possible competition over resources resulting from it. The findings of Wilkoszewski (2011), differentiating policy preferences in Germany by age and other characteristics based on the Population Policy Acceptance Survey and the Generations and Gender Survey, appear

to support this argument. He draws on Mannheim's theory of political generations and shows that younger people are more in favour of transfers to the younger generation than older people are, though his study cannot separate age effects from cohort effects (see below for a discussion of the importance of this separation). The concept of political generations, in turn, will be one at the heart of the analysis in this chapter.

III.1.2.2 What makes a political generation today?

In order to generate hypotheses over where a political generation may be emerging, one needs to single out influences that may trigger such an upcoming. An obvious and often-mentioned possible influence is demographic ageing and the effects this is having on public finances. The argument is that especially pension systems running on a pay-as-you-go logic will place a heavy burden on smaller cohorts once larger older cohorts reach retirement age (Thompson 1991; Wilkoszewski 2011; Higgs and Gilleard 2010; Johnson and Falkingham 1988; Falkingham and Hills 1995). This topic is discussed below in the contexts of Germany and Japan respectively. A second possible influence, which is already widely discussed regarding intragenerational relations but much less so in the realm of intergenerational equity, is dualisation and the emergence of new social risks. "New social risks" are commonly understood as characteristics that raise the financial and/or socioeconomic vulnerability other than "old risks" such as unemployment or illness and disability. Such new forms of risks have become relatively common over the last decades in the face of structural changes of the economy as de-industrialisation, an increasing female labour participation, and an inflation of education (Bonoli 2007; Tepe and Vanhuyse 2010; Thelen 2014). Consequentially, new social risks most typically refer to not being financially able to combine work and family, not getting sufficient returns on investments into education, one's labour skills becoming obsolete by structural change, and being in non-regular employment (Kitschelt and Rehm 2006). Depending on the welfare regime, those affected by new social risks are to varying degrees disadvantaged in the pension system compared to those not affected. Therefore, in addition to intragenerational inequity, new social risks also constitute an intergenerational challenge. This argument will be presented in more detail below.

III.1.2.3 Effects of period, age or cohort

All influences that may provoke the formation of political preferences need to be considered in the context of demographic ageing being a dynamic process with effects of age, cohort and period, though these are often difficult to separate from each other. Many investigations into intergenerational relations so far have lacked a distinction of these three concepts (e.g. Busemeyer, Goerres, and Weschle 2009; Wilkoszewski 2011), though they are fundamental to demographic research. When intergenerational relations have in the past been analysed in terms of the distribution of resources, as this work also does, the reason for this neglect was mostly a lack of suitable data consist-

ing of either sufficiently long longitudinal or a sufficient sequence of repeated cross-sections. However, the distinction between age, period and cohort is crucial since in its absence, one cannot determine whether a certain “political generation” has formed its idiosyncratic preferences because of their commonalities based on their birth cohort or because of their age at a certain point in time. In the case of the former, the specific preferences of that generation would remain distinct at a later or earlier point in time, while in the case of the latter these preferences would tend to fade amid transitioning into a new (age-based) phase of the life course. A period effect, in turn, would tend to affect all age groups or cohort in a similar way at one certain point in time.

Of the few works that have distinguished age and cohort effects, Sørensen (2013) has studied preferences regarding social expenditure in 22 countries between 1985 and 2006 based on International Social Survey Programme (ISSP) data. It is found there that even once birth cohort is accounted for older people prefer more government spending on pensions and health more often than younger respondents. The effects, though, are relatively weak. A shortcoming of Sørensen’s work is that he does not discuss the specifics of country cases so that conclusions about the relationship between political and policy institutions and different age groups’ or birth cohorts’ preferences have to remain rather broad.

Based on the OECD social expenditure database spanning from 1980 to 2010, Plante and Jensen (2017) find that while in terms of public expenditure there are more resources allocated to larger cohorts this happens with a time lag so that in many cases there are shortages and windfalls for larger and smaller birth cohorts respectively. In this case, however, though rational choice is implicit to their assumptions regarding policy expansion, the authors do not estimate the actual association of individual preferences and policy spending levels.

In turn, single case studies on preferences have been carried out on the US based General Social Survey (Fullerton and Dixon 2010; Plutzer and Berkman 2005; Street and Cossman 2006) and based on the Swedish Welfare State Survey (Svallfors 2008). It is found for the US, for instance, that later birth cohorts tend to support public health expenditure more often than earlier birth cohorts (Street and Cossman 2006), and that later cohorts have become more supportive of public education spending compared to earlier ones (Plutzer and Berkman 2005; Fullerton and Dixon 2010). For Sweden, it is found that public support for older people has become more popular over time and that this is not solely explained by an age effect but also by later cohorts that have been supporting generous old-age schemes increasingly more often (Svallfors 2008). Though not generalisable to other country contexts, these results suggest that the often-observed increasing preference for old-age support policies in ageing societies is at least not solely based on lifecycle effects but may also be explained by cohort effects.

In this fashion, this work shall investigate, to the extent that this is possible given the available data, if and how political generations have been occurring in Germany and Japan – and if this is based on age and/or cohort.

III.1.3 Dualisation and insider-outsider theory

III.1.3.1 Types of dualisation as a challenge to solidarity

As alluded to above, demographic ageing comes with at least two challenges to intergenerational solidarity on the societal level, both of which are directly or indirectly linked to the role of the welfare state and a possible conflict over resources. The first one is the distribution resulting from the pension system, consisting of possibly unequal contributions and benefits across cohorts. In this case, the intergenerational link between population ageing and the welfare state is direct. The other challenge regards the intergenerational effects of the emergence of new social risks, and also refers to unequal distribution of contributions and benefits from the pension system. Here, the intergenerational link is indirect because intergenerational inequality results from inequality on the intragenerational level between those affected by new social risks and those who are not.

III.1.3.2 Rueda's insider-outsider model

In the case of either direct or indirect challenges to intergenerational societal solidarity, the logic of insiders and outsiders is applicable, which is explained in this section. The insider-outsider model, inspired by works on dual labour markets and competition between the employed and the unemployed (Blanchard and Summers 1986; Lindbeck and Snower 1986; Rueda 2005; Saint-Paul 1996), was originally developed by Rueda (2005). His basic distinction is the following:

"I define insiders as those workers with highly protected jobs. They are sufficiently protected not to feel greatly threatened by high levels of unemployment. Outsiders, on the other hand, are either unemployed or hold jobs characterised by low salaries and low levels of protection, employment rights, benefits, and social security privileges. [...] [T]he precariously employed and the unemployed are the main group to suffer the consequences of economic fluctuations (being hired in good times and laid off in downturns)" (Rueda 2005, 62–63).

Given their distinct positions in the labour market, Rueda (2005) points out, insiders and outsiders have different interests. Insiders care about the protection of their own jobs, while spending on unemployment benefits and training mainly burdens them with higher taxes and increases low-wage competition. Outsiders, in turn, worry about employment and poverty and can therefore be expected to have a preference for employment creating government expenditure. However, they oppose higher protection of insider jobs, as this means an entry barrier to the full-time jobs they would like to have.

This distinction is relevant here for two reasons. Firstly, since the 1970s and synchronously with population ageing, all OECD countries have been witnessing such tendencies of dualisation, leading

to or amplifying a divide between insiders and outsiders (Emmenegger et al. 2012b; Rueda 2014; Thelen 2014; Marques and Salavisa 2017). This trend is especially tangible in Germany and Japan, in fact, these two countries stand out in international comparison (Emmenegger et al. 2012b; Thelen 2014; Heinrich 2013; Nishiyama 2017). The increasing number of outsiders in these countries is not only disadvantaged in both the welfare state and the labour market in terms of benefit entitlements and income (see discussion below) but also faces a higher poverty risk at old age (Emmenegger et al. 2012b). Secondly, dualisation on income, old-age policies and pensions is giving rise to an intergenerational divide. Just by population ageing and thereby rising dependency ratios alone, makes a distinction of “lucky and less lucky generations” (Myles 2002, 138), where the latter are those cohorts smaller in size and carrying the burden of supporting larger cohorts of the elderly.

In a similar fashion, though looking at income by cohorts, Chauvel and Schröder (2014) find that cohorts entering the labour market in times of economic booms have higher lifetime incomes than those entering in recession or stagnation. Furthermore, they show that dualisation within a generation, as witnessed since the 1970s, also brings about inequalities between generations. In other words, where there are outsiders within a generation, an insider-outsider dynamic is likely to be present also between younger and older persons. One reason is that, depending on a given welfare regime (see below for a discussion), labour market outsiders also have lower pension entitlements. Another reason is path dependency between low income at younger age and low income at older age. Borrowing the terminology of Rueda’s insider-outsider model, today’s pensioners can for this matter be considered as (pension) insiders, while future pensioners (or today’s non-elderly) can be considered (pension) outsiders. This interpretation makes the insider-outsider model not only applicable to intra- but also to intergenerational inequalities.

III.1.3.3 Types of disadvantage

The driving force of the insider-outsider model is the distribution of a possibly scarce resource between societal groups. Translating competition over intragenerational welfare state spending, as focused on by Rueda, to the intergenerational level, competition most strikingly posits an antagonism between the elderly and the non-elderly regarding public expenditure on old-age. Today’s elderly can be called pension insiders as they currently benefit from a certain pension policy initiated in the past, while today’s workforce (pension outsiders) may be put at a disadvantage by the time of their retirement if today’s elderly (pension insiders) are treated too generously. The case that there is competition over a scarce resource regarding old-age spending can be easily made. Following the current (pay-as-you-go) pension logic (see discussion below), in absence of comprehensive reforms, pensions generally become less (or more) generous as the old-age dependency ratio rises (or falls). In this way, other things being equal, just as labour market insiders and outsiders are expected to

have different interests regarding labour and welfare policies, pension outsiders and pension insiders are expected to have different interests regarding expenditure on old-age such as pensions.

In fact, adding the intergenerational dimension to the intragenerational one focused upon by Rueda, a third dimension of conflict may emerge. Because labour market outsiders, compared to labour market insiders, also tend to have lower pension entitlements, this group stands at a double disadvantage (both intragenerationally and intergenerationally). As Chauvel and Schröder (2014) show, this tendency holds across welfare regimes but is especially strong in continental and familialistic regimes (see below for a discussion of welfare regimes). Fervers and Schwander (2015) find similar results. Thus, even without being part of a “less lucky generation”, in Myles’ (2002) words, there is a path dependency from being a labour market outsider to becoming disadvantaged or poor at old age. Being part of a “less lucky generation”, *ceteris paribus*, should intensify the degree of disadvantage. Hence, in addition to testing whether there is indeed a intergenerational conflict of interests between elderly and non-elderly (or pension system insiders and pension system outsiders), it will also be tested in this work whether this double disadvantage is associated with a systematic difference of interests between labour market insiders and outsiders regarding pension spending. In other words, it will be scrutinised whether labour market outsiders reject rich spending on pensions more strongly than labour market insiders, because the outsiders would enjoy even less of those perks. Against the background of these fundamental dynamics, the distinct shape of a given pension system may strengthen or weaken insider-outsider divides and thus influence the likelihood of differences in attitudes towards government spending.

III.1.3.4 Challenges with analysing preferences

The attempt to understand individuals’ preferences over the role of the welfare state comes with a challenge here, which lies in the nature of intergenerational relations. When individuals are asked about their preferences on intergenerational policies, they are implicitly also being asked a question with a strong inter-temporal dimension. For instance, a pension outsider may prefer lower pension expenditure so that his/her current burden is reduced, but he/she may as well prefer higher expenditure so to one day receive a higher pension him/herself. One part of this problem is survey questions not being unequivocal; another is the possible diversity of inter-temporal preferences among respondents of surveys.

As argued above, it is assumed for the purpose of this work that while individuals follow their narrow self-interest at a basic level, this tendency can be dampened or overturned by other factors. The use of a diverse body of covariates in the analytical section (including, among others, variables on political persuasion, education) will accommodate for these factors. For instance, individual political

persuasion may influence a person's preferences in a way contrary to what his or her income or employment status alone would lead him or her to prefer. In addition, high educational attainment may lead to a more informed opinion and thus more differentiated (perhaps more long-term oriented) policy preferences. In this light, including relevant covariates into the analysis will allow for richer interpretations of results. While this will not solve the fundamental challenges of ambivalent survey questions and the inter-temporal dimension of preferences, results will nevertheless become more nuanced and in this sense their limitations more contextual.

III.2 Institutions, welfare state and labour market

III.2.1 Welfare state composition

III.2.1.1 Spending conditions of the welfare state

In order to understand why expenditure on old-age is a salient policy issue that may put a strain on intergenerational solidarity, it is worthwhile to understand the developments of welfare states' spending patterns as well as their budget constraints over time. Table 8 highlights two important measures in this regard, welfare state size and government debt both as a share of GDP.

The upper rows of table 8 show the development of the size of the welfare state since the early 1980s. It can be seen that in Germany, the share constantly increased albeit only slightly, from 22 to 26 percent of GDP. Meanwhile, Japan's welfare state size grew vastly from 11 percent of GDP in the early 1980s to 23 percent in the early 2010s. While Germany's lower expansion rate over the last three and a half decades lies below the OECD average, Japan having more than doubled its welfare state clearly lies above it. Overall, however, Germany's welfare state is still higher than both Japan's and the average value in the OECD, which showed an increase from 16 percent in the early 1980s to 22 percent in the early 2010s.

A major difference between Germany and Japan, seen in the lower rows, is the situation of government debt as a share of GDP. Similar to Japan, Germany's debt share increased over the decades, though in the last years it has been reduced again (albeit not seen in the five-year average data, the latest years do indicate slightly reduced debt ratios). The extent of the debt share increase in Japan, however, is much higher. In fact, it has almost doubled in 20 years, and is higher than that of any other OECD country and tends to increase steadily. The most important reasons behind this are various economic stimulus packages amid years of continuously low economic growth and reconstruction efforts after the Great Tohoku Earthquake in 2011. The government debt burden appears especially important from an intergenerational perspective. At a high level of government debt, austerity

measures appear more likely, which would probably place a relatively stronger burden on the working-age population at the time of initiating such policies.

Table 8: Welfare state size and government debt, five-year averages until 2010, average of available years onwards where data are lacking.

	1980-84 avg	1985-89 avg	1990-94 avg	1995-99 avg	2000-04 avg	2005-09 avg	2010-14 avg*
<u>Social expenditure (as a share of GDP) *data only cover 2010-'11</u>							
Germany	22.12	22.28	24.08	26.18	26.72	26.04	26.15
Japan	10.92	11.26	12.02	14.82	17.30	19.40	22.60
OECD Total	16.18	17.06	18.88	19.12	19.22	19.82	21.55
<u>Government debt (% of GDP) *data cover 2010-'14</u>							
Germany	n.a.	n.a.	n.a.	60.44	62.18	69.06	83.72
Japan	n.a.	n.a.	n.a.	133.41	161.73	186.35	231.70
OECD Total	n.a.						

Source: OECD 2017, own calculations.

III.2.1.2 Spending on old-age

In order to see how the age focus of government spending has evolved over the years alongside population ageing, Lynch's (Lynch 2006, 2001) elderly/non-elderly spending ratio (ENSR) serves as a suitable basis for analysis. The ENSR relates the share of social expenditure directed towards elderly persons to the share directed towards non-elderly persons and is shown in table 9 (OECD 2015d).¹¹ The upper rows show the ENSR in a non-adjusted way, the lower rows show both parts divided by the respective population shares.¹²

For Germany, the non-adjusted ENSR indicated that in 1980, almost twice as much was spent on old-age as for persons at working-age. By 2011, the ratio had decreased to 1.49. Therefore, amid population ageing, Germany's welfare state adjusted its spending priorities in favour of young and working-age recipients. As a proportion of GDP, expenditure directed towards elderly recipients has almost remained constant over three and a half decades at about 10 percent, which considering population ageing implies a lowering per capita expenditure on old-age. Non-elderly spending, in turn, increased in the same period. This change in focus of Germany's welfare state is also represented in

¹¹ Healthcare and education spending are taken out of the equation since their inherent age bias is either less clear than other spending categories or the numbers stem from different OECD datasets. In turn, most of healthcare spending is directed towards the elderly while most of education spending goes towards non-elderly groups, with healthcare being more costly than education in both countries (OECD 2015d), which is also consistent with NTA data (see chapter II). In this sense, the procedure follows Tepe and Vanhuyse (2010).

¹² The formulas, for country i in year t , are as follows:

$$ENSR_{i,t} = \frac{(old-age_{i,t} + survivors_{i,t})}{(ALMP_{i,t} + unemployment_{i,t} + family_{i,t} + housing + incapacity_{i,t} + other_{i,t})}$$

$$Adj. ENSR_{i,t} = \frac{(old-age_{i,t} + survivors_{i,t}) / ((65+)pop.share_{i,t})}{(ALMP_{i,t} + unemployment_{i,t} + family_{i,t} + housing + incapacity_{i,t} + other_{i,t}) / ((0-64)pop.share_{i,t})}$$

the age-adjusted ENSR shown in the lower rows of table 9, indicating that the elderly bias halved between the early 1980s and the early 2010s.

Japan's development has been different from Germany's. The non-adjusted ENSR was at 2.43 in the early 1980s but increased to 3.44 in the early 2010s (after a peak at even 4.05 over the previous five years). The above-shown expansion of Japan's welfare state as a share of GDP is mostly explained by an expansion of old-age spending. Elderly expenditure as a share of GDP, comparatively low at 4.5 percent of GDP in the early 1980s, almost tripled over three and a half decades. However, accounting for the age composition, Japan's adjusted ENSR also halved just as Germany's. Different from Germany, this significant fall in the adjusted ENSR is not due to a reversal of age-wise spending focuses but rather the even more rapid population ageing in Japan (see chapter II).

Considering the OECD context, Japan stands out with its increase in the non-adjusted ENSR but is in line with the decrease in the adjusted ENSR. Indeed, once population compositions are accounted for, the directions of developments of age-wise spending focuses of industrialised economies have been very similar. However, Japan's adjusted ENSR continues to be considerably higher than the OECD average while Germany's is slightly below it.

Table 9: Elderly/non-elderly spending ratio, five-year averages until 2010, average of available years onwards where data is lacking.

	1980-84 avg	1985-89 avg	1990-94 avg	1995-99 avg	2000-04 avg	2005-09 avg	2010-14 avg*
<u>Elderly/non-elderly spending ratio (not adjusted by population shares) *data only cover 2010-'11</u>							
Germany	2.06	1.87	1.38	1.43	1.51	1.52	1.49
Japan	2.43	3.22	2.87	3.07	3.44	4.05	3.44
OECD Total	1.66	1.32	1.09	1.15	1.13	1.18	1.20
<u>Elderly expenditure (as share of GDP) *data only cover 2010-'11</u>							
Germany	10.64	10.38	9.86	10.90	11.44	11.04	10.80
Japan	4.46	5.02	5.34	6.82	8.82	10.38	11.70
OECD Total	6.42	6.64	7.14	7.40	7.42	7.62	8.40
<u>Elderly/non-elderly spending ratio (divided by elderly and non-elderly pop. shares) *data only cover 2010-'11</u>							
Germany	11.66	10.76	7.78	7.67	7.24	6.15	5.74
Japan	22.99	26.28	19.20	16.61	15.20	14.86	11.43
OECD Total	13.80	10.58	8.07	7.92	7.34	7.17	6.92

Source: OECD 2017, own calculations.

III.2.1.3 Spending on new social risks

Following Lynch's (2006) work on age-wise spending biases of welfare states, later works adopted the concept for other spending areas (e.g. Tepe and Vanhuysse 2010). For the purpose of this work,

the respective indicator of a spending bias for new social risks is of particular interest.¹³ One reason is that under the assumption of resource scarcity, spending on old-age may be considered by the public to stand in competition with other spending areas with increasing needs. As discussed above, one of those areas with increasing need are new social risks. Another reason is that those affected by new social risks tend to be more prone to old-age poverty too.

Table 10 shows the developments of new social risk spending patterns. In general, it can be seen that across years and countries, spending for new social risks is very low compared to spending on

Table 10: New social risk spending ratio, five-year averages until 2010, average of available years onwards where data is lacking.

	1980-84 avg	1985-89 avg	1990-94 avg	1995-99 avg	2000-04 avg	2005-09 avg	2010-14 avg*
<u>New social risk spending ratio (adjusted by non-elderly population share) *data only cover 2010-'11</u>							
Germany	0.13	0.17	0.24	0.22	0.21	0.19	0.20
Japan	0.08	0.06	0.12	0.10	0.10	0.09	0.12
OECD Total	0.18	0.15	0.20	0.21	0.22	0.22	0.22
<u>New social risk expenditure (as share of GDP) *data only cover 2010-'11</u>							
Germany	1.52	2.26	3.36	3.30	3.34	2.90	3.05
Japan	0.48	0.40	0.82	0.84	1.00	1.12	1.60
OECD Total	1.58	1.50	2.32	2.44	2.52	2.56	2.80
<u>New social risk spending ratio (NSR spending divided by non-elderly population share) *data only cover 2010-'11</u>							
Germany	0.16	0.19	0.29	0.26	0.26	0.23	0.26
Japan	0.09	0.07	0.14	0.12	0.12	0.12	0.15
OECD Total	0.20	0.17	0.23	0.24	0.25	0.26	0.26

Source: OECD 2017, own calculations.

old-age. Turning to Germany first, the new social risk spending ratio (NSRSR) has increased significantly over time from 0.13 to 0.20. Hence, over time, the share of the welfare state spent for new social risks compared to other spending areas has risen by half between the early 1980s and the early 2010s. Also as a share of GDP, new social risk expenditure increased in Germany, standing at 1.52 percent in the early 1980s and at 3.05 percent in the early 2010s. The age-adjusted NSRSR also increased considerably from 0.16 to 0.26. An important explanation is the shrinking population share of the working-age population, which, other things being equal, leads to an increase in the adjusted ratio.

¹³ The basic way of calculating the NSRSR follows Tepe and Vanhuyse (2010) though they do not adjust for the size of population groups according to age. Consequentially, the formulas used here, for country i in year t , are as follows

$$NSRSR_{i,t} = \frac{(ALMP_{i,t} + family_{i,t})}{(old-age_{i,t} + survivors_{i,t} + unemployment_{i,t} + housing + incapacity_{i,t} + other_{i,t})}$$

$$Adj. NSRSR_{i,t} = \frac{(ALMP_{i,t} + family_{i,t}) / ((0-64)pop.share_{i,t})}{(old-age_{i,t} + survivors_{i,t} + unemployment_{i,t} + housing + incapacity_{i,t} + other_{i,t}) / (whole pop._{i,t})}$$

Similarly for Japan, the non-adjusted NSRSR increased between the early 1980s and early 2010s, and it lay substantially below that of Germany at any point in time. In an OECD context, however, both countries have fallen below the average of industrialised countries during most years (with the exception of Germany in the 1990s, which were the years after reunification). Japan's low share is therefore considerable. On the other hand, as a share of GDP spending for new social risks increased more than threefold in three and a half decades. This has led Japan's adjusted NSRSR to increase by two thirds between the early 1980s and the early 2010s. In this regard, Japan's expansion is in line with the OECD average as is Germany's. On the other hand, Germany's ratio is at the level of the OECD average while Japan's ranks substantially lower. Hence, while both countries' welfare state spending biases for new social risks increased over time, there is still considerably more expenditure in this field in Germany than in Japan.

III.2.2 Welfare regimes and labour markets

III.2.2.1 Welfare regimes and labour markets

An important reason why governments are experiencing population ageing and dualisation in different ways are different institutional backgrounds and policy reforms undertaken in these contexts. This is not only the case concerning public spending focuses on certain age groups but also regards the division into insiders and outsiders in terms of social and old-age security coverage, the level of benefit entitlements, and job security. In both Germany and Japan, the share of fixed-term and other forms of non-regular employment (labour market outsiders) has increased substantially in recent years: 37.4 percent of the Japanese labour force is now in non-regular employment, and 22 percent in Germany respectively (OECD 2014, 2015a; Statistics Bureau Japan 2014; Statistisches Bundesamt 2014). Despite policy reforms, those without a regular job or with discontinuous work biographies are disadvantaged in both the welfare state and pension systems (Emmenegger et al. 2012b; Hinrichs 2012; Peng and Wong 2010). Dualisation is therefore not only a barrier to new entrants to the labour market (Streeck 2011), but may also pave the way for future old-age poverty (Emmenegger et al. 2012a; Esping-Andersen and Sarasa 2002; Hinrichs 2012; Peng and Wong 2010; Takayama 2014).

Departing from Esping-Andersen's (1990) "Three Worlds of Welfare Capitalism"¹⁴, recent works have examined the effects of dualisation across welfare regimes (Chauvel and Schröder 2014;

¹⁴ Esping-Andersen (1990) identified three types of regimes: firstly, the liberal or Anglo-Saxon type which is characterised by low levels of de-commodification or high reliance on the market for social services and a priority for private welfare spending. Secondly, the social-democratic or Scandinavian type that has a high level of de-commodification and strong solidarity owed to comparatively generous universal benefits to provide for equality. Thirdly, the conservative or Continental type that is banking on the state's role as a subsidiary to the traditional family, while the degree of de-commodification is moderate and the function of social services is to maintain previous living standards.

Häusermann, Silja; Schwander 2012). It is shown that income gaps between insiders and outsiders are highest in continental and liberal regimes, whereas among OECD countries in 2000 they ranged from 25 to 40 percent less pre-tax income for outsiders. In continental states, this gap continues to be relatively large after tax and upon social security provision (Häusermann, Silja; Schwander 2012). Häusermann and Schwander find that: “[I]t is mainly the pension systems that are responsible for the dualising effect of taxes and transfers. People who worked in outsider-jobs during their active life are considerably worse off than people who worked in insider occupations. [...] [I]nstitutional dualisation through the pension regime is and will remain strongest in continental Europe and lowest in the Liberal countries” (2012, 41–42). Chauvel and Schröder (2014) include the familialistic regime type in a similar analysis and find that the path dependency of being disadvantaged at younger age to a similar state at old age is especially strong in continental and familialistic regimes. In this light, the remainder of this subsection will discuss welfare regimes and labour market in the two countries. Accordingly, pension systems will be discussed in the following subsection.

III.2.2.2 Welfare regimes and labour markets in Germany

One of the archetypes of the continental type in Esping-Andersen’s original model has been Germany. With its origin in industrial relations where unions would bargain for the protection of workers, it has traditionally favoured labour market insiders over outsiders, whereas outsiders originally were mostly non-employed persons such as (female) spouses. With the welfare state seeking to maintain social status and living standards in the case of need, however, there has also been an in-built disadvantage for non-regular and low-income workers. Those with lower income would accordingly have lower entitlements and those with a non-regular working contract typically have to bear a higher burden of social security contributions. In response to the oil crisis in the 1970s, (West) Germany’s traditional and mostly male-breadwinner-style dualisation expanded into all spheres of society. A gradual increase in female employment, the expansion of tertiary education, de-industrialisation and the expansion of service jobs, which are typically less unionised, have amplified the trend (Silja Häusermann and Schwander 2012; Thelen 2014; Marques and Salavisa 2017; Heinrich 2013; Palier and Thelen 2010).

In the 1980s and 90s, in order not to fall behind in terms of competitiveness amid globalisation, (West) Germany’s industrial partners in the export-oriented sectors such as manufacturers of cars and machine tools, struck deals to reduce their workforces and increase productivity (or the workload) of those remaining (Palier and Thelen 2010; Rueda 2014). This practise spilled over to other industries and was widely realised by means of early retirement (Palier and Thelen 2010). In the meantime, restrictions on the use of agency workers were relaxed with their maximum working period being raised from three months (since 1972) to twelve in 1997. By means of reforms in 1985

and 1996, fixed-term contracts, for the advertising of which employers had had to provide special justification, were legalised for the duration of up to 24 months also without special circumstances on the employer's side in place (Palier and Thelen 2010; Heinrich 2013).

Around the 2000s, fiscally burdened by reunification of East and West in 1990, Germany's social democratic-green coalition government further liberalised its labour market and increased the share of non-regular jobs (part-time, temporary, freelance), matching with the above definition of outsiders. The restrictions for fixed-term jobs, already relaxed in 1997, was completely abolished in 2003. In the meantime, the provision of unemployment benefits was shortened and for most recipients reduced. From 1999, so-called mini jobs have been actively promoted by the government by exempting them from income tax up to 400 Euro per month as well as imposing on the employer to pay the worker's contribution to the social insurance fund. Previously, such mini jobs, which are usually part-time and low skill activities, had mostly been done by students or spouses who would not rely on these jobs as a primary income source. By 2005, the amount of such mini jobs had increased more than tripled from 2 million in 1999 (Palier and Thelen 2010; Heinrich 2013). The share of involuntary non-regular employment has strongly increased since (Thelen 2014). In the course of the so-called Hartz IV reform, unemployed benefits were for most cases lowered as well as their maximum pay-out periods shortened (Hassel 2011; Hemerijck and Eichhorst 2009).

Overall, the divide between labour market insiders and outsiders was deepened as the degree of protection of the latter was further lowered (Seeleib-Kaiser, Saunders, and Naczyk 2012). On average, labour market outsiders have a 39 percent lower income compared with insiders (full-time employees), a gap which is further increased once pension and social security benefits are included (Silja Häusermann and Schwander 2012). The insider-outsider is also strongly marked by region, with East Germany showing a significantly higher share of persons receiving unemployment benefits (Palier and Thelen 2010). Another fault line of this divide is age, with younger persons more often being outsiders (Hinrichs 2012; Emmenegger et al. 2012b). Recalling the earlier discussion of the insider outsider model, labour market outsiders are – even compared to labour market insiders, which are also pension outsiders – at an additional disadvantage because of their lower entitlements to social benefits and pensions.

III.2.2.3 Welfare regimes and labour markets in Japan

As for Japan's welfare regime, there has been disagreement in terms of classification. While Esping-Andersen (1997) categorised Japan as a hybrid case between more familialistic Southern European regimes and the liberal type, Goodman et.al (1998) took a Confucian interpretation because of its long-time residual government spending and high occurrence of three-generation households, high

household savings and a male-breadwinner family model. Rooted in the crucial role corporate welfare plays in terms of social security provision, there is an in-built discrimination of outsiders as non-regular jobs usually come without social benefits. With predominantly high rates of economic growth over decades until a severe economic crisis starting 1990, the Japanese welfare state expanded, though with a strong focus on pensions, health and care, mostly benefitting old-age recipients.

Following the recession in the early 1990s and the Asian financial crisis in 1997, the welfare state was successively cut back and the labour market liberalised to allow for a large non-regular employment sector. This increased and broadened Japan's traditional labour market dualism (Lechevalier 2014; Peng 2010; Heinrich 2013). Until those reforms, the standard for male workers had been, at least in larger companies, lifelong employment with seniority pay (Ogawa, Matsukara, and Chawla 2011; Statistics Bureau Japan 2014; Lechevalier 2014). Amid continuous economic growth with low income inequality, the disadvantages for the still lower number of outsiders had not emerged as a large-scale social issue (Peng 2012). However, the liberalisation policies responding to the economic crisis from 1990 onwards protected only a core of workers, especially in large export-oriented companies (Lechevalier 2014; Peng 2010; Rueda 2014).

In cooperation with the private sector, layoffs were largely avoided but instead a core of workers protected and new employment regulations introduced. At the end of the 1990s, structural changes were introduced leading to the Labour Standard Law Reform in 1998, which established a discretionary work system and weakened the influence of labour unions. In 1999, the Worker Dispatching Law followed, which eased regulations on dispatch work (and was especially meant to activate a cheap workforce among the young and the old), as well as revisions of the Labour Standard Law, which eased regulations on dismissals. In 2003, the Worker Dispatching Law further eased regulations on dispatch work. In the same wave of reforms, incentives for old persons to stay in employment were introduced, mostly in the form of income allowances. In 2004, short-term employment was allowed for 26 high-skill professions (Peng 2010; Wada 2017; Nishiyama 2017). Many other jobs, which would later especially affect new entrants to the labour market, were turned into outsider jobs (Peng 2012). As part of the 2013 growth strategy of the Abe administration, which had taken office in 2012 and revised this strategy in 2015, the residual labour market shall be successively extended according to the business cycle (Cabinet Office 2013b).

Though the welfare state introduced programs tailored to outsiders, dualism persists: unionisation rates are considerably lower among outsiders and so are rates of social protection in terms of pensions, health insurance and employment insurance (Peng 2012). On average, the income gap between outsiders and insiders is 45 percent for men and 31 percent for women (OECD 2015b). Such

non-regular jobs, in turn, are more prevalent among young persons and less frequent at older ages (S. S. Lee 2011; Peng 2012; Peng and Wong 2010). Since also in Japan, dualisation is strongly marked by age, there are more “doubly disadvantaged” individuals today than there were in the past when earlier cohorts were at working age.

III.2.3 Pension systems

III.2.3.1 Pension systems

Demographic developments may force governments, in the name of system sustainability, to reform and adjust their pension systems. This, in turn, changes the distribution between young and old and often disadvantages certain birth cohorts compared to others. This subsection discusses fundamental characteristics of pension systems in Germany and Japan as well as reforms and adjustments that have been carried out in the light of the above-discussed.

III.2.3.2 Pension system in Germany

Germany’s statutory public pension has a single tier earnings-related pay-as-you-go system. For those not reaching an existential minimum, there is a means-tested social assistance scheme. Since 2002, a private and tax-subsidised system, called “Riester-Rente”, constitutes the second pillar, which is meant to incentivise private saving and unburden the public pension system (OECD 2015c; Hinrichs 2012). For full payment of the earnings-related public pension, 45 years of contribution are required, though it is payable upon shorter contribution periods and lower pay-outs or later with additional entitlements. The pensionable age is currently being raised from 65 to 67 years, while retirement at age 63 is possible upon 45 years of contribution (von der Heide 2014). Those in non-regular employment or with discontinuous work biographies are disadvantaged since they are often not fully covered by the system, receive lower premiums because of lower income or are penalised for phases outside the system (Hinrichs 2012; Seeleib-Kaiser, Saunders, and Naczyk 2012).

Germany’s net replacement for the average worker today is around 50 percent (OECD 2015c) and benefits are being adjusted according to a combination of old-age dependency ratio and gross wage growth. The fall in the net replacement rate over time, however, has been significant, as it was once designed to stand at 70 percent though this target has become ever more unrealistic for younger cohorts. The net replacement rate is especially low, at 19.3 percent of previous income, for those with reliance on the means-tested social assistance scheme. These individuals tend to be labour market outsiders and their number is expected to increase in the face of the reform over the last years (Seeleib-Kaiser, Saunders, and Naczyk 2012). Over time, replacement rates have fallen with almost every birth cohort (Geyer and Steiner 2014). Geyer and Steiner (2014) estimate that pension reforms in 1992, which aimed at prolonging working life and reducing the generosity of the pension

system, reduced entitlement for the 1937-1941 birth cohorts by just 0.1 percentage points but reduced those of the 1967-1971 cohorts by 14 percentage points. In general, pension reforms in recent decades, whose aim it was to ensure the system's sustainability, have put later birth cohorts at a disadvantage (Börsch-Supan, Reil-Held, and Wilke 2003).

This general problem is aggravated if life expectancy is taken into account. Upon retirement at age 65, the average retiree was expected to live for another 19.4 years in 2014, which is close to the OECD average of 19.3 more years. Effective retirement, on average, comes about three years before reaching the official retirement age. However, this value has been increasing gradually upon the last pension reforms (OECD 2015c). Peglow and Fenge (2013) estimate that between 2010 and 2060, assuming a sustainable pension system, net replacement rates will further fall by 10.7 percentage points, while contribution rates will increase by 5.5 percentage points and public subsidies by 5 percentage points. In any case, Germany's previous pension system adjustments made in the name of sustainability, amid the demographic developments, are likely to be followed by more reforms, putting future and current working generations at a further disadvantage (Geyer and Steiner 2014; Peglow and Fenge 2013).

III.2.3.3 Pension system in Japan

Japan's public pension system has two tiers, a basic flat-rate scheme and an earnings-related employees' pension scheme. To be eligible for the basic scheme, an individual had to contribute for 25 years, though this has been reduced to a minimum of 10 years and discounted pay-outs by April 2017. A full basic pension requires 40 years of contribution, payable at age 65, as the retirement age is currently being raised from 62 to 65 years. The earnings-related scheme has a contribution ceiling of 152 percent of the average worker's earnings, which in 2015 were defined at 620,000 Yen per month (OECD 2015c). In general, while early retirement is possible but penalised by lower entitlements, later retirement is incentivised by additional entitlements for every additional month worked. Unemployed or those under the income threshold are not required to contribute to the scheme, though this reduces entitlements. It is possible, however, to make up for uninsured phases pay contributions at a later stage (OECD 2015c).

Labour market outsiders, hence those in part-time, temporary or freelance jobs, generally have much lower entitlements and also a lower coverage rate than labour market insiders. Though a social security reform in 2012 has included part-time workers with at least 20 hours per week, other conditions for eligibility such as earnings and contract duration exclude the vast majority of non-regular workers (Takayama 2012). The net replacement rate for a worker with average income currently stands at 40.4 percent (OECD 2015c). The earnings-related pay-out is indexed to net average

earnings until age 67, after which it is only price indexed, typically resulting in lower benefits (Takayama 2012). Because of previous pension reforms that have increased contribution rates and reduced benefits, benefits fall short of contributions for cohorts born after 1965 (Horioka, Suzuki, and Hatta 2007). Cohorts born from 1985 onward are projected to get pay-outs that will yield only 80 percent of the amount they will have contributed (Takayama 2014).

System sustainability is a concern even more than in Germany also because life expectancy upon retirement at age 65 was 21.9 more years in 2014, which may be one reason why effective retirement in Japan already today comes on average about five years after reaching the official retirement age (OECD 2015c). With the old-age dependency ratio projected to rise further, according to Japan's Institute for Population Study and Social Security Research even to 80 percent until 2060 (ISSP 2012), further reforms will be necessary in the name of system sustainability (Braun and Joines 2015; Kitao 2015). Kitao (2015) estimates that for a sustainable pension system, other things being equal, the consumption tax would have to be raised from the current 8 percent to 48 percent, or otherwise be raised to 28 percent in combination with the pensionable age being raised by five years within fifty years and benefits were lowered by 20 percent. Against this background, Okumura and Usui (2014) find that younger cohorts also have lower expectations regarding pension pay-outs than do older cohorts.

III.3 Research questions, hypotheses, data, variables, and methods

III.3.1 Research Questions

In this chapter on intergenerational societal solidarity, it has so far been discussed under what material and institutional conditions persons may have certain preferences regarding the role of the welfare state on intergenerational policies. In the face of demographic ageing and all the above-discussed challenges that come with it, it shall be further investigated how preferences for more government on pensions have developed over time, how this differs across age and cohort, and what are the differences between Germany and Japan.

With these research questions in mind, hypotheses are generated below, after which the data sources are explained and discussed.

III.3.2 Hypotheses

It has been shown in this chapter that both the welfare state, including spending for pensions and new social risks, as well as the labour market, has changed strongly over the past decades in both countries. While Japan has experienced a significant total and relative expansion in expenditure for old-age, Germany has adjusted its welfare state in favour of young and working-age groups. Rising

poverty shares and dualisation, mostly affecting young persons, is a trend that has been observable in both countries, and dualism has been allowed and partly even been championed by policies in either country. Government debt has become a pressing issue in Japan but less so in Germany. These developments are expected to have an impact on the preferences for or against government spending on old-age. Against the background of the above, the following hypotheses shall be worked with for the regression analysis:

- 1) Hypothesis 1.1: Because developments over the past two (and more) decades have differed substantially between the two countries, an overall different trend in the preference for more government expenditure on old age can be expected. While for Germany, the population's overall preference for old-age spending is not expected to have significantly fallen; this is expected to have occurred in Japan.
- 2) Hypothesis 1.2: There is also expected to be an age effect. Judging from the different welfare state spending patterns, however, preferences across age are expected to be different between the two countries. Against the background of the above, rising age is not expected to be associated with a higher probability to prefer more government spending on old age in Germany. In Japan, in contrast, rising age is expected to be associated with a higher probability to prefer increases in old-age expenditure.
- 3) Hypothesis 1.3: Considering the developments of labour markets, pension systems and the welfare state as a whole over the last decades, something of the sort of a political generation may have emerged. A common challenge and a common source of discontent appears to be especially present in Japan, considering high government debt, high occurrence of dualism on the labour market and a probably unsustainable pension system. Therefore, a cohort effect is expected to be present in Japan (with later birth cohorts showing less support for government expenditure on old-age).
- 4) Hypothesis 1.4: Against the background of dualisation, there is also expected to be an outsider effect. Specifically, outsiders are expected to prefer more spending on old-age more often than insiders. The reason is that tax-wise they would carry less of the fiscal burden than insiders but profit relatively more from it. This effect is expected to be present in both countries.
- 5) Hypothesis 1.5: In the face of demographic ageing, as discussed above, the welfare regimes of both Germany and Japan are putting non-regular labourers at working-age today at a double disadvantage because they are both outsiders on the labour market and in terms of pensions. Therefore, younger labour market outsiders are expected to show a higher prefer-

ence for an increase in government spending on old-age compared to labour market outsiders at higher working-age. This effect is expected to be present in both countries.

III.3.3 Data sources and data used

III.3.3.1 International Social Survey Programme (ISSP)

The International Social Survey Programme (ISSP) is an international cross-sectional study investigating various attitudes among individuals aged 15 years or above (ISSP 2018). It is carried out annually with changing topics (such as gender roles, role of government, social inequality, religion, and others) and newly selected individuals every time a survey is being conducted while topics are being repeated in a more or less regular fashion. The survey topic “Role of Government”, which is of interest for this work, has been carried out since 1985 and includes waves for the years 1985, 1990, 1996, 2006, and 2016.¹⁵ While Germany is a co-founding country of ISSP, Japan only joined for the 1996 wave so that only the last three waves are worked with here.

Upon pooling the 1996, 2006, and 2016 datasets, there were initially 10,841 observations. Missing values on the age variable as well as the dependent variable, as well as “can’t choose” responses (see below), have been dropped. Deleting these missing values has left the sample with 10,269 observations.

III.3.3.2 World Values Survey (WVS)

The World Values Survey (WVS) is an international survey that has been conducted since 1981 in around 100 countries using a common questionnaire and covering attitudes on a range of topics (WVS 2014). The latest round, wave 6, was conducted between 2010 and 2014 and includes for the first time rather detailed questions on intergenerational relations. Hence, for a lack of data availability, a development over time of intergenerational relations cannot yet be shown but only one single point in time. Since the questions of the survey nevertheless offer valuable insights that ISSP does not allow for, WVS shall be used here by means of descriptive statistics. In wave 6 of WVS, the sample size includes 2,046 cases for Germany and 2,443 cases for Japan. Below, the variable operationalisation is briefly explained, after which statistics will be shown.

¹⁵ At the time of finalising this work, the 2016 wave were not yet harmonised across countries so that this had to be carried out individually.

III.3.4 Variables

III.3.4.1 ISSP

III.3.4.1.1 Dependent variable

The dependent variable is the question whether or not respondents would prefer an increase in government spending on old-age and retirement. In the 1996, 2006, and 2016 waves, this question has been asked with identical formulation and answer categories: “Listed below are various areas of government spending. Please show whether you would like to see more or less government spending in each area. Remember that if you say “much more”, it might require a tax increase to pay for it.”¹⁶ One of these areas being “Old age pensions”, the respondent can choose out of the answer categories “spend much more”, “spend more”, “spend the same as now”, “spend less”, “spend much less”, “can’t choose”, the last of which has been deleted (GESIS 1999, 2008, 2017; NHK 2018). This variable has been dichotomised into “spend the same or less” (0) and “spend more” (1). A major reason for this dichotomisation is the otherwise low sample size in some of the answer categories. For instance, very few observations are found for the category “spend much less”. Instead of combining the “spend the same as now” category with the two categories indicating demands for more spending, it has been put together with those for less spending. The reasoning behind this is that while demanding more spending may require a tax increase to finance this, demanding the same spending level or a decrease does not come with such implications, other things being equal. Hence, the dependent variable used in the remainder of this chapter conceptually investigates whether respondents would prefer a spending increase to finance retirement and old-age programmes, which would possibly require a tax rise, or not.

III.3.4.1.2 Independent variables

III.3.4.1.2.1 Characteristics of respondent

The main independent variable is the respondent’s age, which has been grouped into ten-year intervals of years of age, consisting of “15-24”, “25-34”, “35-44”, “45-54”, “55-64”, “65-74”, and “75+.” In order to separate age effects from cohort effects, birth cohort is considered, which is accordingly divided in ten-year intervals of years of birth, consisting of “1991-2000”, “1981-90”, “1971-80”, “1961-70”, “1951-60”, “1941-50”, “1931-40”, and “1900-30.” Since for the 2006 survey, the year of birth was not asked, imputations had to be carried. Here, the difference of the age at the point in

¹⁶ As will be seen in chapter IV, survey questions and categories are also presented in the original language there. This step is refrained from in the case of ISSP and WVS. The reason is that upon using ISSP and WVS files respectively, these are already harmonised while in the case of SHARE and JSTAR (the surveys used in chapter IV), harmonisation had to be carried out by the author of this dissertation before analysis could start. Hence, a discussion of survey questions and categories in local country languages did not seem necessary here.

time of surveying and the year of survey have been taken to be equal to the year of birth. This can only be an approximation, however, since the birthdays of the respondents are not known.¹⁷

An important socioeconomic determinant is employment status. Here, the aforementioned insider-outsider logic is applied. The categories are “insider”, “outsider”,¹⁸ “retiree”, “housemaker/disabled/other”, “student/apprentice”, and “no info/missing.” Since the variables on employment status have changed across waves, some adjustments were necessary, which have been discussed with the respective domestic surveying institutions. An insider here is defined as someone working in full-time employment with more than 34 hours per week (for those individuals from the 1996 and 2006 samples; though in Germany in 1996 the amount of weekly work hours was not asked so that here, insiders are taken to be equal to full-time employment), or someone being active on the labour market who works more than 35 hours per week and does not have a term-limited contract (2016, Germany), or someone who is either full-time employed or working for a family business over more than 34 hours per week or self-employed and has employees (2016, Japan). Outsiders, in turn, are defined as those either working not in full-time employment or working no more than 34 hours per week or being unemployed (1996, 2006), or those who are active on the labour market with term-limited contracts or work for less than 34 hours per week (2016, Germany), or those who work no more than 34 hours per week or are self-employed with no employees or are working for a family business for less than 34 hours per week (2016, Japan).

The employment status of the respondent’s current life partner is also accounted for. Due to data constraints, this variable does not include the spouse’s/partner’s weekly work hours. Except for this, the logic of the variable on employment status of the respondent is mostly applied amounting to the following categories: “no partner”, “partner insider”, “partner outsider”, “partner retiree”, “partner housemaker/disabled/student/other”, and “no info/missing on partner.” The reason for grouping “housemaker/disabled/other” together with “student”, different from the variable on the employment status of the respondents (where both are separate categories) is the otherwise very low sample size of “partner student.”

Another important socioeconomic indicator is educational attainment. Here, categorisation is abiding by the ISCED 1997 framework as much as possible (OECD 1999). The three categories include “no

¹⁷ The 2006 survey for Germany was carried out from 18 March to 21 August of 2006 and that for Japan was done between 18 and 26 November of the same year (GESIS 2008).

¹⁸ For a more refined categorisation, Schwander and Häusermann (2009) suggest to define outsiders by their employment history and type of job instead of employment status. While this is hard to execute with the available data, notably because of its fundamentally cross-sectional nature, in the multivariate analysis it will be worked with interactions in order to refine outsidersness. For instance, once employment status is interacted with educational attainment, a distinction of high-skill and low-skill outsiders is possible, which already provides valuable insights. Another interaction that will be employed is employment status and gender, given the strongly gendered dimension of dualism in both countries.

more than (mid-level) than secondary school“, “higher secondary/other“, and “academic.“ In the case of Germany, the first (lowest) of these three categories includes all those respondents with no school degree, a degree that is not a professional degree (“kein beruflicher Ausbildungsabschluss“), or a professional degree that is no higher than semi-skilled labour (“Teilfacharbeiterabschluss“). For Japan, this category includes all those respondents who have or have not graduated from lower or upper secondary school completed but do not hold a high school degree. The second (middle) category, for Germany, includes all those respondents with middle school or high school degree, and for Japan includes those with a high school diploma allowing university entry. The third (highest category), for either Germany or Japan, includes all those who hold an academic (college-equivalent or university) degree.

One variable that tends to correlate with employment status and educational attainment is income. The reason for considering it here despite such correlation is that it can be expected to add important information to the analysis. Because of correlation, however, it will only be added in a final step. The income information from the two countries and three points in time has been made comparable by standardising it to monthly family household income units and converting these into US-Dollar in purchasing power parity of the respective year using the OECD database for conversions (OECD 2018a). On this basis, six income categories have been created: “0-1000“, “1001-2000“, “2001-3000“, “3001-4000“, “4001-5000“, “5001-6000“, “more than 6000“, and “no info/missing.“

Two more variables that are considered here are gender and living arrangement. Gender is binary, divided into “male“ and “female.“ Living arrangement is more complicated since the respective variables have changed across survey years. One way of grouping these differing variables and categories so to allow for cross-survey comparison has been the following ordering of living arrangements: “single“, “two adults“, “one or two adults with children“, “more than two adults (with or without children)“, and “other/no info/missing.“

Two further variables, which may have an effect on policy preferences, are an individual’s interest in politics and an individual’s self-placement regarding political affiliations/persuasion. Regarding political interest, respondents were asked how interested they are in politics, and answers in the original questionnaires include: “very interested“, “fairly interested“, “somewhat interested“, “not very interested“, “not at all interested“, and “can’t choose.“ To deal with sample size problems, these categories have been grouped into: “very or fairly interested“, “somewhat interested“, “not or not at all interested“, and “missing/can’t choose.“

Bearing in mind the discussion of political generations above, individual interest in politics as well as political persuasion may be important determinants, albeit these might only be partly exogenous as

party (affiliation) preferences and policy preferences may be more or less strongly connected. Regarding political persuasion, respondents were asked where they would place themselves on a ten-point scale according to their personal political persuasion if the lowest value on the scale means far left and the highest value means far right (2016, Germany), or which of the following category they would describe themselves with: “Far left etc.”, “Left, centre left”, “Centre, liberal”, “Right, conservative”, “Far right etc.”, “Other, no specific”, “No party, no preference” (1996, 2006, and 2016 in Japan). Responses have been divided into the following categories: “centre left/left/far left” (1-4, or “Far left etc.” or “Left, centre left” respectively), “centre/liberal” (5-6, or “Centre, liberal” respectively), “centre right/conservative/far right” (7-10, or “Right, conservative”, “Far right etc.” respectively), “no preference/don't know/don't vote” (<0, or “Other, no specific”, “No party, no preference” respectively), and “missing.”

III.3.4.1.2.2 Other attitudinal variables

In order to understand attitudes and policy preferences as thoroughly as possible, it is important to consider more attitude-related questions than only the dependent variable. In this endeavour, equivalent questions relating to other social policy fields have been added as well as one question that is conceptually different but relates to the same policy field. This latter question asks whether respondents think that it should be the government’s responsibility “to provide a decent standard of living for the old.” Answer categories include, unchanged from the original questionnaires: “definitely”, “probably”, “probably not”, “definitely not”, and “don't know/missing.” Other variables depicting more specific policy preferences follow the same logic as the dependent variable and ask whether the respondent would prefer the government to spend “much more”, “more”, “the same”, “less”, “much less” or “can't choose” on certain social policy fields. The responses regarding each of these policy fields have been turned into a respective variable. These include: health coverage, unemployment benefits, and education. Answer categories include, equally for each variable: “spend the same or less”, “spend more or much more”, and “missing.” These variables, however, are only shown in a descriptive way and not included in the multivariate analysis.

III.3.4.1.2.3 Other variables

An important variable when investigating developments over time is the year of survey. As follows from the above, there are three points in time, 1996, 2016, and 2016. Another crucial variable, this work being of comparative nature, is country, consisting of Germany and Japan. Germany, however, is further divided into West and East because of its long political division and traced demographic, economic and political differences. Another important reason for considering West and East separately for multivariate analysis is that in the ISSP samples East Germany is oversampled. By including a distinction by area this problem is accounted for.

III.3.4.2 WVS

III.3.4.2.1 Dependent variables

Two questions in WVS are of interest for the purpose of this work, all of which ask respondents about their attitudes towards intergenerational relations in the face of demographic ageing: The first one states: "Older people get more than their fair share from the government", and then asks to what extent the respondent agrees or disagrees, consisting of the original answer categories: "Strongly agree", "Agree", "Disagree", and "Strongly disagree" or one could indicate to have no opinion or prefer not to answer. Since the extreme categories have low frequencies of occurrence, categories of this variable have been recoded into: "don't know, no answer", "elderly are advantaged", and "elderly are not advantaged."

In a similar way, the second variable of interest is the statement: "Older people are a burden on society", and again, respondent had the same answer categories to choose from. This variable's categories were recoded into: "don't know, no answer", "elderly are a burden", "elderly are not a burden."

III.3.4.2.2 Independent variables

The age variable, as in ISSP, has been divided in ten-year intervals. Since in the WVS the youngest respondents are 17 (not 15 like in ISSP), the categories are as follows: "17-24", "25-34", "35-44", "45-54", "55-64", "65-74", and "75+." With regard to employment status, categories have been operationalized in a way that resembles those in ISSP to the highest degree possible: it distinguishes labour market "insider", "outsiders", "retirees", "housewives-other", "students", and "unemployed." Bearing in mind Rueda's (2005) definition for labour market outsiders, this group is operationalised as all unemployed persons, self-employed persons with a household income not higher than the bottom seven decimals in their respective country, or part-time employees whose household income is not at least within the top three income decimals. Full-time employees in the lowest three income decimals are also defined as outsiders. Insiders, in turn, are all full-time employees with a household income above the three bottom decimals, as well as part-time employees or self-employed with a household income within the top three decimals. Housewives are those who declare their occupational status as housewives as well as married female part-time employees whose household income is not in the top three income decimals. The country variable, different from ISSP, does not distinguish between West and East Germany and therefore only consists of Germany and Japan.

III.3.5 Method and analytical strategy

As mentioned above, those questions in the World Values Survey that are of particular interest when investigating intergenerational solidarity in terms of attitudes have so far only been asked in the latest wave. Since intergenerational solidarity is here conceptually understood as an inter-temporal entity, no multivariate regression analysis is applied to the WVS data (because the data do not allow analysing a development over time). Instead, these data will be used as an auxiliary source to better understand the latest state of affairs of intergenerational solidarity regarding the allocation of government resources.

In turn, data of the International Social Survey Programme allow for an analysis of development of intergenerational relations over the last 20 years (1996, 2006, and 2016). The focus of analysis shall therefore be based on this data source. The dependent variable being dichotomous and the pooled dataset, though consisting of three points in time, not consisting of repeatedly asked individuals (hence each individual only appears once in the whole sample); a logistic regression logic is applied to the data.

III.4 Descriptive statistics, multivariate analysis

III.4.1 Descriptive analysis

III.4.1.1 Attitudes towards old people (World Values Survey)

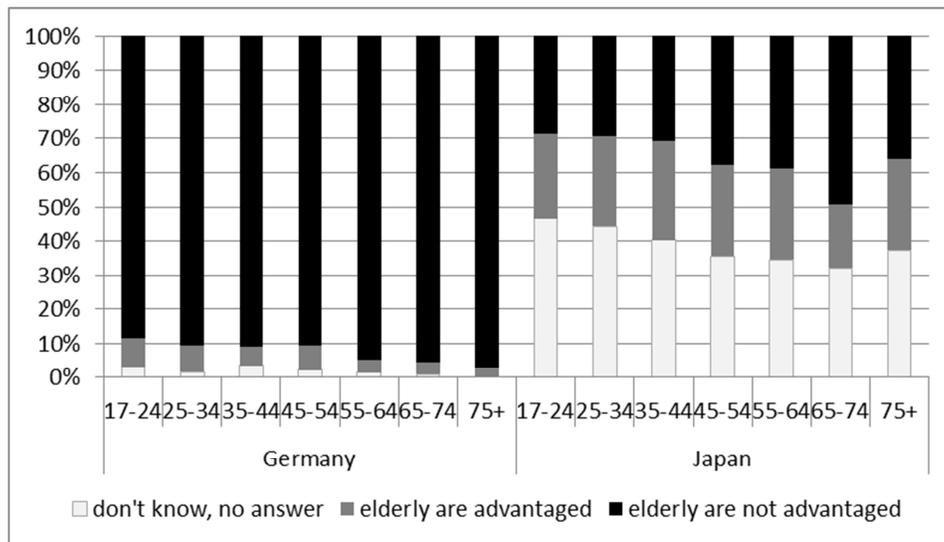
Figures 17 and 18 show responses to two questions on intergenerational relations across age groups in Germany and Japan. In figure 17, answers are shown to the question whether respondents agree to the statement that "Older people get more than their fair share from the government." Responses vary strongly across the two countries but in both countries, responses also vary across age groups. In Germany, while in every age group an overwhelming majority does not think that the elderly get more than their fair share from the government, the share of those who do think so is highest among the lowest age group and lowest among the oldest. 8.5 percent of those aged 17-24 years agreed to the statement but only 2.9 percent of those aged 75+. Compared to Germany, one major difference in Japan is the very high share of "don't know" answers, which varies between 32.1 and 46.7 percent and is highest among the youngest.¹⁹ In turn, even without eliminating these answers, the share of those agreeing that the elderly get more than their fair share is considerably higher in Japan than in Germany in any age group. The lowest shares of positive responses (18.7 per-

¹⁹ High shares of "don't know" responses and modest responses in general have been found among Asian respondents in other studies and have been explained largely by cultural factors (see: Harzing 2006).

cent) occur among those at pension age (though not the very oldest) and the highest shares are found among those at working-age, especially those aged 35-44 (29.1 percent).

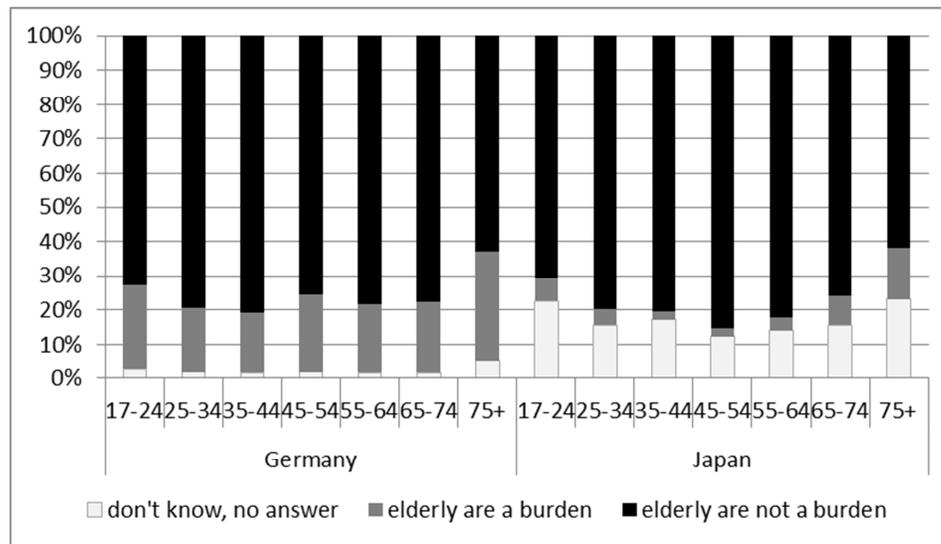
Figure 18 shows responses to the statement "Older people are a burden on society." Responses here paint a rather different picture. In both countries, it is those aged 75+ who have the lowest proportion of answering that the elderly are not a burden (62.9 in Germany and 61.9 percent in Japan respectively). Also in both countries, the age group with the second-lowest shares are the 17-24 year olds (72.9 percent in Germany and 70.7 percent in Japan). In Germany, however, shares of "don't know" answers are low, which is not the case for Japan (there they range between 15.7 and 23.2 percent). Ceteris paribus, the share of those stating that the elderly are a burden on society are higher in Germany than Japan in every age group. This is important to bear in mind considering the responses above to the statement that "Older people get more than their fair share from the government": though more persons in Japan agreed there, fewer persons in Japan think that the elderly are a burden per se. Hence, the stark differences above appear to be caused by policy rather than values, which is in line with the previous discussion in this chapter. In Germany, in turn, intergenerational solidarity appears stronger, judging on the basis this data. Again, this also appears to be consistent with the discussion above.

Figure 17: Responses to the statement "Older people get more than their fair share from the government", by country and age group.



Source: WVS (2014), own calculations.

Figure 18: Responses to the statement “Older people are a burden on society”, by country and age group.

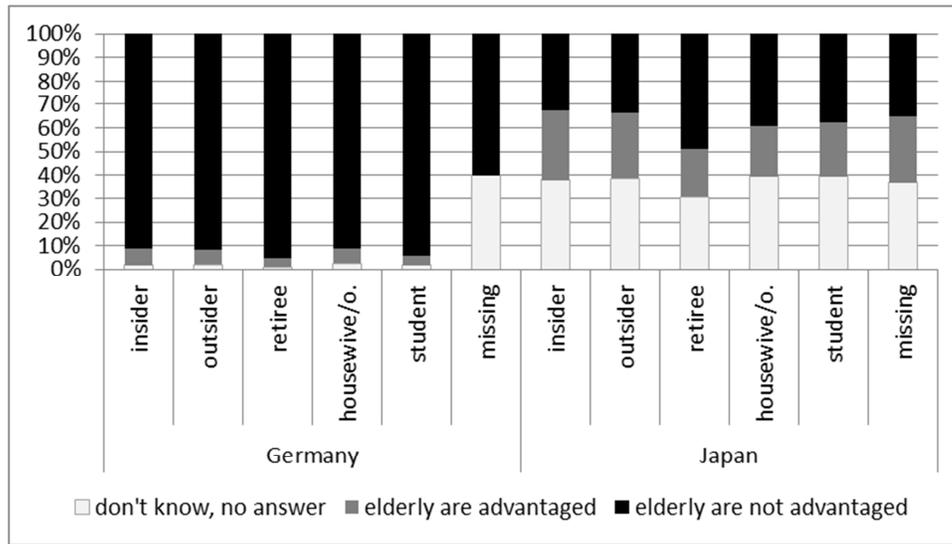


Source: WVS (2014), own calculations.

Figures 19 and 20 show responses to the two questions discussed above but instead of age, results for Germany and Japan are shown by employment status. Figure 19 showcases answers to the question whether respondents agree to the statement that "Older people get more than their fair share from the government." As above, the share of "don't know" answers in Japan is high across categories while it is very low in Germany. In Germany, negative answers (stating that the elderly do not get more than their fair share from the government) are highest among retirees (95 percent), followed by students (94.3 percent). Insiders, outsiders, and housewives all show values around 91 percent. In Japan, by far the highest share of negative answers occurs among retirees (48.9 percent) and the lowest shares are seen among insiders (32.7) and outsiders (33.8). Consequently, while there is a considerably higher overall share in Japan thinking that the elderly get more than their fair share compared to Germany, there do not appear to be strong differences according to labour market insiders and outsiders in either country. Rather, there is an observable (age-based) difference between younger and older respondents.

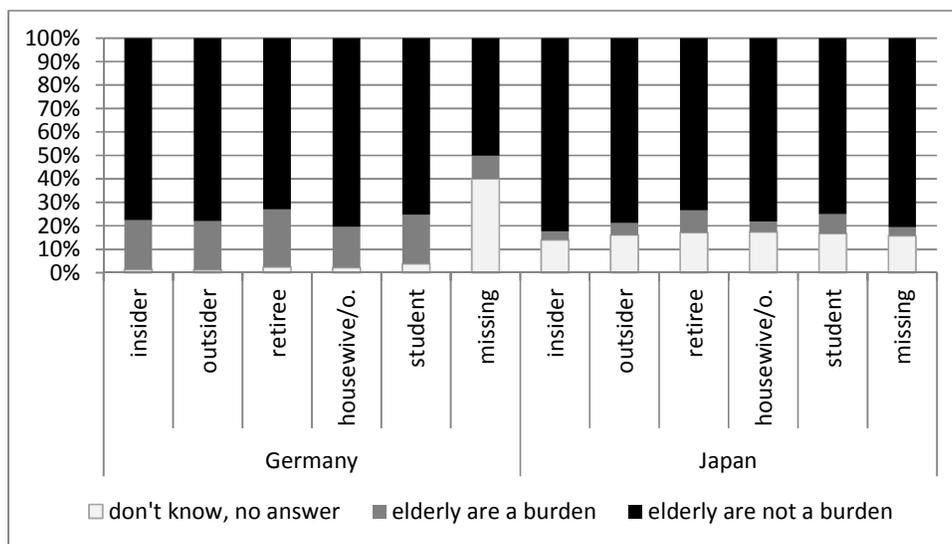
This image appears again in figure 20, which shows responses to the statement "Older people are a burden on society." The highest shares of agreement occur among retirees (24.6 percent in Germany, and 9.6 percent in Japan where a further 17 percent answered "don't know"). In Japan, slightly more outsiders (5 percent) than insiders (3.6 percent) agree to the statement, while this difference is even smaller in Germany (21 percent among insiders and 20.7 percent among outsiders).

Figure 19: Responses to the statement “Older people get more than their fair share from the government”, by country and employment status.



Source: WVS (2014), own calculations.

Figure 20: Responses to the statement “Older people are a burden on society”, by country and employment status.



Source: WVS (2014), own calculations.

Responses to these questions from the World Values Survey, therefore, show three things: firstly, there are considerable differences between Germany and Japan regarding resource distribution between the elderly and the rest of society and these differences are in line with the developments of welfare state spending patterns and pension systems discussed above. Secondly, while there appears to be little disagreement in Germany regarding either question, there is a clear divide in Japan: age groups do not disagree regarding the statement that "Older people are a burden on society" (a vast majority thinks they are not), but there is disagreement regarding the statement that "Older

people get more than their fair share from the government." Thirdly, considering the very different levels of agreeing to the statement about the "fair share", in neither country there is strong differences between labour market insiders and labour market outsiders. Regarding age, in turn, there are differences in both countries. The tendency is that those persons who are currently receiving pensions consider this share less often to be "more than fair" compared to those who are not receiving it (yet).

III.4.1.2 Attitudes towards the role of government (International Social Survey Programme)

III.4.1.2.1 Attitudes towards the government's role to care for old persons

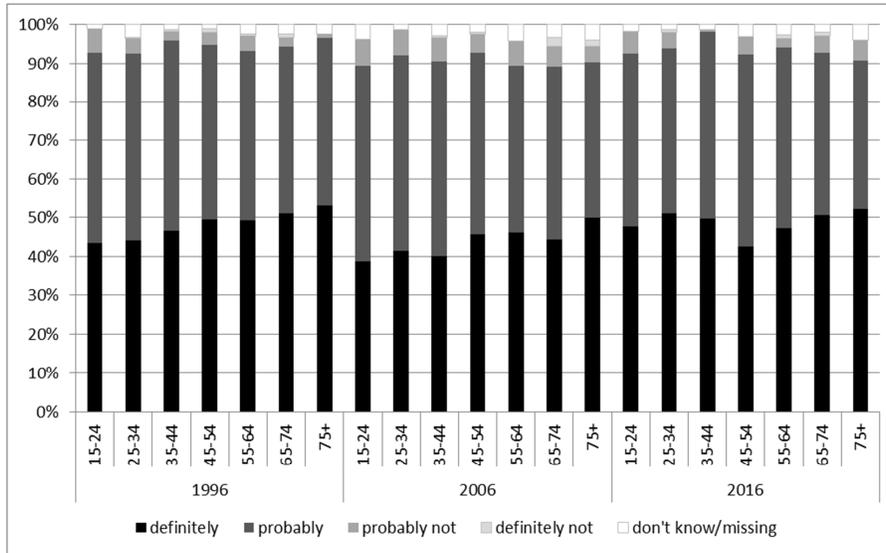
Figures 21 to 23 show the responses to the question whether it should be the government's responsibility to provide for a certain living standard for the old by country, age group and year of survey. This question allows conclusions about a society's position towards the welfare state in more general, regardless of current engagement in public policy. In figure 21, showcasing the responses for West Germany, it can be seen that across age groups and year about half responded "definitely." Adding those responding "probably", between around 90 and almost 100 percent in every age group and year think that the government has a responsibility to provide a certain standard of living for the old. Across years, however, the proportion of those responding "definitely" tends to be higher among the oldest age groups.

Figure 22 shows the same question for East Germany. While a similar pattern can be seen, there are stronger differences by age groups among those answering "definitely" to the question about the government's responsibility towards old people. It can also be seen that the youngest age group has a very high share of answering "definitely" in 2016, indeed among the highest of all age groups, compared to the youngest in earlier years. In general, however, 90 percent or more in any year and age group answer that it is either "definitely" or "probably" the government's responsibility to provide for a certain standard of living for the old.

Figure 23 shows the responses in Japan, which differ considerably from those in West and East Germany. Though also in Japan a vast majority across age groups and years of survey respond with "definitely" or "probably", these accumulated shares vary from almost 90 percent (65-74 year olds in 1996 and 2006) to only two thirds (25-45 year olds in 2016). Meanwhile, the shares of those answering "probably not" increased over the years of survey. In 1996, this share only reached 10 percent among the 25-34 year olds while in 2016 this share was higher than 10 percent in every age group (and highest among the 45-54 year olds, hence the same birth cohort that already had a 10 percent share of responding "probably not" in 1996). In general, there has been a broad majority thinking

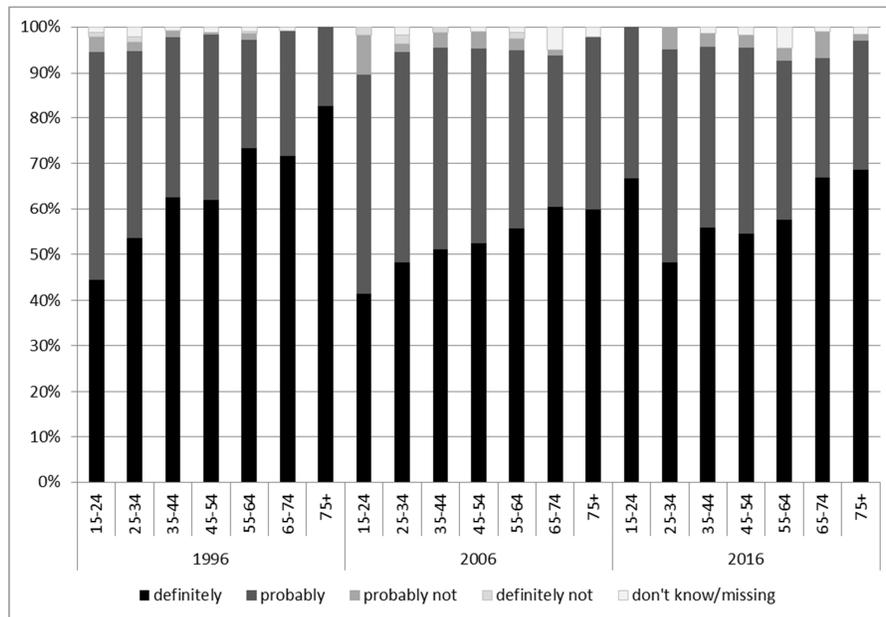
that the government does have a responsibility to provide for a certain living standard for the old, this proportion has been lower in Japan than in Germany and it has decreased over time.

Figure 21: Attitudes to the question whether it should be the government's responsibility to provide for a certain living standard for the elderly, West Germany, by age group and year.



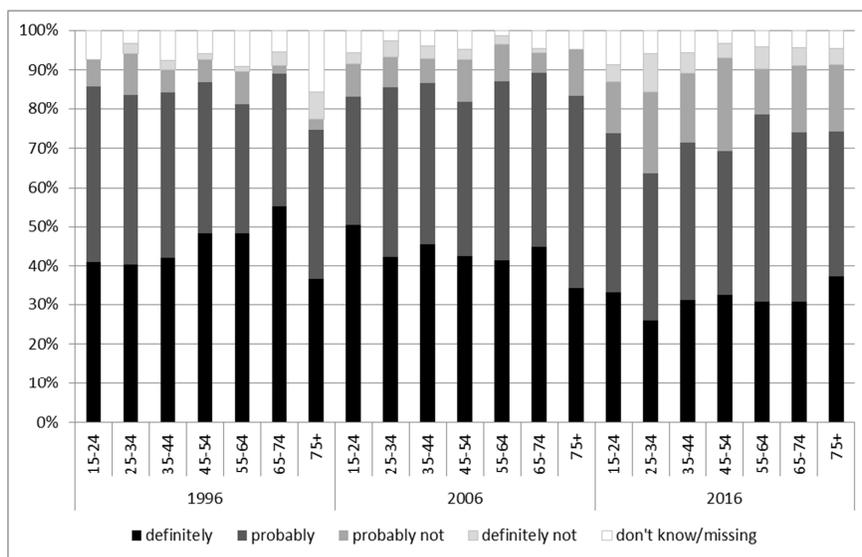
Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

Figure 22: Attitudes to the question whether it should be the government's responsibility to provide for a certain living standard for the old, East Germany, by age group and year.



Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

Figure 23: Attitudes to the question whether it should be the government's responsibility to provide for a certain living standard for the elderly, Japan, by age group and year.



Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

III.4.1.2.2 Preferences regarding government expenditure in policy fields other than old-age

Figures 24 to 26 show responses to questions related to the dependent variable across country and year of survey. Analogous to the question constituting the dependent variable, these questions ask whether the respondent would like to see either "more" or "much more" spending on a certain policy field or "the same", "less", or "much less." As above, response patterns to these questions give insight regarding the role of the welfare state in general.

Figure 24 shows responses on the question whether more or less resources should be spent on health coverage. As shown above with NTA data (see chapter II), health expenditure mostly, but not exclusively, benefits elderly individuals. While across year and country, a majority would like to see more spending, the development over time differs. In both West and East Germany, the share of those demanding more spending increased over years and in 2016 reached more than 70 and almost 80 percent respectively. In turn, the share of those demanding more government spending on health decreased from 67 percent in 1996 to around 53 percent in 2016 in Japan. This development is in line with preferences regarding government expenditure on pensions and the ENSR shown above.

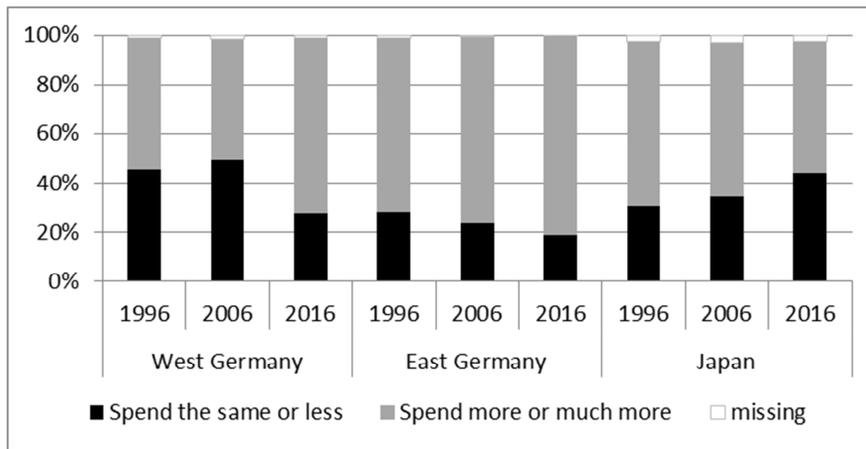
Responses regarding government spending on unemployment benefits, which are typically benefiting working-age individuals, are shown in figure 25. While West Germany shows constant but rather low levels of around 30 percent preferring more spending, East Germany has shown a decrease of those demanding more spending albeit from a higher level, declining from 55 percent in 1996 to 39 percent in 2016. In Japan, the proportion of those demanding more spending for the unemployed decreased from 32 to 20 percent between 1996 and 2016 (while there is almost 10 percent of miss-

ing values across years; excluding these would yield higher shares of those demanding more spending). These decreases in the general preference for more support for the jobless come amid increasing pressures on the labour market in both countries.

Figure 26 shows responses on whether more or less resources should be spent on education, which are mostly benefiting individuals at young-age. West and East Germany show similar development with the preference for a spending increase rising from 50 to 84 percent and 57 to 91 percent between 1996 and 2016 respectively. In Japan, there is also an increase in the share of those demanding more spending on education but it is less pronounced and only reaches lower levels. In 1996, 48 percent preferred a spending increase and in 2016 this share stood at 56 percent.

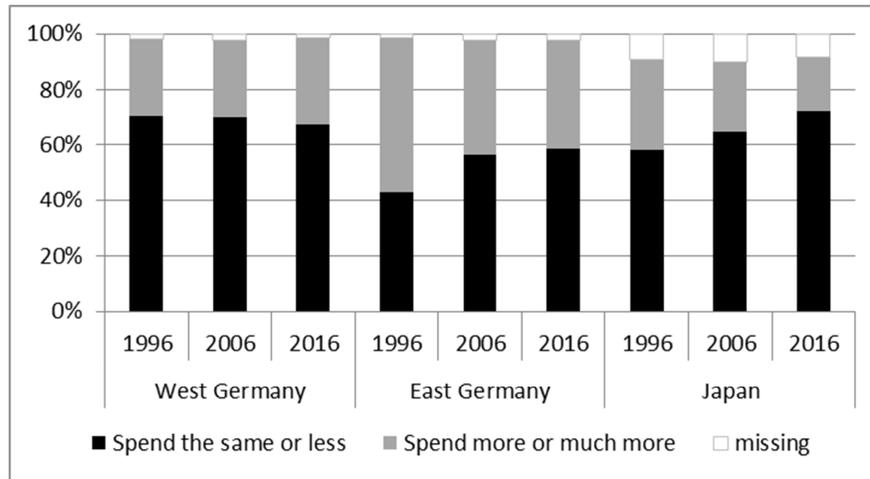
In general, it is shown that demands for more government spending across social policy fields have been more common in Germany than in Japan across the 20 years between 1996 and 2016. However, it is also shown that in Japan, the preference for more spending in those fields primarily benefiting young individuals has increased while the preference for more spending in fields benefiting mostly old-age individuals has decreased. In Germany, in contrast, there has been an increasing preference for more spending across social policy fields, regardless of whether the primary recipients are of old or young age.

Figure 24: Preferences regarding government spending on health coverage, by country and year.



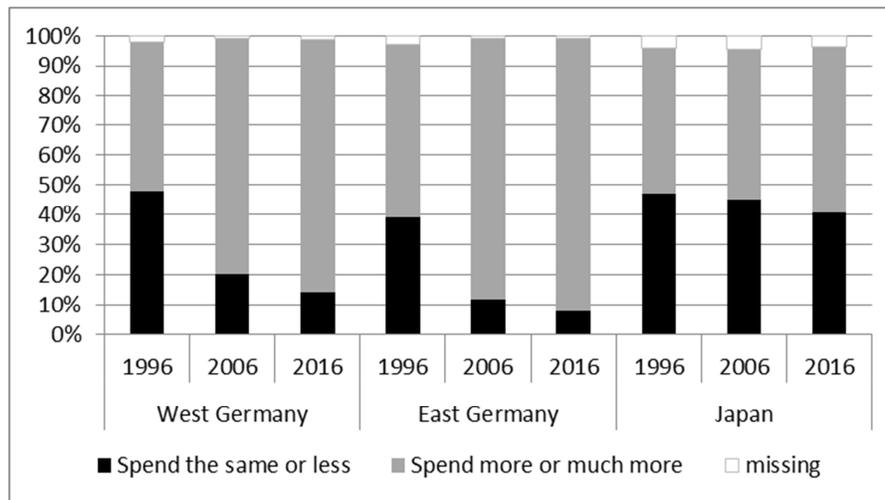
Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

Figure 25: Preferences regarding government spending on unemployment benefits, by country and year.



Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

Figure 26: Preferences regarding government spending on education, by country and year.



Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

III.4.2 Multivariate analysis

III.4.2.1 Summary statistics

In the remainder of this section, the summary statistics will first be presented, after which descriptive statistics are presented by age and cohort. Following these two steps, results of the multivariate analysis will be discussed. Tables 11 and 12 show the summary statistics of the variables used for multivariate analysis. Regarding the dependent variable, the question whether the government should spend less, the same or more on old-age, the majority prefers more spending across countries. Overall, this share is slightly higher in Japan (53 percent) than in West Germany (52 percent), but it is the highest in East Germany (61 percent). How such shares vary according to year of survey,

age group, cohort and socioeconomic characteristics will be scrutinised below.

Regarding the other variables shown in table 11, it has to be noted that with respect to employment status, retirees are underrepresented in Japan. The reason for this is that women aged 65 years and

Table 11: Summary statistics; period, age, cohort, and some socioeconomic characteristics, column percent.

Variable	Category	West Germa-ny	East Germa-ny	Japan
Opinion regarding government spending on old-age pensions	Spend same or less	48.41	38.68	46.63
	Spend more	51.59	61.32	53.37
Year of survey	1996	51.43	50.14	31.39
	2006	24.24	23.84	30.15
	2016	24.33	26.02	38.46
Age group of respondent	15-24	9.93	7.95	10.04
	25-34	17.76	15.06	11.8
	35-44	18.23	18.02	16.91
	45-54	18.00	17.93	17.16
	55-64	17.12	18.35	18.59
	65-74	12.54	14.56	16.64
	75+	6.42	8.13	8.85
Birth cohort group of respondent	1900-30	9.07	10.21	8.01
	1931-40	13.72	15.06	13.83
	1941-50	15.56	17.24	19.30
	1951-60	18.48	20.47	17.70
	1961-70	21.86	18.35	15.56
	1971-80	12.99	10.49	15.16
	1981-90	5.85	6.89	7.09
	1991-2000	2.47	1.29	3.36
Educational attainment of respondent	no more than (mid. sec)	61.97	61.83	24.22
	higher seconda./vocat.	23.67	24.63	50.31
	academic	12.13	11.92	23.92
	other/missing	2.22	1.62	1.54
Employment status	insider	43.54	43.72	43.82
	outsider	16.60	18.90	14.07
	retiree	22.15	29.02	6.58
	housemaker/disabled/o	12.15	4.30	26.25
	student/apprentice	5.03	3.65	5.79
	no info/missing	0.52	0.42	3.49
Income category (monthly, household, USD and PPP)	0-1000	3.29	6.01	8.90
	1001-2000	12.54	21.67	14.67
	2001-3000	17.6	22.69	15.94
	3001-4000	16.98	16.73	11.77
	4001-5000	10.79	10.17	8.90
	5001-6000	7.05	3.74	8.96
	more than 6000	10.98	3.84	12.37
	no info/missing	20.77	15.16	18.48
Total number of observations		4410	2164	3695

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

above in Japan tend to self-select into the category of housemakers instead of retiree, which is not the case for West and East Germany (this is also alluded at by the relatively higher share of housemakers in Japan). Rather than speculating over which women to code as retirees, it has been decided to respect individuals' self-selection and keep it in their respective categories.

Another notable difference regards educational attainment. Japan's share of individuals in the lowest category is substantially lower than in West and East Germany while that of those in the highest

category is higher. One reason is Germany's dual education systems which makes many individuals fall into the middle category. In Japan, in turn, there is no such formalised system in place but instead, those with low schooling education tend to get their training on the job. As noted above, the ISCED 1997 framework (OECD 1999) has been relied on for categorisation. These cross-national differences also appear in chapter IV where a different data source is used. In other words, strong differences on the education variable are not unique to ISSP.

Table 12 shows the second part of summary statistics. Here, notable differences across countries can be seen on the political variables, interest in politics and political persuasion. Regarding interest in politics, West and East Germany do not differ strongly with around 30 percent claiming to be very or fairly interested and between 25 and 28 percent saying to be not very or not at all interested. In Japan, only one fifth is very or fairly interested and 29 percent is not very or not at all interested. Regarding political persuasion, though this is a highly culturally contingent question, the differences are

Table 12: Summary statistics, gender; family and politics related socioeconomic characteristics, column percent.

Variable	Category	West Germany	East Germany	Japan
Opinion regarding government spending on old-age pensions	Spend same or less	48.41	38.68	46.63
	Spend more	51.59	61.32	53.37
Interested in politics?	very or fairly interested	30.00	28.56	20.68
	somewhat interested	43.56	42.01	48.66
	not very or not at all interested	24.99	28.05	28.99
	missing	1.45	1.39	1.68
Political persuasion	centre left/left/far left	32.06	36.83	6.74
	centre/liberal	18.34	14.93	15.53
	cntr. right/conserv./right	23.99	19.36	33.18
	no preference/don't know	11.72	11.55	27.44
	missing	13.88	17.33	17.10
Gender	male	50.41	48.61	49.07
	female	49.59	51.39	50.93
Living arrangement	single	18.44	16.96	7.09
	2 adults	35.51	39.19	22.33
	1-2 adults w. children	27.80	24.68	14.02
	>2 adults w/o childr.	17.57	18.58	55.43
	other/no info/missing	0.68	0.60	1.14
Employment status of partner	no partner	38.87	38.35	31.42
	insider	25.71	29.07	32.37
	outsider	10.48	9.57	6.33
	retiree	9.68	14.09	5.12
	housem./disabled/stu./o.	14.60	8.13	21.57
	no info/missing	0.66	0.79	3.19
Total number of observations		4410	2164	3695

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

even stronger. In West and East Germany respectively, 32 and 37 percent claim to be left of the centre while in Japan only 7 percent position themselves on the left. In turn, 33 percent of respondents in Japan consider themselves right of the centre, which in West and East Germany only 24 and 19 percent do respectively. In addition, more than one fourth of Japanese respondents claim to have no

political preference, which is only the case of 12 percent in East and West Germany. These differences shall be borne in mind for multivariate analysis.

III.4.2.2 Separating preferences on old-age expenditure by age and cohort

Table 13 shows the share of positive responses on the dependent variable by age group, year and country. Implicitly, age effects and cohort effects are both showcased because of the ten-year ranges regarding both age groups (rows) and years of survey (columns). Changes across age within one

Table 13: Percentage of persons preferring more or much more government spending on pensions and old-age by age group and birth cohort.

West Germany						
	1996 (n=2268)		2006 (n=1069)		2016 (n=1073)	
age group	birth cohort	“spend more“	birth cohort	“spend more“	birth cohort	“spend more“
15-24	1971-80	0.47	1981-90	0.59	1991-2000	0.78
25-34	1961-70	0.44	1971-80	0.53	1981-90	0.69
35-44	1951-60	0.41	1961-70	0.49	1971-80	0.67
45-54	1941-50	0.38	1951-60	0.47	1961-70	0.66
55-64	1931-40	0.51	1941-50	0.44	1951-60	0.64
65-74	1921-30	0.46	1931-40	0.58	1941-50	0.64
75+	1900-20	0.52	1900-30	0.57	1900-40	0.61
Total		0.44		0.51		0.67
East Germany						
	1996 (n=1085)		2006 (n=516)		2016 (n=563)	
age group	birth cohort	“spend more“	birth cohort	“spend more“	birth cohort	“spend more“
15-24	1971-80	0.44	1981-90	0.50	1991-2000	0.86
25-34	1961-70	0.50	1971-80	0.43	1981-90	0.72
35-44	1951-60	0.55	1961-70	0.48	1971-80	0.72
45-54	1941-50	0.56	1951-60	0.39	1961-70	0.72
55-64	1931-40	0.70	1941-50	0.54	1951-60	0.75
65-74	1921-30	0.69	1931-40	0.70	1941-50	0.74
75+	1900-20	0.80	1900-30	0.64	1900-40	0.70
Total		0.60		0.52		0.73
Japan						
	1996 (n=1160)		2006 (n=1114)		2016 (n=1421)	
age group	birth cohort	“spend more“	birth cohort	“spend more“	birth cohort	“spend more“
15-24	1971-80	0.61	1981-90	0.50	1991-2000	0.39
25-34	1961-70	0.58	1971-80	0.46	1981-90	0.33
35-44	1951-60	0.52	1961-70	0.47	1971-80	0.34
45-54	1941-50	0.61	1951-60	0.53	1961-70	0.42
55-64	1931-40	0.60	1941-50	0.66	1951-60	0.50
65-74	1921-30	0.67	1931-40	0.67	1941-50	0.58
75+	1900-20	0.58	1900-30	0.59	1900-40	0.56
Total		0.59		0.56		0.46

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

birth cohort can be seen by reading the table diagonally downwards from left to right (to facilitate reading, each cohort is shaded with the same respective tone of grey across years). Overall changes over time (for a whole population with all age groups), in turn, can be seen in the respective lowest row (to be read horizontally from left to right).

For West Germany, it can be seen that in general the share of those responding positively (preferring more or much more government spending on pensions, even if this requires a tax increase) is increasing with age. Every cohort has shown increasing likelihoods of positive responses over the three years of survey at every age. At the same time, however, there are differences across cohorts. In general, for instance, younger birth cohorts tend to show a higher share of positive responses. One interpretation of this cohort effect is that while poverty shares have increased across age groups and over the past three decades (see chapter II), this share has increased especially among younger age groups. Younger individuals may be worried that their poverty shares would be transferred into old-age in the absence of an engaging welfare state. Another reason may be the liberalising pension reforms in the early 2000s (also discussed above), which have provoked a greater desire for more expenditure. In addition, West Germany shows a period effect with increasing likelihoods of positive responses over the three years of survey (shown in the lower row indicated by “Total”), which appears to support this interpretation. East Germany shows a slightly different picture. The trend over the three years of survey also shows a general trend of increasing likelihoods of positive responses with increasing age across and within cohorts though the more considerable increases happened between 2006 and 2016 (rather than between 1996 and 2006). Overall as well, the period effect is considerable and appears to be stronger than that in West Germany. Also, in 2016, but not in 2006, positive response likelihoods in East Germany are higher than in West Germany for every age group. Thus, in both areas of Germany, a changing age gradient over time can be seen. While in 1996 it tended to be the older age groups who preferred higher government expenditure on pensions, in 2016 it was the youngest age groups with the highest shares of positive responses.

For Japan, the picture is different from that in Germany. Within cohorts, the share of responses tends to have decreased, and the extent of the decrease tends to be higher among younger birth cohorts (read diagonally downwards from left to right, within the same shade of grey). A period effect can also be seen in Japan (see lowest row from left to right). While there were little differences across age groups in 1996 (the 75+ year olds had a slightly lower share of positive responses than the 15-24 year olds but the same share as the 25-34 year olds; read vertically within one year), a clearer difference across age groups emerged in 2006 and increased further in 2016. In the survey of 2016, only 39 percent of the 15-24 year olds preferred more or much more government spending on old-age while 56 percent of the 75+ year olds did. Among the younger cohorts, hence, there is a lower share of positive responses even as they have been ageing.

This difference between Germany and Japan is in line with the development of the elderly/non-elderly spending ratio (ENSR) over the same period. While that of Germany has decreased and younger birth cohorts more often demand more spending, the ENSR has strongly increased in Japan

and younger birth cohorts more often demand less spending. In turn, poverty shares have increased among young age groups in both countries. One interpretation of why young respondents in Japan nevertheless prefer less pension expenditure more often is the heavy government debt burden in Japan (see above in this chapter). In this logic, Japanese respondents may tend to regard a spending increase on pensions as financially unsustainable and thus consider it to their disadvantage rather than to their advantage. Under these circumstances, public support for intergenerational policies appears to have weakened considerably in Japan while it has strengthened in Germany. This descriptive observation will be scrutinised in multivariate regression techniques at the end of this chapter.

III.4.3 Results of multivariate analysis

III.4.3.1 Testing for period, age and cohort effects

Table 14 shows the results of the pooled logistic regression models. In order to see in which way the effects of each variable alter depending on other variables, a stepwise modelling approach is taken here.²⁰ Model 1a shows that preferences for government spending have increased over the survey years. Compared to 1996, which serves as reference category, there is a significant change to 2016. However, the coefficient for 2006 is not statistically significantly different from 1996. Model 1a also shows that compared to West Germany, the odds of agreeing to more government spending is elevated by almost 50 percent for respondents in East Germany. This appears to be consistent with the insider-outsider theory discussed above as East Germany is especially hard-hit by dualisation. However, there are no statistically significant differences between Japan and West Germany. Model 1b, which additionally includes age, shows a strong age gradient with those age groups younger than 55 years showing significantly lower support for more old-age government spending than those aged 65-74 (reference category).

For model 1c, two key socioeconomic variables have been included, employment status and educational attainment. Compared to labour market insiders (reference category), labour market outsiders and retirees show odds that are significantly elevated by 23 percent and 38 percent respectively. Regarding educational attainment, compared to academics (reference category), those with lower educational levels show significantly higher odds of preferring an increase in government spending on old-age. Both these outcomes are significant with the insider-outsider theory discussed above.

²⁰ For logistic regression, stepwise modelling does not come without problems as its characteristics are not the same as those of linear regression. The interpretation of parameters across models with different independent variables is therefore not straightforwardly possible in the same way (see for example: Mood 2010). This caveat has to be borne in mind here. However, since some of the variables used here may be collinear it is still advisable to only add them in separate steps in order to be able to see the strength of the models without certain variables. In turn, interpretation of the results shall tend to focus on the respective last models including the most variables (except where a strongly collinear variable is added in the last step, as is the case regarding the interpretation of age effects once cohort is added to the model. Here, the age effect will be interpreted before including cohort).

Also notable in model 1c is that Japan now has significantly higher odds than West Germany (reference category), in fact by 25 percent.

For model 1d, the two political variables have been added. Regarding interested in politics, it shows that compared to those respondents who consider themselves to be very interested (reference category), those who are somewhat interested and not very or not at all interested have odds that are 26 and 49 percent higher respectively. Regarding political affiliation, in turn, only those with no preference (and those with missing values on this variable) appear to have significantly elevated odds compared to those who consider themselves to be centre/liberal (reference category).

In model 1e household income is added as a categorical variable. While the above variable remain mostly unchanged (though significant level difference of Japan versus the reference variable West Germany somewhat decreases), it shows that income is an important predictor. Even including employment status and educational attainment, support for more government spending on old-age is lower with higher income. Compared to those respondents living in a household of monthly earning between 3001 and 4000 US-Dollar, those earning considerably less than that (0-2000) show significantly higher odds while those earning more than that show significantly lower odds. This, again, is consistent with the insider-outsider theory.

Model 1f also accounts for birth cohort. In this step, the variable for period (year of survey) has been left out in order to avoid the so-called APC problem that occurs once the three collinear variables age, period and cohort are included in the same model (see for example: Fienberg 2013). The result is that the cohort variable with all groups that were born later than 1941-50 (reference category) has elevated odds, ranging from 22 percent (1951-60, significant at the 95 percent level) to 120 percent (1981-90). The 1991-2000 birth cohort shows much higher odds, which is mostly explained by its low sample size.²¹ The age variable, in turn, does not lose significance but instead, some variables gain significance: compared to those aged 65-74 (reference category), all younger age groups now have significantly lower odds of preferring more government expenditure on old-age. The country variable remains unchanged by including the cohort variable. However, in order to better understand the effects of these variables, it is important to analyse them separately for both countries, Germany and Japan, which is being done below.

²¹ The 1991-2000 birth cohort includes 261 observations, 158 of which prefer more spending (86 of 109 respondents in West Germany and 25 of 28 respondents in East Germany). This is a much higher share than among the other birth cohorts, while the sample size is only about 40 percent of the second-smallest cohort (1981-99). In addition, only the 2016 survey includes individuals born 1991-2000, which was a wave that already shows significantly elevated odds (for Germany), as shown in the regression tables.

Table 14: Model 1a-f, pooled data, logistic regression results, dependent variable: preference for government spending on old-age pensions, odds ratios.

		Model 1a	Model 1b	Model 1c	Model 1d	Model 1e	Model 1f
Variable	Category	OR	OR	OR	OR	OR	OR
Survey year (ref.: 1996)	2006	1.08	1.06	1.09	1.08	1.00	
	2016	1.32***	1.27***	1.52***	1.58***	1.57***	
Country (ref.: West Germany)	East Germany	1.48***	1.47***	1.47***	1.46***	1.35***	1.37***
	Japan	1.03	1.00	1.25***	1.18***	1.10	1.09
Age category (ref.: 65-74)	15-24		0.76***	0.86	0.79**	0.80*	0.32***
	25-34		0.64***	0.78***	0.72***	0.71***	0.37***
	35-44		0.60***	0.75***	0.72***	0.72***	0.44***
	45-54		0.66***	0.83**	0.80**	0.82**	0.61***
	55-64		0.90	1.07	1.06	1.07	0.93
	75+		0.93	0.87	0.89	0.90	0.98
Employment status (ref.: insider)	Outsider			1.23***	1.22***	1.15**	1.16**
	Retiree			1.38***	1.34***	1.25**	1.30***
	Housemaker/dis./oth.			1.16**	1.16**	1.10	1.12
	Student/apprentice			0.90	0.92	0.91	0.84
	No info/missing			1.13	1.10	1.07	1.11
Educ. attainment (ref.: academic)	mid. Sec. or less			2.13***	2.01***	1.77***	1.68***
	higher second./vocat.			1.68***	1.60***	1.45***	1.45***
	No info/missing			1.95***	1.89***	1.74***	1.83***
Interested in politics (ref.: very)	Somewhat				1.26***	1.23***	1.24***
	Not much/not at all				1.49***	1.43***	1.44***
	No info/missing.				1.19	1.15	1.16
Political persuasion (ref.: centre/lib.)	Centre left – far left				1.05	1.04	1.01
	Centr. right – far right				0.89*	0.89*	0.86**
	No preference/d.k.				1.18**	1.16*	1.08
	Missing				0.80***	0.80***	0.78***
Income category (ref.: 3001-4000) (monthly family inc., in USD and PPP)	0-1000					1.25**	1.23*
	1001-2000					1.30***	1.28***
	2001-3000					1.10	1.09
	4001-5000					0.85*	0.87*
	5001-6000					0.80**	0.81**
	>6001					0.66***	0.67***
	No info/missing					0.94	0.94
Cohort group (ref.: 1941-50)	1991-2000						3.57***
	1981-90						2.20***
	1971-80						1.88***
	1961-70						1.41***
	1951-60						1.22**
	1931-40						0.93
	1900-30						0.83
Constant		0.98	1.33***	0.41***	0.39***	0.55***	0.73**
Number of observations		10269	10269	10269	10269	10269	10269
Controlled for: living arrangement, gender, partner's employment status							

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations. Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 15 shows regression results only for Germany. As in the pooled models 1a-f, the country variable is strongly significant with respondents in East Germany showing 47 percent higher odds of preferring more government spending on old-age than West Germany (reference category), and this area effect remains significant across all models for Germany. In model 2a, which in addition to the country/area control only includes the variables year (period) and age, it can be seen that the strong period effect shown in the pooled models is even stronger. As expected in hypothesis 1.1, there is thus no decrease. Specifically, accounting for the variables in model 2a, respondents in the 2016 sur-

vey have 124 percent higher odds of preferring more government spending on old-age compared to those from the 1996 survey (reference category). 2006, in turn, is not significant. In other words, there is a considerable increase in overall support for intergenerational policies towards old-age in Germany in recent years. One interpretation is that the effects of the liberalising pension reforms are fully felt now, with more private retirement saving actively promoted by the government, which comes at a time of higher precariousness among young age in recent years. At the same time, the relatively strong economic growth and solid government finances of the last years may contribute to a notion that the government would indeed be able to finance more spending on old-age (though this latter part is not included in the estimation models). For age, in turn, it can be seen that younger age groups (except for those aged 15-24) show significantly lower odds than the reference category (65-74).

Model 2b includes employment status and educational attainment in addition to those already included in model 2a. Labour market outsiders have 33 percent higher odds than insiders (reference category). This tendency is as expected by the insider-outsider logic: higher government expenditure on pensions would put a tax burden on the whole society but it would be especially outsiders, not insiders, who would stand to gain from it. This is consistent with hypothesis 1.4. In addition, those with lower educational attainment show 221 (less than higher secondary school degree) and 82 (less than academic) percent higher odds of preferring more old-age expenditure than those with high education levels (academic, reference category). Upon the inclusion of these two variables, the age variable is no longer significant.

In model 2c, political variables are added. While this step does not alter the significance of the other variables considerably, both show high significance levels by themselves. Regarding interest in political affairs those who are somewhat interested or not interested have 29 and 70 percent higher odds than respondents who are very interested in politics (reference category). Regarding political persuasion, self-identifying as left of centre shows 37 percent higher odds than being centre/liberal (reference category) while being right of centre does not significantly differ from those politically at the centre. Having no preferences, in turn, differs from the reference category in a similar way as being left (39 percent higher odds).

Table 15: Model 2a-e, Germany, logistic regression results, dependent variable: preference for government spending on old-age pensions, odds ratios.

		Model 2a	Model 2b	Model 2c	Model 2d	Model 2e
		OR	OR	OR	OR	OR
Survey year (ref.: 1996)	2006	1.08	1.10	1.11	0.96	
	2016	2.24***	3.63***	4.03***	3.78***	
East vs. West (ref.: West Germany)	East Germany	1.47***	1.47***	1.43***	1.31***	1.37***
Age category (ref.: 65-74)	15-24	0.89	1.01	0.94	0.94	0.11***
	25-34	0.75***	0.94	0.87	0.85	0.19***
	35-44	0.73***	0.95	0.91	0.92	0.32***
	45-54	0.67***	0.84	0.83	0.83	0.50***
	55-64	0.94	1.08	1.09	1.09	0.90
	75+	1.03	0.99	1.00	1.00	1.18
Employment status (ref.: insider)	Outsider		1.33***	1.32***	1.25**	1.27***
	Retiree		1.25*	1.24*	1.17	1.54***
	Housemaker/dis./oth.		1.27**	1.22*	1.16	1.10
	Student/apprentice		1.01	1.03	1.01	0.77
	No info/missing		1.14	1.09	1.05	1.22*
Educ. attainment (ref.: academic)	no more than (mid. sec)		3.21***	2.80***	2.44***	2.09***
	higher secondary/vocat.		1.82***	1.74***	1.57***	1.75***
	No info/missing		2.47***	2.38***	2.11***	2.64***
Interested in politics (ref.: very)	Somewhat			1.29***	1.26***	1.26***
	Not much/not at all			1.79***	1.70***	1.74***
	No info/missing.			1.24	1.21	1.25
Political persuasion (ref.: centre/lib.)	Centre left – far left			1.37***	1.35***	1.15*
	Centr. right – far right			1.18*	1.17*	0.97
	No preference/d.k.			1.39***	1.36***	1.14
	Missing			1.32***	1.33***	1.05
Income category (ref.: 3001-4000) (monthly family inc., in USD and PPP)	0-1000				1.15	0.97
	1001-2000				1.32***	1.16
	2001-3000				1.02	0.98
	4001-5000				0.80**	0.86
	5001-6000				0.78*	0.81*
	>6001				0.62***	0.68***
	No info/missing				0.80**	0.78***
Cohort group (ref.: 1941-50)	1991-2000					34.11***
	1981-90					8.59***
	1971-80					4.69***
	1961-70					2.50***
	1951-60					1.59***
	1931-40					0.87
	1900-30					0.69**
Constant		1.06	0.24***	0.18***	0.28***	0.52***
Number of observations		6574	6574	6574	6574	6574
Controlled for: living arrangement, gender, partner's employment status						

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations. Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

The income category, included in model 2d, is significant in the expected way: those with higher incomes than the reference category (3001-4000 US-Dollars per month) tend to have significantly lower odds of preferring more government spending on old-age. In turn, the age variable remains non-significant, which is in line with hypothesis 1.2 (no age effect for Germany).

In model 2e, (birth) cohort is added to the model. Here, it can be seen that younger birth cohorts tend to have higher odds of preferring more government spending on old-age compared to those born in 1941-50 (reference category). The latest birth cohorts have very high odds, which is mostly

due to the relatively low sample size of these categories and the fact that these latest cohorts only joined the survey in the latest year(s) that generally show a higher tendency of support (see comment in the pooled models above). Hence, while there is a cohort effect in Germany, this does not contradict with hypothesis 1.3 (expecting there to be no tendency of later birth cohorts showing less support for higher old-age expenditure compared to earlier cohorts).

Results for Japan are shown in table 16. In model 3a, only including year (period) and age, this can already be seen in the year variable. In contrast to Germany, where respondents in the 2016 showed higher support for increases in old-age expenditure compared to those in 1996 (reference category), this effect is also significant in Japan but in the opposite direction. Compared to respondents from 1996, those in 2016 have 47 percent lower odds of preferring more old-age expenditure. One explanation may be the fiscal burden that Japan has assumed within the ten years between 2006 and 2016, during which Japan experienced the Global Financial Crisis from 2008, the Great Tohoku Earthquake in 2011, and continuously low economic growth. An important policy response to these challenges have been increased government spending. The decreased overall support for more government spending on old-age is consistent with hypothesis 1.1. In addition, there is a strong age gradient with younger age groups showing less support for higher old-age expenditure compared to those aged 65-74 (reference category).

In model 3b, employment status and educational attainment are added. It shows that there appears to be no outsider effect in Japan, which stands in contrast to Germany where an outsider effect is strong. The education variable, in turn, shows significantly higher odds (by 58 percent) of those with less than a higher secondary school degree compared to those with an academic degree (reference category).

Model 3c, including interest in political affairs and political persuasion, does not alter the significance of the above-discussed variables of the previous models. In turn, neither of the newly added variables shows significant results at the 95 percent level, which stands in contrast to Germany (where those self-identifying as politically left of centre have higher odds than those at the centre, while those being very interested in politics show significantly lower support for more old-age expenditure compared to those being somewhat or not interested).

In model 3d, income is added, and as in Germany, higher income is associated with lower support for increases in old-age expenditure. With the variables included here, employment status is still not significant. Consequently, there is no support for hypothesis 1.4 (labour market outsiders showing more support for increases in old-age expenditure compared to labour market insiders). In turn, the age variable continues to be significant. Compared to respondents aged 65-74 (reference category),

Table 16: Model 3a-e, Japan, logistic regression results, dependent variable: preference for government spending on old-age pensions, odds ratios.

		Model 3a	Model 3b	Model 3c	Model 3d	Model 3e
		OR	OR	OR	OR	OR
Survey year (ref.: 1996)	2006	0.85*	0.90	0.91	0.93	
	2016	0.53***	0.58***	0.58***	0.60***	
Age category (ref.: 65-74)	15-24	0.55***	0.63**	0.59***	0.60***	2.46***
	25-34	0.45***	0.56***	0.53***	0.54***	1.68**
	35-44	0.43***	0.55***	0.53***	0.54***	1.10
	45-54	0.58***	0.74**	0.71**	0.74**	1.12
	55-64	0.77**	0.89	0.88	0.89	1.07
	75+	0.80	0.72**	0.74**	0.74**	0.68**
Employment status (ref.: insider)	Outsider		1.03	1.02	0.98	0.97
	Retiree		1.11	1.10	1.05	1.11
	Housemaker/dis./oth.		1.14	1.13	1.10	1.05
	Student/apprentice		0.75	0.76	0.80	1.03
	No info/missing		1.04	1.04	1.00	0.86
Educ. attainment (ref.: academic)	no more than (mid. sec)		1.58***	1.56***	1.41***	1.46***
	higher secondary/vocat.		1.13	1.12	1.06	1.05
	No info/missing		0.83	0.85	0.82	0.81
Interested in politics (ref.: very)	Somewhat			1.24**	1.21**	1.20**
	Not much/not at all			1.18	1.14	1.14
	No info/missing			1.23	1.16	1.21
Political persuasion (ref.: centre/lib.)	Centre left – far left			1.17	1.15	1.12
	Centr. right – far right			0.95	0.95	0.94
	No preference/d.k.			1.09	1.07	1.09
	Missing.			1.08	1.06	1.02
Income category (ref.: 3001-4000) (monthly family inc., in USD and PPP)	0-1000				1.57***	1.56***
	1001-2000				1.34**	1.31**
	2001-3000				1.32**	1.30**
	4001-5000				1.03	1.01
	5001-6000				1.13	1.15
	>6001				0.92	0.89
No info/missing				1.28*	1.23	
Cohort group (ref.: 1941-50)	1991-2000					0.15***
	1981-90					0.20***
	1971-80					0.42***
	1961-70					0.56***
	1951-60					0.79*
	1931-40					1.01
	1900-30					1.16
Constant		2.43***	1.35	1.27	1.20	0.92
Number of observations		3695	3695	3695	3695	3695
Controlled for: living arrangement, gender, partner's employment status						

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations. Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

those respondents aged less than 55 years all show significantly lower odds of support, ranging from a 26 percent (45-54) to a 40 percent decrease (15-24). This evidence supports hypothesis 1.2 (younger age groups having a lower tendency to support increases in old-age expenditure compared to older ones in Japan).

Model 3e includes cohort (instead of year/period). Firstly, it can be seen that some of the age effect disappears (especially for the relatively less young age groups). In addition, later birth cohorts show strong levels of significance. Compared to those born in 1941-50 (reference category), those groups

born later than 1960 all show significantly lower support for higher old-age spending. The 1961-70 cohort shows 44 percent lower odds, the 1971-80 cohort shows 58 percent lower odds (both compared to those born 1941-50). Those born in 1981-90 and 1991-2000 (though these have only been in the survey once and twice respectively) even show 80 and 85 percent lower odds. These later cohorts (especially those from 1971 and later) joined the labour market in times when dualisation has hit especially hard (more so among later cohorts) and who according to above-mentioned estimations are most likely to get significantly less pension benefits than earlier cohorts. To what extent they can be called a “political generation”, however, it remains unclear because, as mentioned above, the outcome variable does not, at least to the whole Japanese population, appear to be associated with any sort of political interest or persuasion. A cohort effect, in turn, can clearly be observed, which is consistent with hypothesis 1.3.

To inquire deeper into the possible effects that dualism may have on intergenerational solidarity the following subsection will show results of interaction of relevant variables in this regard.

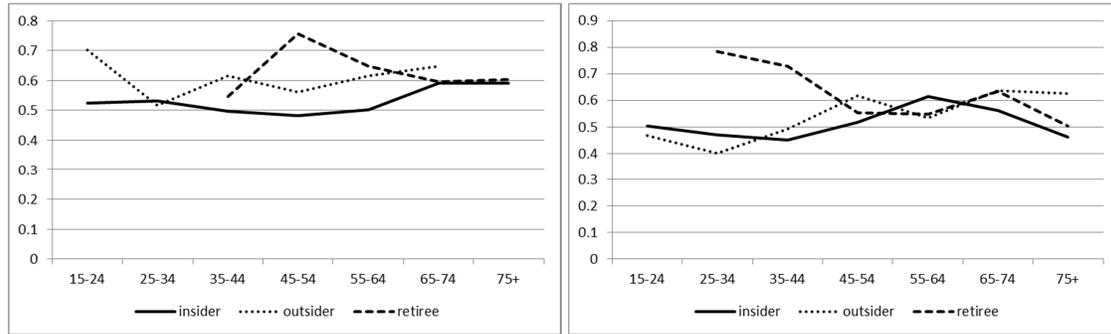
III.4.3.2 Testing for outsider effects

While effects of period, age and cohort have been shown above and are in line with the respective hypotheses, there are still missing or unexpected results regarding the effects of (labour market) dualism. Figure 27 shows plotted interaction results of the variables (here, only those categories of interest are shown; in turn, for the applied control variables see annotations below the graphs). Not differentiating by year, it can be seen that for Germany (left), outsiders show higher support than insiders at most ages (except for 25-34). In Japan (right), differences are much smaller and indeed not significant.²² Once differences within outsiders are compared across age groups, the expected age gradient of younger outsiders showing more support for increases in old-age spending compared to older outsiders is not observable.²³ Thus, there appears to be no support for hypothesis 1.5.

²² To confirm significance levels, additional logistic regressions have been applied where the reference categories are set accordingly to be able to make a judgment at the 95 percent levels of confidence. See appendix for output tables.

²³ See appendix for significance levels.

Figure 27: Interaction of age group and employment status for Germany (left) and Japan (right), dependent variable: preference for government spending on old-age pensions, average probabilities.

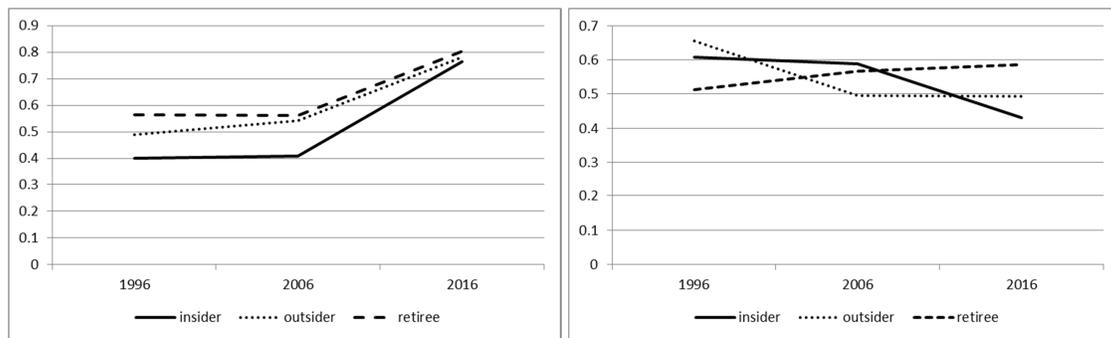


Controlled for: year, educational attainment, living arrangement, gender, partner's employment status, political interest, political persuasion, East/West (Germany).

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

In figure 28, interaction effects of employment status and year are shown in order to check whether there is an outsider effect that has developed or disappeared over time. In Germany (left), as could already be seen in the regression table, support for more government spending on old-age increased across employment types, indeed they converged to very high levels of support. In 1996, in contrast, there was a difference with outsiders supporting spending more often than insiders. Things have taken a different turn in Japan, however, where between 1996 and 2016 support for more spending declined among insiders and outsiders but increased among retirees. Support is lowest among (labour market) insiders, highest among retirees (or pension insiders), although the difference between labour market insiders and outsiders are not significant.

Figure 28: Interaction of year and employment for Germany (left) and Japan (right), dependent variable: preference for government spending on old-age pensions, average probabilities.



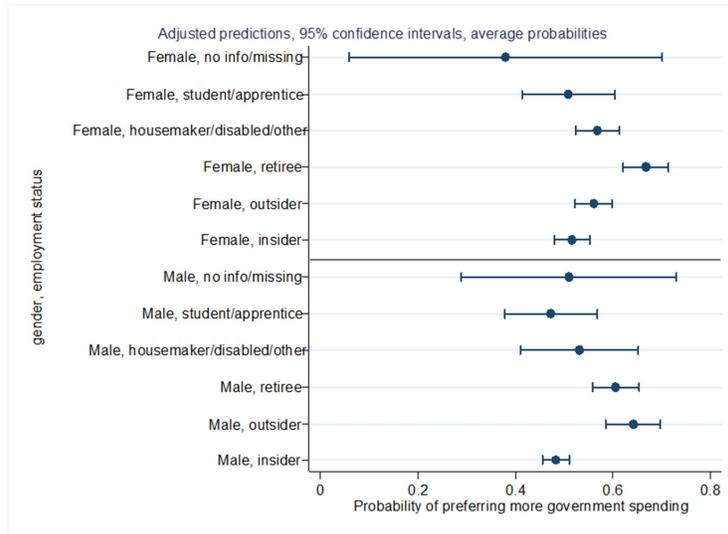
Controlled for: age group, educational attainment, living arrangement, gender, partner's employment status, political interest, political persuasion, East/West (Germany).

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

In figures 29 (Germany) and 30 (Japan), the effects of interactions between gender and employment status are shown (not differentiated by year). It is evident that for Germany is that there is an outsider effect for men but not for women: male insiders show significantly less support for more

spending than do outsiders (though once differentiating by year, this effect disappeared in 2016; see appendix) and retirees. Among women, insiders and outsiders do not differ among each other, though both show less support than female retirees. In Japan, in turn, there are no significant differences (also not once the output is separated by years; see appendix).

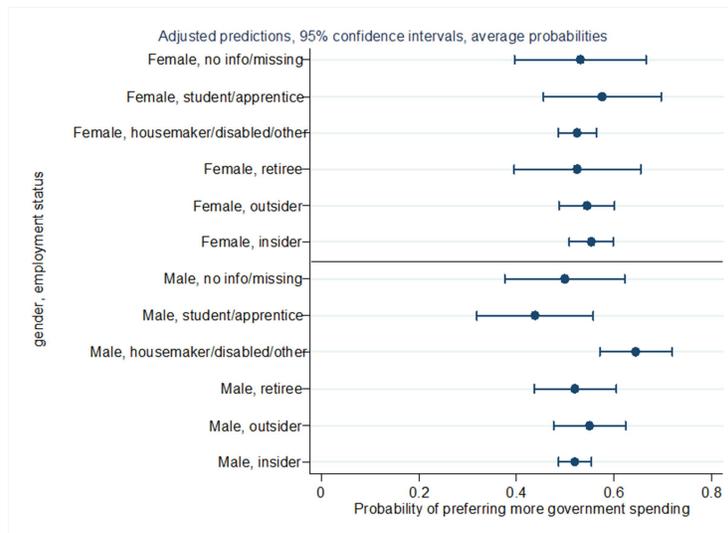
Figure 29: Interaction of gender and employment status for Germany, dependent variable: preference for government spending on old-age pensions, average probabilities.



Controlled for: year, age group, educational attainment, living arrangement, partner's employment status, political interest, political persuasion, East/West (Germany).

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

Figure 30: Interaction of gender and employment status for Japan, dependent variable: preference for government spending on old-age pensions, average probabilities.



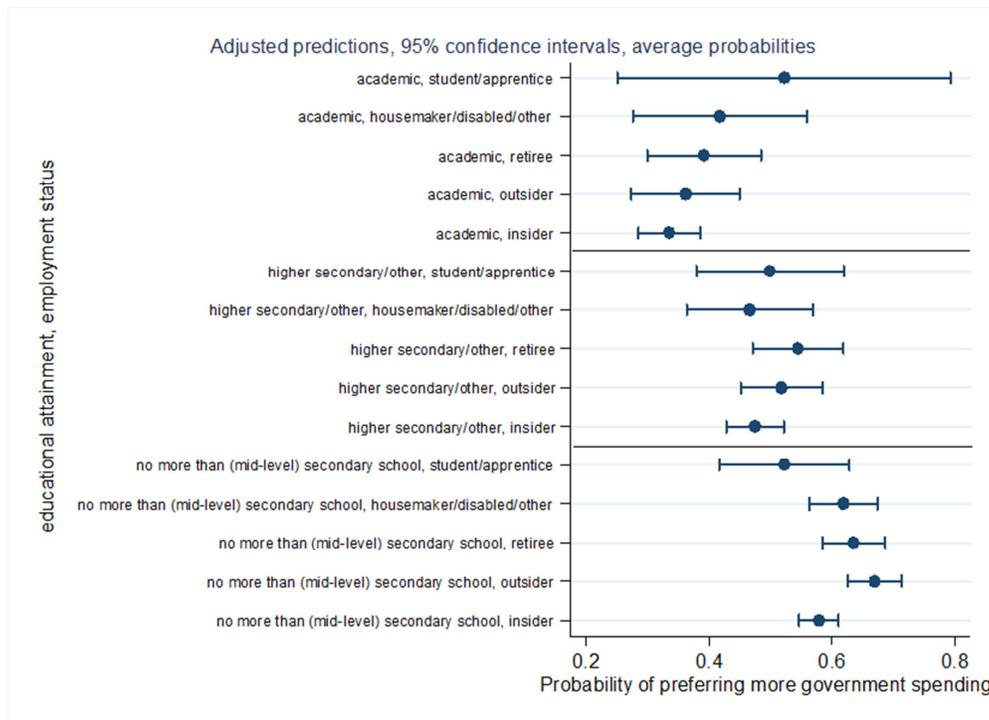
Controlled for: year, age group, educational attainment, living arrangement, partner's employment status, political interest, political persuasion, East/West (Germany).

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

Figures 31 (Germany) and 32 (Japan) show one more interaction regarding dualism, educational attainment and employment status (not distinguishing by years), which is aimed at differentiating insiders and outsiders according to their levels of skills. For Germany, a clear difference can be seen, showing that there is an outsider effect at the lowest education level (outsiders supporting more spending more often than insiders), though this effect vanishes with rising levels of education. In other words, at higher levels of education, the preferences of insiders and outsiders (and even pensioners) tend to converge (also, the effect disappeared in 2016 once results are differentiated by year; see appendix).

In Japan, with all years together, differences between insiders and outsiders do not differ significantly across levels of educational attainment. Differentiating by years (see appendix) does not alter this result.

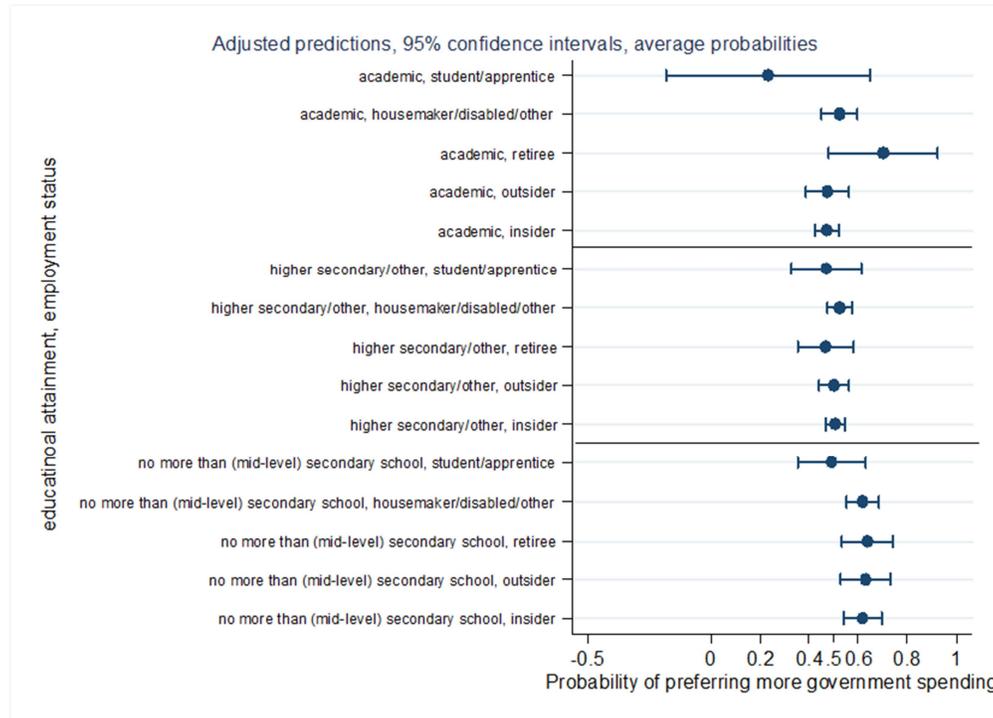
Figure 31: Interaction of educational attainment and employment status for Germany, dependent variable: preference for government spending on old-age pensions, average probabilities.



Controlled for: year, age group, educational attainment, living arrangement, partner's employment status, political interest, political persuasion, East/West (Germany).

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

Figure 32: Interaction of educational attainment and employment status for Japan, dependent variable: preference for government spending on old-age pensions, average probabilities.



Controlled for: year, age group, educational attainment, living arrangement, partner's employment status, political interest, political persuasion, East/West (Germany).

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

Considering this, there are mixed findings regarding the (labour market) outsider effect across both time and countries. While such effects are observable in Germany (for younger outsiders, for outsider men, and for low-skilled outsiders), these effects mostly disappear in the latest wave survey year (2016) once results are differentiated by year. In other words, there used to be various forms of outsider effects in Germany but according to the latest available data, there are no longer. In Japan, in contrast, which shows strong age effects, there are no outsider effects observable and this finding does not alter across years. Consequently, for both countries, hypothesis 1.4 (labour market outsiders showing more support for government spending than labour market insiders) and hypothesis 1.5 (young labour market outsiders showing higher support than outsiders at older age groups) cannot be supported here.

III.5 Discussion

This chapter has investigated intergenerational solidarity on the societal level mainly in terms of preferences for government spending on intergenerational policies, such as pensions and old-age support. Using policy preferences as an outcome variable, the two theoretical pillars of this chapter

have been Rueda's (2005) insider-outsider theory and the related literature on dualisation on the one hand and Mannheim's (1964) concept of "political generations" and related literature on the other hand. On these grounds, it has been tested in what way preferences in Germany and Japan have developed over time, across age and cohort as well as socioeconomic characteristics.

Against the background of the above, the following conclusions can be drawn. According to hypothesis 1.1, it was expected that overall support for more government spending on old-age did not decrease over time in Germany, while it did decrease in Japan. Indeed, while overall support in Germany rose over the years observed here, it fell in Japan. Hypothesis 1.1 can therefore be supported.

With hypothesis 1.2, it was expected that the effect of age on the outcome variable differs between the two countries. Specifically, it was expected that there is more support for higher government spending on old-age among older age groups in Japan, while this effect could not be observed in Germany. This has been observed: Japan shows a strong age effect with younger groups opposing higher spending more often, which cannot be observed in Germany. In fact, Germany shows reversed preference patterns with younger age groups more often supporting spending increases. Thus, hypothesis 1.2 is also supported.

Following hypothesis 1.2, hypothesis 1.3 expected there to be a cohort effect as well. For Japan, a "political generation" among younger cohorts was expected to oppose spending increases more often. For Germany, such an effect was not expected. Again, this picture has been observed in the data so that hypothesis 1.3 is also supported.

Regarding hypothesis 1.4, however, the data shows less support. While there is an overall outsider effect in Germany (labour market outsiders showing more supporting for increases in government spending on old-age compared to labour market insiders), this effect has disappeared over time and was no longer significant in 2016 (though it was in 1996 and 2006). For Japan, this effect was not significant in any year. In addition, subgroups of outsiders who are especially exposed to new social risks, such as the low-skilled or women, do not show significantly different results in Japan (and in Germany they only did in the first two years surveyed but not in the third; in addition, gender showed the reverse direction). Thus, since it is one of the objectives of this work to discuss developments over time as an analysis of the consequences of demographic ageing (and the expected results, wherever they appeared, vanished in 2016), hypothesis 1.4 cannot be supported. Hypothesis 1.5 expected there to be an additional effect among young outsiders. This, as with hypothesis 1.4, cannot be supported by the data.

The developments discussed and the results obtained in this chapter may show some general patterns, which would be worth verifying across countries. In the face of ageing, Germany and Japan

have, with their very similar demographic challenges, responded in parts quite differently on a policy level. Similarities include the dualisation trend in the labour market, the liberalisation of pension systems, and the institutional penalty thereby imposed on labour market outsiders. Regarding the structure of the welfare state, however, countries have been diverging: Germany's old-age bias decreased over time while that of Japan increased (though once adjusted for population composition at least the direction of development is similar, Japan still has a much stronger old-age bias). As a result, support for more spending on old-age strongly decreased in Japan (although poverty levels are still highest among old-age individuals, as shown above) while it increased in Germany. In Japan, where government debt levels (albeit partly due to other reasons) increased strongly over the last decades (and especially over the last years), public support for old-age spending decreased especially among younger members of society.

For Japan, the observable cohort effect hints in many ways at the emergence of a "political generation" according to Mannheim: a common source of discontent may be an unsustainable pension system that will give the later cohorts of today few benefits (indeed, as mentioned above, the young of today will probably receive less benefits from the pension system than they will have contributed to it once they reach retirement age) and at the same time levels of government debt so high that additional reforms may be required in the name of fiscal renewal. On the other hand, as partly shown above in terms of the variables on political interest and political persuasion, preferences on old-age expenditure in Japan are not correlated with either interest in politics or a certain side of the political spectrum. In other words, the issue of old-age expenditure does not seem to be a topic dividing society across political fault lines (it even does so less than in Germany, where support for more old-age expenditure is associated with being politically left).

The fact that it is older groups who prefer more spending more often while it is younger groups opposing this more often – and that in addition there is no significant difference across employment status – offers one conclusion: in Japan today, government spending on pensions is a largely rational policy issue in the sense that it is almost an established fact that the later cohorts of today will be considerably worse off than today's elderly (cohorts). Under such circumstances, it is at most of secondary importance whether one is a labour market insider or outsider (though these two groups are in fact treated very differently by Japan's welfare regime), because what really divides society on this issue is age (or cohort).

In Germany, in stark contrast to Japan, support for old-age expenditure has increased especially among young persons over time, though the 2016 survey showed a rise in support in the whole of society. One reason may be the increasing risks of old-age poverty among today's younger (and middle-) age groups. Hence, while (especially younger) respondents in Germany are facing an unsustain-

able pension system (as discussed above), the more common response (compared to Japan) is that spending on pensions should rise rather than fall. One explanation of this difference compared to Japan is the relatively solid fiscal position in Germany considering recently falling government debt levels, which stands in strong contrast to Japan. In turn, as shown by WVS data, the share of respondents with the opinion that “Old people get more than their fair share from the government” is very low in Germany, which cannot be said of Japan.

Intergenerational solidarity on the societal level, as measured in the way of this chapter, has lately been strengthening in Germany, but it has been weakening in Japan where public support for intergenerational policies directed towards old-age has been decreasing (especially among those who are not old). In the next chapter of this work, it will be tested how intergenerational solidarity is determined on the family level, which may serve as a bulwark against a possible generational conflict on a societal level.

IV Analysis 2: intergenerational family solidarity

IV.1 Theory

IV.1.1 Theory of saving and giving

IV.1.1.1 Life cycle hypothesis models

It has been widely acknowledged and shown in the previous chapter that the income and consumption patterns of individuals over the life course can be divided in three phases. At young age, a typical person consumes more than he or she generates in income, while at working age income exceeds consumption, which again changes into a deficit at old age (Ogawa et al. 2012; Kluge 2009; R. Lee 2003a). The macroeconomic consequences thereof, which can either be an accumulation or decrease of societal wealth, were first analysed in the simplistic form of the “life cycle hypothesis” (Modigliani and Brumberg 1954). Modigliani (1988) summed it up as follows:

“According to this hypothesis, the planned consumption path reflects the allocation of life resources to consumption over the life span. At least in the absence of bequests, this implies that there will tend to be saving resulting in transitory accumulation of wealth when current income is above, and/or current consumption below, average. There will be dissaving, financed from the transitory accumulation, in the opposite case” (Modigliani 1988, 16).

Extensions of this model include overlapping generations, enabling analysis of the saving, dissaving and transfer behaviour across generations while these are simultaneously alive (Heijdra and Romp 2008; Hurd, Smith, and Zissimopoulos 2011; Mudrazija 2014; Rosenzweig and Wolpin 1993). An obvious merit of such models is the applicability to country cases with ageing populations, by which it can be seen how the conditions for the intergenerational sharing of resources may vary depending on institutional differences such as welfare regimes. Mudrazija (2014) considers a model of three phases, in which one generation ages from being young to being old, preceded and succeeded by other generations who are meanwhile being born, age or die. A crucial element, already found in Modigliani and Brumberg’s (1954) original model and evidenced by NTA data above (see chapter II), is the hump-shaped pattern of transfer giving: young and old generations are net receivers of transfers while those at working age are net givers. The two basic assumptions for this model are that firstly, the primary reason for receiving transfers is need and secondly, the primary purpose of those transfers received is consumption, which is consistent with previous works on the motivations of giving by Becker (1974), Barro (1974) or Kohli and Künemund (2005). In his work, Mudrazija (2014) finds that though fundamental transfer patterns are similar across countries, the specifics, such as the age of transition from one life course phase to the next or the extent of deficit and surplus, vary depending on a country’s welfare and family regime. However, the analysis is confined to three

common European welfare state types based on Esping-Andersen (1990): the social-democratic, the conservative and the traditional (elsewhere called Mediterranean, Southern European or familialist) type (Mudrazija 2014, 251).²⁴ In all those countries that are part of the analysis, the likelihood to make downward transfers (from old to young) uniformly decreases with age, and the trend is strongest in traditional or familialist welfare regimes (see below for a definition). It is the least strong in social democratic countries, and conservative regimes fall in the middle of the two extreme types. Though Mudrazija's work shows how the giving and receiving of transfers differs along the life course and across regime types, non-European welfare and family regimes, such as Asian countries, are disregarded. This work shall expand the conceptual work by considering the case of Japan. It shall also go beyond the too simplistic assumption that the only reason for transfers is need, which is discussed below.

IV.1.1.2 Theory of transfer giving

IV.1.1.2.1 Egoism and reciprocity

There has been extensive research on the prevalence and determinants of inter vivos. Many studies have approached the topic by drawing on a rational choice approach. Apart from economic factors, individuals are assumed to derive utility from giving. These studies differ in terms of the mechanisms of giving by which individuals are assumed derive utility, ranging from a mere distinction of egoism and altruism (Horioka 2014; Hamaaki, Hori, and Murata 2016; Horioka et al. 2000), to concepts including an in-between category such as indirect reciprocity (Arrondel and Masson 2001), and manifold categorisations with more subtle differentiation between the extremes, such as social prestige, feelings of duty or social pressure (Kohli and Künemund 2003; Schokkaert 2006). Generally in the literature, egoism as a driver to make a transfer is marked by the expectation to receive a transfer back, be it in cash or kind. In contrast, altruistic individuals derive pleasure or utility from the act of giving itself or the pleasure of others. Indirect reciprocity lies in between these two extremes in that persons with this motivation seek to maintain a culture of giving. Thereby, he or she who gives is not expecting to necessarily receive something back from the same person but instead to keep alive the custom of making intergenerational transfers as such. This is especially important in settings where more than two generations are involved. It is straightforward to show how the consequences of population ageing and the individualisation in living arrangements may differ according to different types of utility from making a transfer. For example, if parents and their adult children live far apart

²⁴ Mudrazija here erroneously quotes Esping-Andersen's seminal "The Three Worlds of Welfare Capitalism" (1990) for having coined the types social democratic, conservative, and traditional. In Esping-Andersen's original typology, however, the "three worlds" refer to the types social democratic, conservative, and liberal. The traditional welfare regime was only later introduced (see for example: Rhodes 1996).

and providing care to the elderly parents is therefore impracticable for the adult children, then a parent with egoistic or reciprocal considerations would likely refrain from providing financial support since there would be no prospectus of getting something in return. In contrast, egoistically or reciprocally motivated adult children who hope to receive financial support from their parents might opt to live near their parents' home in order to be able to provide care. Horioka et.al (2016) find evidence for such latter behaviour in Japan. Horioka (2014) compares Chinese and Japanese parents with Indian and American ones and shows that the former have more selfish motivations than the latter. In an altruistic setting and even under the assumption of indirect reciprocity, living arrangements in a family and especially the distance between the individuals would not tend to affect transfer behaviour as strongly as egoism or direct reciprocity would. Albertini and Kohli (2017) find evidence for altruism among European childless elderly who are a strong source of charity giving (the authors use data of the first three SHARE waves and, beyond substantive charity giving, also find evidence of other voluntary transfers). Arrondel and Masson (2001) find indirect reciprocity in a French sample with three generational settings (it is shown that upon having received a transfer, individuals often give "back" to the next generation rather than to the one the transfer came from).

IV.1.1.2.2 Kinds of transfers

As alluded to above, in order to understand how differences in socioeconomic circumstances, family structures, or policies will likely be associated with intrafamilial intergenerational sharing, adopting a basic rational choice logic is helpful, which shall thus be done here. However, not only different types of utility from making transfers need to be considered but also different types of transfers themselves. This is relevant since where certain material (or motivational/utility) grounds for making one kind of transfer are not given, they can be or are substituted by other types of transfers.

Private transfers, hence those that are not organised through the state or the market, can be made *inter vivos* or in the form of bequests. While the latter are usually larger in size, the former tend to be more important to the receiver since they can be consumed immediately and not only upon death of the donor (Kohli and Künemund 2003). This work shall therefore, and for reasons of data availability, focus on *inter vivos* transfers.²⁵ Such transfers, carried out between living individuals, are also more diverse than bequests in that they can be made in either cash or kind, such as in the form of care services or co-residence incorporating various forms of help among the co-residents (Kohli and Künemund 2003; Mudrazija 2016; Albuquerque 2014; Albertini and Kohli 2017). As shown above (see chapter II), elderly individuals are net givers of private financial transfers until high old age. Transfers in kind, not accounted for in NTA, tend to flow downwards as well as upwards (Kohli and

²⁵ In the case of the data for Japan that will be worked with, *inter vivos* and bequest cannot always be clearly distinguished. This will be explained further below.

Künemund 2003; Albertini and Kohli 2017; Mudrazija 2016; Albuquerque 2014). For example, elderly parents provide childcare to grandchildren while adult children provide eldercare to their parents. While this dimension of non-financial transfers will be considered on a descriptive basis in this chapter, it will not be at the centre of analysis for reasons of data availability. Non-financial transfers will, however, be considered in the broader context of intergenerational solidarity and therefore be relevant for the generation of hypotheses regarding financial transfers, as will be shown below.

IV.1.1.2.3 Capability to give, need to receive

Exclusively focusing on the motivations to make transfers, however, may undermine the importance of the individual situation of the donor and the recipient respectively. Leaning on an established body of literature stressing the (financial or physical) need of the recipient (Villanueva, Demange, and Hochguertel 2005; Künemund, Motel-Klingebiel, and Kohli 2005; McGarry and Schoeni 1995; Silverstein et al. 2002), Mudrazija (2016) takes material needs, and implicitly also the capability to give, into account in his modelling of the interplay between public and private transfers. Assuming that hence the driving force of private transfers is not just egoism or reciprocity but also the need of the recipient and/or the capability of the donor, hypotheses regarding the crowding in and crowding out of private transfers in light of the presence or absence of public transfers can be made. In a three-generational setting, Mudrazija (2016) argues from a life course perspective that children and young adults often face high costs to finance events such as university entry, moving out from the parental household or marriage. In contrast, the (middle-age) working population, often parents to this younger generation, is mostly generating surplus income, which to a large extent is redistributed to both the older and the younger generation through the public sector. The old generation, who are in many cases the parents of the working-age population and grandparents of the younger generation, has accumulated private savings and is simultaneously receiving pensions and other income through the public sector. Until they become frail and need private care as well as costly healthcare services, the elderly therefore, on average, have spare resources to spend. Since the need for such resources is often strong among the younger generation, and the working-age population is already providing its share to both old and young, the able old generation becomes a net donor of transfers downwards. In other words, public transfers to the elderly may crowd out private transfers to the elderly but at the same time they crowd in private transfers to the younger generation. Comparing 13 European countries based on individual-level data from the second wave of SHARE and country-level data mostly from the OECD, Mudrazija (2016) finds evidence for these proclaimed tendencies (it is shown that where public transfers to elderly persons are higher, private transfers to the elderly tend to be relatively lower but in turn, private transfers from these benefitted elderly to younger generations are relatively higher).

Mudrazija's (2016) model, however, does not consider how living arrangements may affect transfer giving, nor does it explicitly mention the increasing precariousness among young and also working-age adults (chapters II and III), which makes downward transfers from the elderly more important but also more likely not to be high enough. A related element and also one that is disregarded by Mudrazija (2016) are socioeconomic differences. It is straightforward to assume, also in line with the life cycle hypothesis (see above), that high-income and high-wealth individuals would be more likely to make private transfers because they are in a position to do so. Whether this indeed happens, and if so to what extent it does, will be tested at the end of this chapter. It shall also be tested to what extent living arrangements are associated with how families fulfil their role of a guarantor of actual intergenerational solidarity.

IV.1.1.2.4 Social status reproduction

Bringing together the material situation of donor and recipient respectively on the one hand and the utility from making a transfer on the other, there is another mechanism to explain transfer giving. In the context of increasing dualisation of the labour market over time (see chapter III) and thereby explained increased poverty among younger adults, differences in living standards between generations may emerge. Indeed, specific cohorts may be more affected than others by certain broader economic and/or policy changes when these happen around the time of labour market entry of those cohorts. In such a context of intergenerational differences in living standards, parents may be inclined to support their adult children or grandchildren not simply because they are financially in a position to do so or because the potential recipients are in acute need of support for some reason. Giving also does not need to be motivated by egoism, reciprocity or altruism. Instead, parents may worry about downward social mobility of their offspring and to prevent this from happening, they make transfers. Albertini and Radl (2012) call this approach to downward intergenerational transfers "social status reproduction."

This approach considers parents' intrafamilial transfers as an investment into the socioeconomic status of their offspring. Stemming from Breen and Goldthorpe's (1997) model of educational attainment, one assumption is that members of a certain social class, characterised by educational status, will have aspirations towards the educational attainment of their children. For instance, parents with high educational status, such as holding an academic degree, will be more likely to consider it both desirable or beneficial and also feasible for their children or grandchildren to obtain the same education status than will be parents with lower educational attainment. Since it highly correlates with living standards, educational attainment can also be considered a proxy for an individual's socioeconomic situation in more general (Albertini and Radl 2012). Hence, not only will parents with high educational attainment face lower marginal costs to make intrafamilial transfers, they will also be more

likely to make transfers because the road for their offspring to achieving the educational attainment of their parent(s) is longer. Therefore, parents with high educational attainment should be more likely to make intrafamilial transfers to their offspring than are parents with lower educational attainment.

In a study based on the first two waves of the SHARE dataset including 11 European countries, Albertini and Radl (2012) find support for their hypothesis as parents with higher educational attainment are more likely to make transfers and tend to transfer higher amounts. In addition, once the child has achieved the same educational attainment of the parent, transfer giving becomes less likely. Analysing financial transfers specifically intended for the education of children, Rauscher (2016) reports similar findings based on US data.

IV.1.2 Intergenerational support in the welfare state context

IV.1.2.1 Crowding in, crowding out, and specialisation

As discussed above, the welfare state and the family can be considered to take on complimentary roles when it comes to the support of individuals. Rather than a mere crowding out of family transfers because of the existence of public transfers, or the crowding in because of the lack of it, social policy can provoke a sense of specialisation of support between the two sectors. Brandt and Deindl (2013) find that based on the SHARE dataset, higher public expenditure on families does not necessarily lead to a lower occurrence of private intrafamilial transfers. Instead, families may make different transfers in accordance with what the government is offering. For instance, where a government grants high public pensions, adult children may increase their in-kind transfers to their aged parents. Where families receive government support in terms of extensive childcare facilities, aged parents may be inclined to support their adult children and grandchildren by financial means instead of childcare services. Various other studies have found evidence for this specialisation hypothesis indicating a division of labour between the state and the family (Johansson, Sundström, and Hassing 2003; Daatland and Herlofson 2003; Motel-Klingebiel, Tesch-Roemer, and Von Kondratowitz 2005).

Since the specific form of family support appears to respond to the specific government support, it is important to understand the context of the countries that are subject to analysis.

IV.1.2.2 Varieties of familialism and private transfers

Building on the “Three Worlds of Welfare” of Esping-Andersen (1990), Shinkawa (2013) attempts to establish a typology that, different from the “Three Worlds” and Esping-Andersen’s own extensions, recognises how de-commodification can come with certain implications for the kind of private support in cash or kind. With a specific focus on family regimes, Shinkawa (2013) works with only two dimensions, “de-commodification” and a notion of “de-familialism”, which considers welfare and

family policies that depart from the traditional male-breadwinner bias that would otherwise persist. The concept of de-familialism is in that sense similar to Esping-Andersen's, but Shinkawa uses it to introduce "familialism" as a whole fourth family regime type (along with the other three that Esping-Andersen coined). Here, familialistic regimes are defined by low degrees of both de-commodification and de-familialism and Shinkawa finds Japan to be exemplary of this category. Germany, in turn, is again categorised as conservative, with a lower degree of de-familialism but higher degree of de-commodification. The two regime types conservatism and familialism share their cultural and policy bias towards maintaining the male-breadwinner model, according to which women would be the typical provider of care and household work. Figure 33 shows Shinkawa's categorisation schematically.

Figure 33: Classification of Japan and Germany according to Shinkawa's (2013) typology.

		<i>De-commodification</i>	
		High	Low
<i>De-familialisation</i>	High	Social democracy	Liberalism
	Low	Conservatism (Germany)	Familialism (Japan)

Though Shinkawa does not make concrete statements on intrafamilial transfers in either cash or kind, the implications from his typology become clear once one considers socioeconomics, such as a distinction between low and high income households. In social democratic regimes, where most social benefits and care services are provided through the public sector, reliance on the family as a support institution would be relatively low. Therefore, the impact of socioeconomic differences would be relatively low. In contrast, conservatism provides various services through the public sector but also upholds social stratification through the principle of income and status maintenance and by tending to exclude those without full-time employment (or labour market outsiders, see below). The state serves as a support institution where the families of those with relatively high (income or socioeconomic) status are more likely to receive replacement support when in need. For those individuals with relatively low economic status, however, the government is less generous so that the family is a crucial support institution for those persons. In contrast to conservative regimes, institutional arrangements in liberal welfare regimes do not privilege insiders over outsiders. However, liberalism is characterised by its generally frugal nature of government-provided services. Therefore, stratification implicitly goes by income or wealth, so that whoever is in a weaker financial position may have to rely to a larger extent on familial support. Similar to liberalism, familialism heavily relies on the family as a provider of support, be it transfers in cash or kind. In familialism, though, due to the low level of de-commodification, this applies to most individuals and not just for those excluded from the market due to low ability to pay. Considering the typical male-breadwinner nature of familialistic

regimes, however, families with low income may experience additional pressure when in need as they often depend on a single earner whose income and social security may not be sufficient to provide for all members.

Comparing actual intergenerational transfers, both cash and kind, in a welfare-regime setting, Albertini et.al (2007) find such patterns to be broadly consistent with Esping-Andersen's (1990) typology once a familialistic regime type is included.²⁶ Using wave 1 data of the Study of Ageing and Retirement in Europe, they differentiate intergenerational transfers of time and money in ten countries that are usually categorised as conservative (or Continental European), social-democratic (or Nordic), or familialistic (or Southern European). One crucial finding is that, as mentioned above and in line with other studies (Hank and Buber 2009; Kluge 2009; Kohli 1999b, 2004, 2006; Kohli and Künemund 2005; R. Lee 2003b; Ogawa, Mason, Chawla, and Matsukura 2010), across age and countries, there is a net downward flow of private transfers from old to young. Comparing regime types, and in line with the specialisation hypothesis, transfers occur with the relatively highest frequency but lowest intensity in the social-democratic countries, while the reverse is the case for familialistic countries and conservative regimes fall in the middle of the two. In other words, familialistic countries appear to (financially) support their younger or older family members less often, but when they do so, their support has a higher average value than that in the other regimes.²⁷ The relatively lower frequency of support, though, is largely explained by high levels of coresidence, as the typical way of supporting one another happens within the household and often in a non-financial way that many respondents may not consider a transfer when asked (Albertini, Kohli, and Vogel 2007; Albertini and Kohli 2013; Albertini 2016). In other words, coresidence may be understood to support transfer giving, or even be thought of as almost a transfer/support in itself. In addition to coresidence possibly being a transfer already, Mason and Lee (R. Lee and Mason 2011) discuss various works with findings regarding a crowding-in effect between coresidence and intrafamilial transfer giving. Combining NTA data partly with national surveys, they show that coresidence indeed provokes intergenerational transfers in countries as culturally and economically different from each other as India, Taiwan, Japan, and Costa Rica. In the same monograph, Lee and Donehower (2011) summarise in a comparative analysis of transfers and residence patterns across countries that:

²⁶ Albertini, Vogel and Kohli's paper predates that of Shinkawa, but their typological concepts resemble each other. Shinkawa mentions that the Mediterranean countries – which Albertini, Vogel and Kohli call the Southern European type – would fall into the category of "familialism."

²⁷ After wave 2, SHARE is no longer including the amounts of transfers but only the existence or absence thereof. Therefore, an update of such analysis based on newer data is unfortunately not possible. This data limitation, which in principle also regards the equivalent Japanese Study of Aging and Retirement, has to be borne in mind in the context of this work. In the appendix, for the available cases, transfer amounts are nevertheless shown in the appendix.

“In countries with relatively high proportions of elderly co-residing with adult children, intra-household transfers to the elderly are greater, and intra-household transfers from the elderly are also greater, as we would expect. We also find, however, that in these same countries with high co-residence, inter-household transfers to and from the elderly are also greater” (R. Lee and Donehower 2011, 199).

IV.1.2.3 Social care in the welfare state

While Lee and Donehower focus on financial transfers (despite considering coresidence as a variable), Daly and Lewis (2000) put in-kind transfers at the centre of their analysis. More than Shinkawa, Daly and Lewis (2000) look specifically at types of care and who provides them in different institutional settings. Their term “social care”, according to their concept, “lies at the intersection of public and private (in the sense of both state/family and state/market provision); formal and informal; paid and unpaid; and provision in the form of cash and services” (Daly and Lewis 2000, p.282). Daly and Lewis suggested considering social care as a crucial dimension of any welfare regime since everything builds upon it: paid labour outside the household, for example, is for many individuals unthinkable without counting on someone’s care work in the household, including cleaning, shopping, childrearing, eldercare and related activities and responsibilities. In an ageing society, the importance of such social care increases. When thinking about gender, social care is important because so far, it has typically been women carrying out social care activities (Daly and Lewis 2000; Pfau-Effinger 2005a; Estévez-Abe and Naldini 2016; Goldscheider, Bernhardt, and Lappegård 2015; Sainsbury 2008; Crompton 2006; Boling 2015). An important reason for this gender bias in care is path dependency of cultural norms and the design of welfare regimes that tends to go hand-in-hand with it (Pfau-Effinger 2005b; Esping-Andersen 1990; Pfau-Effinger 2005a; Goldscheider, Bernhardt, and Lappegård 2015; Estévez-Abe and Naldini 2016). In both Germany and Japan, this path led to a male-breadwinner welfare and family regime, which, however, has been loosened in recent years, as argued above and below (see chapter III). Nevertheless, the female bias in care provision and all types of household work persists (Hakim 2002; Pfau-Effinger 2005a; Estévez-Abe and Naldini 2016; Boling 2015; Crompton 2006; Sainsbury 2008).

When splitting social care into childcare and eldercare, Daly and Lewis (2000) find that there is variation among welfare regimes according to who is mostly responsible for carrying out those tasks: the public sector, the family or a voluntary sector.²⁸ Provision through the market is not properly considered here: private responsibility, as shown in the table, can imply market provision (as is the case in the liberal regime for childcare) while at the same time, public responsibility might function in terms of cash transfers for care services that will be provided by the market (eldercare in liberalism). Nevertheless, the typology provides valuable insight into the division of responsibilities, which is depicted in figure 34. Familialism delegates both childcare and eldercare to the family while conservatism

²⁸ This term is borrowed from Daly and Lewis (2000, 282).

divides both childcare and eldercare between the family and the voluntary sector consisting of civil society organisations such as those affiliated with labour unions (for instance “Arbeiterwohlfahrt” in Germany) or religious communities.

Figure 34: Care responsibilities of institutions across welfare regimes according to Daly and Lewis’ (2000) concept of social care.²⁹

	Social Democr.	Conservatism	Liberalism	Familialism
Childcare	Public	Private/civil soc.	Private	Private
Eldercare	Public	Private/civil soc.	Public	Private

Daly and Lewis’ (Daly and Lewis 2000) empirical analysis, on which the typology is based, includes only European countries and does not include important family reforms of the last years. Nevertheless, against the background of these tendencies of different regimes, specific institutions in the two countries can be discussed. For the following subsections, this typology shall serve as guiding coordinate when discussing institutional and policy developments in the realm of the family as a (social and also legal) institution as well as policies of childcare and elderly care. Thus, to understand the two countries’ institutional transition paths over the last years and decades, which is discussed below, it shall be assumed that Germany’s (conservatism-influenced) institutions have evolved from a strong private/family bias and a voluntary sector that contributes to the provision of welfare (see below for a discussion. Those of Japan (rather familialism-inspired, as alluded to by Shinkawa; see above) have evolved from a stronger bias towards private (intrafamilial) provision of care services.

IV.2 Family institutions and policies

IV.2.1 Family institutions

IV.2.1.1 Germany

As is characteristic of conservative regimes, the family has traditionally assumed an important role in Germany. Derived from the centuries-old catholic principle of subsidiarity, the first provider of insurance would be the family, the second the Christian Church³⁰ and only third in row would come the responsibility of the government (Palier 2010). Equally, the focus on family or household income instead of individual income when calculating benefit entitlements also shows the strength of the fam-

²⁹ Daly and Lewis (2000) use a different terminology, denoting the liberal type as the Beveridgean welfare state, the conservative type as Bismarckian, familialism as Mediterranean and social democracy as Scandinavian. Since these terms are often used interchangeably and their classification of countries goes hand in hand with the classifications of other works that use the respective other terminology, I have chosen the terminology above in the name of consistency within this work.

³⁰ In the face of economic development and industrialisation the voluntary/community sector of welfare providers grew, which would complement and partly replace the welfare role of the Church. This included labour-movement related organisations and additional ones with other affiliations (see for example: Palier 2010).

ily as an institution. Filial obligation is legally secured by law and bears a long tradition. Ostner (Ostner 2010) notes that: “Until very recently, West Germany obligated husbands and wives, parents and children to mutually care for one another for as long as necessary, and anchored this principle in law” (Ostner 2010: 220).

Already the catholic-inspired Bismarckian welfare state had put the family at its centre, a concept carried on in the Weimar constitution from 1918. Germany’s Nazi government, not opposing the catholic family values in principle, historically stood out with its pronatalist intrusion into familial privacy. After the Second World War and upon Germany’s division into East and West, governments on both sides were careful to avoid this pronatalism and its fascist connotation, and by rebuilding their polities, especially capitalist West Germany gave the family a crucial role in its new welfare regime (Ostner 2010). Breaking with old traditions, East Germany promoted a dual-earner and largely gender-equal family model from early on, aiming at mobilizing a possibly large workforce and reaching full employment. Upon childbirth, the mother would withdraw from the labour market only for a short time, after which state-provided childcare facilities would take charge of the children. In this way, children could be made sure to be taught Socialist ideals and work ethic while women were available for employment. West Germany, as noted above, promoted a marriage-based family model with complementary gender roles consisting of a male breadwinner and a female housemaker, a logic supported by tax allowances and moral imperatives (Bosch and Jansen 2010; Ostner 2010). Step by step, West Germany relaxed its preferred support of the “nuclear family model”, consisting of two married parents and their biological children, introducing parental leave entitlements in the 1970s, and extending eligibility to up to three years including related pension credits in the 1980s (Bosch and Jansen 2010; Fleckenstein 2011; Ostner 2010).

Upon reunification in 1990, West Germany’s legal and economic system was imposed on former East Germany. More than a decade and a half after reunification in 1990, Germany did, however, put the role of the family in the whole country on a new footing with a reform package in 2007. The parental leave benefit reform was designed as an incentive to realise gender-equal parental leave from the labour market, and thereby increasing the labour population. From 2005 onward, the government had started to systematically expand childcare by granting a nationwide right to a care facility spot to every child from age one³¹ (Henninger, Wimbauer, and Dombrowski 2008; BMFSFJ 2017). These steps have been considered as a paradigm shift in the German welfare state, moving it, at least in terms of family policy, towards the more gender-equal social-democratic model (Palier 2010; Henninger, Wimbauer, and Dombrowski 2008). In comparison with other countries, including and

³¹ In some federal states, especially in East Germany, however such legal entitlements had been in place already before (Kreyenfeld, Spieß, and Wagner 2002; Ostner 2010).

especially Japan, Germany's parental leave benefit (Elterngeld) and other family benefit schemes such as child benefits and further packages have been found to be rather generous (Coulmas and Lützel 2011). Parental leave to both sexes is encouraged, offering 67 percent of the job salary for twelve months, capped at 1,800€ per month, plus two more months for the other parent (Seeleib-Kaiser and Toivonen 2011b; Palier 2010). This marked a significant increase compared to the 300€ per month that had been granted to parents who took parental leave previously (Kreyenfeld, Konietzka, and Böhm 2007).³²

Despite the shifts, which mark a clear trend towards de-familialisation, the central role of the family in terms of the provision of welfare continues. Beyond household income as the basis for benefit entitlement calculation, responsibilities of support remain: "[I]n Germany, parental obligations—mostly cash obligations—last till the age of 25 for children in education and forever in the case of living-in children of any age who lack means, including the unemployed on the reformed job seeker benefit scheme (Arbeitslosengeld II)" (Ostner 2010, 227). Regarding old-age relatives, in turn, the familialistic stance has been weakened but in principle remains: "Filial obligations also persist: while the German 2001 pension reform abolished children's obligation to support their income-poor pensioner parents, they must still pay for the care of their needy elderly parents" (Ostner 2010, 227). At the same time, such need for care tends to increase because in a population ageing as fast as Germany's the share (and total number) of the frail elderly tends to grow rapidly. Regarding the (private) provision of care, in turn, one major challenge is that other things being equal and with the rising labour participation of women, who have been the typical informal care providers in the past, the increasing need for care may not be met with an increasing availability of caregivers.

IV.2.1.2 Japan

Before Japan entered the industrial era as a relative latecomer in the second half of the 19th century, the family was the centre of "practically all activities" (Suzuki 2013, 70), including production of value added, care of children, elderly and disabled family members as well as education.³³ In line with Confucian beliefs, the Japanese family comes not only from a strong tradition but also from one with

³² West Germany had introduced a six-week parental protection regulation scheme in 1952, which was extended to eight weeks in 1955. From 1979, working mothers could take six months of paid parental leave. From 1986, a "childrearing vacation" (Erziehungsurlaub) of ten months with 600 Deutsche Mark per month were introduced, which until 1992 was successively raised to three years. From 1993, parental (monetary) benefits and parental leave were decoupled and benefits only granted up to two years. From 2001, more flexible ways of using parental vacation were introduced, enabling parents to receive higher benefits (900 Deutsche Mark) for a shorter period (one year instead of two) and benefits made family-income contingent (see for example: Kreyenfeld, Konietzka, and Böhm 2007, 437).

³³ This kinship structure, called ie-system ("ie" being Japanese for house, household or family), was established for the elite, the Samurai class, in the Tokugawa shogunate from the early 17th century. In the Meiji period starting in the latter half of the 19th century, which abolished Japan's feudal system, this structure was expanded to more strata of society (see for example: Goodman 2005).

a clear hierarchy.³⁴ Until the Second World War, the son and his wife were legally subordinate to the head of household in the husband's family line (mostly but not necessarily the father), who could make decisions over arranged marriage and inheritance. On the institutional level, this led to a strong subsidiarity of family affairs where the state would largely withdraw from this field. Such an "East Asian" welfare model has been associated with by-law deference to filial piety, family and kinship as central elements, while the state's role was mostly restricted to being a provider of education (Goodman, White, and Kwon 1998; Peng and Wong 2010). Still today, while many Western European societies have abolished legal responsibilities within the family, Japan's Civil Code, Article 877, requires persons in a lineal relationship, including siblings and under some circumstances also third-degree relatives, to care for each other. This regulation is, according to Ogawa et.al (2012) "often invoked and enforced", and has created and supported a family culture of "deep sensitivity to social approval, a strong motivation throughout life to relieve oneself of indebtedness to others, and absolute duties to parents" (Ogawa et al. 2012, 248). Such tendencies have, however, been weakened over the last decades. In an anthropological study of changes in Japanese family patterns in the face of ageing, Long (2014) finds that:

"[T]he industrialization of Japan over the course of the twentieth century undermined the stem family system in both urban and rural areas, as most people became more dependent for their future livelihood on the educational system rather than on inheriting the family farm or business. More people moved away from their parents' homes for jobs or for higher education. Corporate workers lived in cramped quarters and were sometimes transferred away from their home areas; rural youth migrated to cities for jobs" (2014, 186).

In international comparison, and in line with other East Asian countries, Japanese family structures continue to be noted not only for late departure from the parental home, high occurrence of post-marriage co-residence and co-residence at older ages, relatively high household savings in the absence of a strong welfare state (though Japan's savings rate has strongly diminished lately, as shown above, and the welfare state has expanded) as well as high family expenditure on children's education and health of the elderly members (Raymo 2014; Peng and Wong 2010).

³⁴ Confucianism, or Neo-Confucianism, was adopted as state philosophy by the Tokugawa shogunate in the early 17th century and among other things helped shape the role of the individual in the family as well as in society (Tucker 2018). Crucial ingredients of Confucian social life are the five basic relationship patterns, which are located between 1) king and subject, 2) father and son, 3) husband and wife, 4) elder brother and younger brother, and 5) the family and its outside relations. These links would traditionally help maintain the social order (see for example: Winfield, Mizuno, and Beaudoin 2000; Yum 1988). Regarding hierarchies, Winfield et.al note that: "In each relationship, the younger, weaker or female members pay respect to the older, stronger or male members" (2000, 332).

During the decades-long era of almost uninterrupted and high economic growth³⁵, the Japanese welfare state did ease the burden on the family in some ways (notably in terms of spending for elder-care and to a lesser extent on childcare, as will be discussed below), yet emphasizing the importance of the family as an institution in others (by welfare entrenchments such as introducing co-payments on healthcare). In terms of easing, as mentioned above, the universal public pension and health insurance programs were introduced already in 1961 (Suzuki 2013). On the other hand, in order to prevent a strengthening of left-wing movements, the conservative government and the corporate sector introduced generous programs mostly, but not exclusively, through so-called firm-specific welfare including life-long employment contracts with salaries high enough to sustain a whole family even in the working-class.³⁶ Spouses became entitled to corporate welfare benefits, such as health insurance and pension schemes, as long as their annual incomes would not exceed a certain amount well below that of a full-time employee, disincentivising female full-time employment (Shinkawa 2013). Such provisions were historically generous and filled, at least for labour market insider families with a full-time prime earner, various gaps the welfare state would not touch. On the other hand, they also reinforced the male-breadwinner bias even through the corporate sector.

In the 1960s and early 1970s, this strongly familialistic structure was thought to be just a stepping stone towards eventually establishing a Western-style welfare state. When the oil crisis hit various rich oil-importing countries from 1973, however, the governing Liberal Democratic Party (LDP) blamed the more generous welfare states in the West for the prolonged economic turmoil there. Since workers would be demanding ever higher wages with little consideration for the national economy, the government suggested, the welfare state should refrain from offering too much. Against this background, the LDP declared the “Japanese-style welfare society” in the 1970s, which reinforced familialism but this time, rather than being a temporary approach, thought as a permanent state (Miura 2012; Peng and Wong 2010; Shinkawa 2013). Welfare retrenchments were carried out. On the one hand, from the 1980s, child-care as well as long-term care regulations for the elderly were introduced, with Japan setting a world-wide example to follow in the latter regard (Campbell 2008). On the other hand, though, healthcare co-payments were introduced in 1982 for the elderly

³⁵ While economic growth was consistently above 4 percent in the 1970s, Japan entered a recession following the oil shock of 1973, after which the economy quickly bounced back to previous growth levels (World Bank 2018). Another recession followed in 1982. With the negotiation outcome of the G5 Plaza Accord in 1985, forcing Japan to appreciate its currency, the government adopted a low-interest rate policy provoking high economic growth contributing to the inflating of a speculation bubble (see for example: Fujita and Tabuchi 1997; Obstfeld 2009). In 1985-1989, the average real economic growth yielded 5.16 percent until the bubble burst in 1990 (see chapter II). Onwards, growth fell considerably and, in five-year average values, has since been oscillating between 0 and 2 percent per year.

³⁶ While the Employees’ Pension System was designed to cover all workers except for those in the smallest companies, the National Pension System was meant to include everyone not covered by an employment-related pension programme (see for example: Campbell 2008; also see chapter III).

and in 1984 for employees, in addition to a flat-rate tier of employees' pension schemes (Shinkawa 2013). These steps exerted financial pressure on the familial household. In the 1980s, amid advanced population ageing, an increasing female labour participation rate and still insufficient government support for the elderly, a "care crisis" broke out with many families overburdened by their increased responsibilities (Miura 2012).

These steps have initiated an ongoing shift of the Japanese welfare state towards a more liberal regime type (Shinkawa 2013). To ease the thereby induced burden placed on private households, Japan's successive governments, mostly in the form of the conservative LDP and up until the current Abe administration, have tried to push for more gender equality (Raymo 2014; Seeleib-Kaiser and Toivonen 2011b; Shinkawa 2013). Speaking in the vocabulary of Shinkawa's typology, there have been attempts to de-familialise the Japanese welfare regime. But despite increased female employment, the effects are meagre so far with a still high gender wage gap, a higher share of non-regular employment among females and little change in the family roles regarding who provides care (Raymo 2014; Seeleib-Kaiser and Toivonen 2011b; OECD 2015b; Estévez-Abe and Naldini 2016).

As in Germany, the role of the family as a provider of (intergenerational) support is increasing in Japan. In turn, to a seemingly stronger extent than in Germany, the capacity of the family in Japan to fulfil this role accordingly appears to be under threat. Although (full-time) labour participation among women is still relatively low compared to other industrialised countries, there have been notable increases over the past decades. At the same time, population ageing is not only more advanced than in Germany (see chapter II), but there is also more precariousness among younger persons (see chapters II and III). In addition, living arrangements, which are one crucial infrastructure for familial support, have been changing at a higher pace and more crucially than in Germany (see chapter II and this chapter). As shown above, the trend towards smaller household size and less occurrence of multi-generational households is posing a challenge for the family to fulfil the role of a provider of support.

Regarding the role the family can play in terms of intergenerational support, the situation seems critical: on the hand, amid demographic ageing and increasing financial pressure on the individual, its importance appears to be rising. On the other, two important drivers of support, coresidence and the financial strength of households, appear to be weakening its potential.

IV.2.2 Donors' capability and recipients' necessity

IV.2.2.1 Capability

As mentioned above, one important factor regarding intergenerational transfers, especially regarding financial transfers, is the material capability to give. Next to income, which generally tends to

decrease with increasing age (see chapter II), one important factor for this is wealth such as the possession of financial assets and real estate. Of course, home ownership does not in all cases imply that someone is leading a wealthy life. Home ownership can be considered to be dependent not only on the availability of financial resources but also on non-financial factors such as individual living and spending preferences and the opportunity costs compared to renting a dwelling. In addition, the value of an owned home may in some cases even be well below the price of a rental apartment so that renters may overall be wealthier than homeowners (Mulder and Wagner 1998; Kurz 2004; Andrews and Caldera Sánchez 2011). Nevertheless, home ownership shall still be considered here as a proxy for wealth in more general.³⁷ The two most important reasons for this are the financial costs that buyers of real estate are confronted with and the capital gains that owning a house usually produces (Kurz 2004). Kurz (2004) finds that intergenerational transfers such as bequests increase the likelihood of transitioning into home ownership. Considering housing ownership as a proxy for wealth in more general, this relation can also go the other way: he or she who owns a dwelling is more likely to be in a position to make transfers. In turn, individuals who do not own housing may be more likely to be in a less favourable economic condition.

IV.2.2.2 Germany

Various works show that compared to other industrialised countries, home ownership rates in Germany are relatively low, with around 40 percent of all households owning the dwelling they are living in (Mathä, Porpiglia, and Ziegelmeier 2014; Kurz 2004). In East Germany it is even lower than in West Germany (Kurz 2004). Analysing data ranging from 1957 to 1993, Kurz (2004) shows that, ownership rates of working class households have been relatively high until the 1970s, after which they stagnated whereas the ownership rates of households whose principal earners were service workers or civil servants continued to increase. Kurz argues that the main reason for the relative decline of working class households' ownership rates is the deteriorated economic conditions marked by lower labour security starting with the oil shock in the mid1970s. Throughout the analysed period, households with self-employed principal earners had the highest rate with slightly more than 60 percent. Distinguishing by birth cohorts, it is found that amid a more uncertain economic environment from the 1970s onwards, younger cohorts have shown delayed and less frequent transitions into home ownership (Kurz 2004).

Comparing 15 European countries, Lennartz, Arundel and Ronald (2015) find that in addition after the 2007-08 global financial crisis, home ownership rates among young adults aged 18-34 years have generally declined. Though specific conditions differ across countries, the two most important rea-

³⁷ In the analytical section of this chapter, owning real estate assets will be used as an independent variable. To avoid confusing owners of low-price dwellings with those of high-prices, possession of financial assets will be controlled for.

sons for this development are adverse labour market conditions and increased volatility of financialised housing markets. In Continental European countries with a strong rental market, in turn, effects of the financial crisis were relatively low. In the case of Germany, while 15 percent of the 18-34 year old population had owned a dwelling in 2007, this value only declined by 0.9 percentage points in the six-year average of 2007-12. Overall, however, the authors conclude that “these are indeed not favourable times for younger adults to move into the owner-occupied sector” (Lennartz, Arundel, and Ronald 2015, 32).

Börsch-Supan et.al (2001) noted at the turn of the millennium that though German elderly persons have so far shown high savings rates and thus are accumulating wealth until high age, this pattern might change for future cohorts. One important reason for this expectation was pension reforms that would shift a considerable proportion of retirement income from pay-as-you-go schemes to a funded pillar. Such a reform, which has by now been carried out (see chapter III), is designed to increase saving at younger ages but is also likely to provoke more dissaving at higher age. Another effect of such a policy is that it marks a clearer socio-economic gradient in terms of how much can be saved, and later dissaved.

Whether younger cohorts are already disadvantaged regarding disposable income at working-age, however, is disputed. Atonczyk, DeLeire and Fitzenberger (2010) show that Germany’s male baby boom cohorts received higher overall wages than those born before and after them. Boockmann and Steine (2006), comparing West German cohorts from 1925 to 1974, show that income returns on education investment have decreased over time and cohorts. Lauterbach and Sacher (2001) show that men born between 1955 and 1970 are more likely to be in non-regular employment or unemployment than the male 1935-40 birth cohort, though the contrary is the case for women. However, Chauvel and Schröder (2015) find that although the baby boomer cohorts have had higher incomes than earlier and later birth cohorts, the differences decline once controlling for more variables. Including variables such as migration background, marital and residential status, education, and having children, the cohort effect (5.8 percent more income for the baby boomers) is the smallest one of all significant variables. According to their analysis, “after introducing controls, virtually every successive birth cohort in Germany (...) had increasing disposable incomes, similar to general rates of economic growth” (Chauvel and Schröder 2015, 298).

IV.2.2.3 Japan

Compared to Germany, Japan has a significantly higher home ownership rate, which has been at around 60 percent of all households (Forrest, Kennett, and Izuhara 2003).³⁸ Forrest, Kennett and Izuhara (2003) show that while the home ownership rate of all age groups combined remained constant between 1978 and 1998, there would have been a significant decline without those aged 60 and above. Due to the older age groups' overall sizes, as well as their ownership rate increase from over 76 to 81 percent, Japan's overall home ownership rate did not go down in this period. Meanwhile the 35-39 years age group's ownership rate fell from 58 to 48 percent, that of the 30-34 year olds went down from 44 to 29 percent, and that of the 25-29 year olds sank from 27 to 13 percent respectively. Forrest and Hirayama (2015) show that this trend continued at least until the end of the last decade. Hirayama describes this rather dramatic decline as a departure from "Japan's ownership-based aged society" (2010, 176). By this, he means that home ownership is a main pillar of Japan's welfare system, since households that own the dwelling they are living in face lower monthly expenditures, can be a crucial factor to keep families out of poverty.

Similar to Germany, Hirayama and Ronald (2008) explain the decline in home-ownership rates among younger age groups with the liberalisation of the labour market, which has led to a higher occurrence of non-regular employment, which for the first time is no longer solely a female phenomenon. In addition, Hirayama names the generally more volatile economic environment and "heavier burdens imposed by mortgages and diminishing government support in accessing the owner-occupied housing sector" (2010, 179). Against this background, Hirayama argues that:

"The escalation of inter- and intragenerational inequalities will inevitably unravel the foundations of the aged society. Home ownership in contemporary Japan can thus be described as a double-edged sword. Owner-occupation will arguably play a more significant role in sustaining a further aged society in the future while at the same time property ownership inequalities are likely to affect social solidarity" (2010, 179).

Considering disposable income and consumption between 1981 and 2008, Lise et.al (2014) find that younger birth cohorts face higher inequality than older birth cohorts. The authors use data from the Basic Survey on Wage Structure, the Family Income and Expenditure Survey, the National Survey of Family Income and Expenditure, and the Japanese Panel Survey of Consumers, and compare intra-cohort inequality in terms of individual wages and earnings, household income, after-tax income, and consumption. It is shown that between 1981 and 2008 inequality increased in every way of measuring, though less so in terms of after-tax income and consumption, indicating that government policy is alleviating the rising inequalities to some extent). Similar to projections for Germany, Curtis

³⁸ There are, however, notable regional variations with rural areas showing higher home-ownership rates than larger cities, ranging from 46 percent in Tokyo to 79 percent in the predominantly rural prefecture of Toyama (Statistics Bureau Japan 2008). With sharply rising prices of homes in urban areas, this gap widened with the consequences of the bubble economy that ended in 1990 (Hirayama 2010, see for example: 2005).

et.al (2017) expect the savings rate in Japan to decrease further in the future. Vihriälä (2017), in turn, finds that stagnant consumption has led to increasing income-to-consumption ratios, which means that assets are becoming relatively more important in financing consumption (see chapter II). Socio-economic differences pronounce this in an adverse way for those households with lower wealth and/or income, which in turn may raise the importance intergenerational transfers especially for these disadvantaged groups. Saito (2016) argues that because of increasing liquidity constraints of Japanese private households, fiscal policy is becoming more effective in steering consumption. However, since the government, considering its high debt-to-GDP ratio (see chapter III), is more likely to engage in austerity than fiscal expansion in the next years and even decades, private households are likely to face higher burdens in the future.

IV.2.3 Government support for families

IV.2.3.1 Overview

It has been shown in chapter III that over time the spending patterns of the welfare state have developed into different directions. While Germany's government expenditure has been adjusted towards working-age recipients in the light of demographic ageing, Japan's fiscal expansion has happened strongly in favour of the increasing elderly population. One important reason is Japan's government spending on the basic pension (see chapter III) as well as old-age survivor support. Another important difference between Germany and Japan is how the government is supporting working-age groups, notably families. Table 17 shows the development of government spending patterns on families³⁹ over the last three and a half decades. In Germany, around 3 percent of GDP has been spent on families in total and this value has remained rather constant since the turn of the millennium. In Japan, in contrast, welfare state expenditure for families has expanded by more than one third compared to the early 2000s. However, the increase happened from a low level, also in international comparison (OECD 2018b). Despite the expansion, Japan's family expenditure as a share of GDP is still only roughly half of that in Germany. In other words, Japan's private households receive less government support than Germany's so that the role of the family in Japan is by default more pronounced.

The considerable differences in the generosity of parental benefit schemes between Germany and Japan, with the former being more supportive, have been shown in the above sections of this chapter. When considering enrolment of children in formal childcare, another crucial element of the

³⁹ Family benefits here refer to government-financed schemes that are explicitly directed to families. This includes child-related cash transfers to families with children, public spending on services for families with children, and financial support for families provided through the tax system including tax exemptions and allowances. Social expenditure that benefits families but not exclusively families, such as spending on healthcare or housing, are not included (OECD 2018b).

state's engagement in family affairs and the degree of de-familialisation, Germany and Japan hardly differ from each other. Enrolment among 0-2 year olds (or 1-3, see remarks below the table) has increased to slightly below 30 percent in both countries. Among 3-5 year old children (or 4-6, see remarks below the table), more than 90 percent are enrolled in both countries and the share is even higher in Germany. Hence, though public childcare provisions do provide for some degree of de-familialisation and take some burden off the family, this is not the case for the majority of parents of children aged less than three years. In addition, with formal childcare not necessarily being available the whole day, many parents may be forced to take over the parental role after daily childcare hours are over.

Table 17: Family policy and childcare, Germany and Japan, percent.

	1980-84 av	1985-89 av	1990-94 av	1995-99 av	2000-04 av*	2005-09 av	2010-13 av
<u>Public expenditure on families (% of GDP)</u>							
Ger., cash/serv.	1.83	1.50	2.08	2.04	2.05	1.92	2.14
Ger., total	n.a.	n.a.	n.a.	n.a.	3.03	2.82	2.99
Jap., cash/serv.	0.47	0.41	0.43	0.56	0.72	0.85	1.30
Jap., total	n.a.	n.a.	n.a.	n.a.	1.16	1.36	1.57
OECD Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<u>Enrolment in formal childcare (% of age group)*</u>							
Germany, 0-2 y.	n.a.	6.00	16.12	11.87	18.84	28.24	27.49
Germany, 3-5 y.	n.a.	74.00	77.50	83.94	90.40	95.00	96.10
Japan, 0-2 years	n.a.	n.a.	n.a.	n.a.	n.a.	23.54	28.17
Japan, 3-5 years	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	91.08
OECD Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source (unless stated otherwise): OECD (2017c), own calculations.

* For Germany before 2010, values are taken from Krapf and Kreyenfeld (2013, 37) and refer to enrolment shares of children aged 1-3 and 4-6 years respectively. While data there are presented separately for West and East, shares have been unified here for the sake of consistency. To do so, percentages have been weighted by the population share of each area (West and East) and summed up. It has to be noted here that enrolment rates in East Germany have historically been higher than those in West Germany though West German levels have converged to those in the East over time.

Contrasting the institutionalisation of childcare with that of eldercare, another element of de-familialisation can be seen. Table 18 shows the share of recipients of two types of long-term care by age groups.⁴⁰ In both countries generally, the population share of those receiving long-term care increases with age. Also, while both countries show a bias towards long-term care provision at the recipient's home rather than at a care facility, both countries' occurrence of care provision at home has remained constant or become slightly more common over time. The population share receiving long-term care at a facility, typically more costly, has stagnated or slightly declined, which is likely to be explained by excessive cost as the total numbers of (potential) receivers has increased amid de-

⁴⁰ For Germany, these include recipients of long-term care of all classes 1-3 (including cases of hardship). For Japan also, all recipients of long-term care are included (OECD 2017b).

mographic ageing. In the beginning of the current decade, long-term care at home has been provided to about one quarter of the 80+ year olds in Japan. Adding the 9 percent receiving care at a facility, one third of the 80+ population is receiving long-term care. For the 65+ year olds, this share stands at around 13 percent. Both shares are slightly higher than those in Germany: Just over 30

Table 18: Eldercare, Germany and Japan, percent.

	1980-84 avg	1985-89 avg	1990-94 avg	1995-99 avg*	2000-04 avg*	2005-09 avg*	2010-14 avg
<u>Recipients of long-term care at home (% of population in age group)</u>							
Ger., of 65+ pop.	n.a.	n.a.	n.a.	7.47	7.22	7.00	8.16
Ger., of 80+ pop.	n.a.	n.a.	n.a.	19.17	18.74	17.78	19.66
Jap., of 65+ pop.	n.a.	n.a.	n.a.	n.a.	8.07	9.65	n.a.
Jap., of 80+ pop.	n.a.	n.a.	n.a.	n.a.	21.27	24.35	n.a.
OECD Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<u>Recipients of long-term care at facility (% of population in age group)</u>							
Ger., of 65+ pop.	n.a.	n.a.	n.a.	3.5	3.84	3.78	3.96
Ger., of 80+ pop.	n.a.	n.a.	n.a.	11.07	12.50	11.94	11.44
Jap., of 65+ pop.	n.a.	n.a.	n.a.	n.a.	2.90	2.94	2.8
Jap., of 80+ pop.	n.a.	n.a.	n.a.	n.a.	9.37	8.82	7.92
OECD Total	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source (unless stated otherwise): OECD (2017c), own calculations.

percent of 80+ year olds receive long-term care, two thirds of which get it at home, and 12 percent of the 65+ year olds. Other than childcare, however, the share of long-term care recipients by itself does not as easily allow for conclusions regarding how much of a burden is in fact taken off the shoulders of family members. The most important reason for this is while every child requires care, only elderly whose health imposes significant limitations on their daily activities, need services. Nevertheless, the information provided in table 18 gives an idea as to how common the phenomenon eldercare is and how it has been developing over time. The legal provisions for this will briefly be discussed in the remainder of this section.

IV.2.3.2 Care policies in Germany

IV.2.3.2.1 Eldercare

Care for both children and the elderly has been commonly described as “new social risks” (Bonoli 2007; Esping-Andersen et al. 2002; Taylor-Gooby 2004). New social risks, in contrast to the “old risks” that the male-breadwinner family loses its capability to generate labour income, are understood to be those risks that have long been neglected by welfare states and reforms. The lack of resources to provide care – time or money – is a result of notably population ageing, increasingly unstable family settings and labour market insecurity. These changes have given rise to the necessity to rethink care

responsibilities and ease the burden on private households (Kitschelt and Rehm 2006; Miura 2012; Bonoli 2007; Esping-Andersen et al. 2002).

In Germany, structural reforms were carried out for both eldercare and childcare (though these were not part of one reform package). First came care policies for the elderly, followed by a reform of childcare more than a decade later. In 1994, Germany's then governing conservative-liberal coalition introduced a social insurance scheme for long-term care, replacing the previously means-tested and more family-based practice of social insurance by the idea of solidarity and mandatory participation in the scheme (Cuellar and Wiener 2000; Comas-Herrera et al. 2006). Almost the whole participation is insured through this pay-as-you-go social care insurance (Soziale Pflegeversicherung), though about 10 percent have opted out to be insured through a funded private program (Comas-Herrera et al. 2006). Contributions are paid as a fixed percentage of labour income and benefits can be claimed once a person requires help of at least 90 minutes per day over at least half a year. Such basic benefits are not means-tested, but those services that exceed the costs of the benefit payments are (Cuellar and Wiener 2000; Comas-Herrera et al. 2006). In fact, and according with the information above of table 18, the care insurance has kept home care a priority over care in an ambulatory way or at a care facility. Morel (2007, 632) argues that "the reform was by no means intended to reduce the quantity of care provided informally." Instead, familialism was preserved by making informal caregiving more attractive through benefits. Depending on the intensity of care required, the benefit level varies and recipients can choose between in-kind benefits, cash or a combination thereof, whereas cash benefits can be used to pay family carers. Upon the introduction of the insurance scheme, the share of those using in-kind benefits over cash for home care decreased 84 percent to 73 percent in 2001 (Morel 2007). Table 18 shows, however, that as a proportion of the total population of the respective age group, neither those receiving care at home has changed nor that of those receiving care at a professional facility. The tendency that family care is more common than care at an eldercare facility remains.

By 2015, the first of three parts of a new "care strengthening law" (Pflegerstärkungsgesetz) was passed, which was intended to improve and individualise care (von der Heide 2014). The latter two parts of the law, which took effect by 2017, are intended to loosen the criteria to be eligible for care, expand the scope of services and thereby raise contributions (Bundesministerium für Gesundheit 2016). Rather than changing the paradigm of care, the law is building on previous concepts. As such, it has been lauded for being "surprisingly generous" for its improved benefits, though effects remain to be seen (Rothgang and Kalwitzki 2015).

IV.2.3.2.2 Childcare

As mentioned above, more paradigmatic shifts in care policy were made in 2005 and 2007 regarding childcare, decisively overhauling the previous more modest and male-breadwinner-oriented parental leave schemes. As discussed above, the 2007 family reform introduced elements that are typical of social-democratic welfare regimes such as gender-equal parental leave and an increase in daycare facilities also for children below Kindergarten age. As can be seen in table 17, this policy, upon which public expenditure on families relative to GDP increased by about 10%, had an effect especially on daycare for children aged 0-2 years. On the one hand, enrolment in formal childcare in this group almost doubled, but on the other hand the share of such children is still only about one fourth of the total population in that age group. In line with Seeleib-Kaiser and Toivonen (2011a), Henninger et.al (2008) argue that although the 2007 family reform was a push towards gender equality by introducing elements of social democracy, the benefit structure of the law was focused on activating high-skilled women. According to the argument, the increase in gender equality has since been stratified by qualification with low-skilled and low-earning women not benefiting to the same extent from parental leave as do high-skilled and high-earning women: “As the level of benefit increases with the income level, it is above all working parents from the middle and upper income groups that benefit” (2008, 297).

This element of stratification, in fact a fundamental feature of conservative regimes, is relevant for both childcare and eldercare. In this context, thus, de-familialisation is stronger where skills and incomes are higher. In addition, the previous gender bias in childcare provision tends to be addressed to a lesser extent for lower-skilled women because of typical gender wage gaps: since it is the case for most parental couples that the male partner has a higher labour income, it appears financially sensible especially for women with lower salaries (mostly correlated with lower skills) to take the full available time of parental benefit. For women with higher labour income (or skills), in turn, the income difference to the (mostly male) partner can be expected to be lower and therefore the opportunity costs for either partner would be more similar.

This tendency, not fully addressed by the reform, still manifests the traditional gender division of labour of childcare especially among lower-skilled women. In terms of eldercare, it is a combination culture and opportunity costs that maintain the same gender bias. As for culture, the German welfare regime had been strongly favouring informal family-provided care for the elderly over decades, which is likely one reason why it has remained the most popular choice since the 1994 reform and all its revisions. In addition, the reason why it tends to be women rather than men providing eldercare is not only explainable by custom but also by wage level and employment status. As shown above, women on average work less hours and paid labour and even earn considerably less when they work

full-time, and they are also more often in non-regular employment. This lowers women's opportunity costs, compared to men, of taking on family care for the benefits from the care insurance. Therefore, the current conditions for families in Germany appear to create a trade-off between increasing gender equality and solid intergenerational solidarity: the higher skills, income and therefore opportunity costs are for women in families to provide care, the more difficult it becomes to maintain the current regime of intergenerational support. As long as men are not included in care and housework activities to an increasing extent, the "double burden" for women of labour work and care work is likely to go at the expense of either gender equality or of intergenerational solidarity. At least regarding (informal) childcare provision, one possible way to fill gaps resulting from such tension are elderly persons, or grandparents, that take on the role of family carers. In the next section, after a discussion of care policies in Japan in the following subsection and a brief discussion of attitudes towards care provision, it will be shown to what extent such intergenerational solidarity is taking place within the family.

IV.2.3.3 Care policies in Japan

IV.2.3.3.1 Childcare

An environment for crucial care reforms in the field of childcare in Japan emerged in the 1990s. Japan's fertility boom in the late 1940s was followed by a steep decline with the total fertility rate falling from 3.65 in 1950 to 2.04 in 1957. Until 1973, total fertility remained at this level (which is the replacement fertility level; see chapter II),⁴¹ after which it steadily declined further. However, this trend only was only publicly considered a problem in 1990. This was the year of the "1.57 shock", when fertility had dropped to this value, and the government declared low fertility a policy issue (Atoh 2011). Atoh shows that since then, Japan has laid out various family and specifically fertility policies, overturning the previous hands-off approach. The "1.57 shock" was followed by childcare legislation from 1992, and from 1995 three waves of the so-called "Angel Plans" aimed at the reconciliation of work and family life. In addition, a parental leave system was introduced as an income-related scheme, which marked a partial shift away from the traditional male-breadwinner model, offering 50 percent of the previous income during the time of parental leave (Seeleib-Kaiser and Toivonen 2011b). Though these are notable changes in the Japanese context, in international comparison, Japan's financial support for young families is still modest, also relative to Germany (Coulmas and Lützel 2011; Atoh 2011).

⁴¹ An exception was 1966, which in the Chinese zodiac is the year of the fire horse. According to traditional beliefs this would be an unlucky year for the birth of a girl. As a result in 1966, total fertility rate fell considerably and approached 1.6, after which it increased again until 1973 (see for example: Retherford, Ogawa, and Sakamoto 1996).

The modesty of Japan's family policy can also be seen in table 17, which shows a multiplication of public expenditure on families over the last decades on the one hand, but still a significantly lower share than that of Germany. Policies such as the Angel Plans and their successive programs have, in turn, raised enrolment in formal childcare among those aged 0-2 to a level slightly above that of Germany. In 2010, the then liberal government abolished a child-related tax deduction and introduced a universal child benefit for children under 15. However, amid strengthened conservative opposition two years later, the law was changed into a means-tested benefit two years later though the income threshold was high enough to include a large proportion of families (Saraceno 2016). Maternity leave, for which only full-time employed women with labour market insider jobs are eligible, is 14 weeks, to which one additional week of paternal week can be added, though this is also only applicable to labour market insiders. Beyond the much shorter period of parental leave compared to Germany, the possibility to take the leave also appears more difficult. As mentioned above, though illegal, social pressure at the workplace is often said to make both mothers and fathers refrain from taking the leave (Macnaughtan 2015). According to a trade union survey from 2013, one in four women has been a victim of so-called "maternity harassment", or "matahara" in Japanese, where women intending to take a leave are criticised for their apparent lack of solidarity with their co-workers (Rengo 2013). Mun and Brinton (2015) show that despite legal entitlements in place, more than 60 percent of women who are pregnant or recently gave birth exit the workforce altogether instead of taking parental leave.

The current conservative government, in an attempt to halt the shrinking of the workforce, is trying to make full-time work more attractive to women, notably by promising to expand daycare facilities for children and by encouraging companies to promote women into management jobs.⁴² Macnaughtan argues that these attempts are unlikely to succeed as long as the strict labour regime for men, which includes long hours and after-work activities with colleagues, is not also addressed (Macnaughtan 2015). In line with this, Saraceno (2016) and Estévez-Abe (2013) argue that Japan's childcare regime is still supporting familialism rather than gender equality.⁴³

⁴² Holthus (2010) shows that there is a very clear rural-urban divide in terms of the availability of childcare facilities. In urban areas, there are up to several thousands of children on waiting list whereas in some rural prefectures there are no waiting lists at all. Weathers (2016) mentions the same tendencies.

⁴³ The campaign, under which the Abe administration tried to promote female employment (Cabinet Office 2013a), sparked controversy because it appeared that the government was wishing for women to die. The reason was that next to its slogan "Towards a Japan in which women shine" (*Josei ga kagayaku Nihon e*), the exclamation "shine!" was often and prominently used in Roman letters. Read in Japanese, "shine" is the imperative form of the verb "shinu", or "to die" (see for example: Hooton 2014).

IV.2.3.3.2 Eldercare

In the field of eldercare, Japan's policy development has been more radical. In 2000, the long-term care insurance was introduced, a universal mandatory scheme covering 90 percent of beneficiaries' needs (Campbell and Ikegami 2000). Though categorisation of the level of care need is slightly different and services can only be received in kind, not in cash, the scheme was initially inspired by Germany's social care insurance (Campbell and Ikegami 2000; Saraceno 2016). Public expenditure for eldercare has since increased ten-fold, and Japan's system has been considered generous even compared to other OECD countries (Peng 2002; Campbell 2002b; Estévez-Abe and Naldini 2016). The broad coverage of formal eldercare is pictured in table 18, though the share of those receiving care declined slightly in the last years amid attempts by the government to reduce public costs. For both kinds of care, at home and at a care facility, the share of recipients is lower in Japan than in Germany in either age group. As in Germany, private care companies are allowed to offer services for both home care and institutional care. However, since Japan is not allowing to pay out benefits to recipients in cash,⁴⁴ eldercare provided by family members is less common than in Germany and hence, eldercare is de-familialised significantly more strongly in Japan (Campbell 2002a; Saraceno 2016).

The difference in de-familialisation between childcare and eldercare distinguishes Japan and Germany in an important way. In terms of childcare, Japan continues to be a strongly male-breadwinner-oriented and familialistic society, even stronger than in Germany, which at least to an extent departed from the policy emphasis on the male-breadwinner model regarding childcare. Regarding eldercare, however, Japan's system of universal long-term care insurance ruling out paid care of family members is actively de-familialistic, which is less the case for Germany. For intergenerational solidarity, under the current system, the burden on the family as an institution is eased to a stronger extent than in Germany. This would set free time resources for working-age persons, mostly women, to participate more strongly in the labour market and generate income to save money for the future or support the education of one's offspring. However, this potential is currently mitigated by a childcare regime that reinforces the male-breadwinner setting. Considering rising precariousness among working-age persons and families, realising this potential, provided by the advantageous eldercare regime, is increasingly urgent for at least two reasons. One is to counter the trend of declining household income and savings rate, which has been ongoing since the mid-1990s. The other is filial obligation to support family members in need, which regardless of long-term care continues to extend beyond the closest family members and is still invoked by law (Ogawa et al. 2012).

⁴⁴ Upon the introduction of long-term care insurance, feminists led by activist Keiko Higuchi lobbied against the payment of cash benefits for family member-provided care. Their main worry was that if cash benefits were paid to families, the money would likely be misspent while the actual care work would continue to be carried out by the daughters and daughters-in-law (see for example: Klingholz and Vogt 2013).

IV.2.4 Attitudes towards childcare and eldercare

In order to understand possible intergenerational differences regarding the provision of care, either for children or elderly, attitudinal data is a crucial starting point. In the 2012 wave of the International Social Survey Programme on the topic “Family and Changing Gender Roles IV” (ISSP 2016), individuals were asked for the first time about their attitudes towards the provision and financing of childcare as eldercare as well as more generally about their attitude towards intergenerational (upwards) support. Since these data is only available for one cross-section so far, it cannot be distinguished between age and cohort nor can a development over time be shown. Nevertheless, it is worthwhile to consult the data to get insight into differences across age groups at a given, not-too-distant point in time.

Beyond the differences in de-familialism in government expenditure according to policy field and country discussed above, there are also stark differences in attitudes towards the provision and financing of social care. When confronted with the statement that “adult children are an important source of help for elderly parents”, there does not appear to be a strong age gradient in Germany. A majority agrees to the statement at both young and old age and the two middle-age groups of 30-49 year olds and 50-64 year olds. There is a difference in gender, however, with male respondents agreeing more often than females throughout all age groups in Germany. With women being the more typical providers of care, support or help, one interpretation of this difference is that men tend to be generous because it would likely not be them having to provide the help they are asked about. In Japan, at least those women in the two middle-age groups are less likely to agree to the statement than men. Notably in Japan, among those aged 16-29 and 30-49, the share of those disagreeing among this is almost as high as that of those agreeing. The elderly in Japan are those most likely to agree to the statement.

Confronted with the question “who should provide eldercare?” Respondents in both Germany and Japan tend to answer that it should be the family, while the government is the second most popular choice, which in Germany is relatively popular among young respondents. In both Germany and Japan, respondents aged 65+ do by far more expect the family to provide the support compared to alternatives such as the government, NPOs or private institutions. Private institutions, in turn, are relatively popular among young respondents in Japan. One interpretation is that members of this older age group, have distinct attitudes because they were brought up in times with distinct social norms, whereas the current (at the time of surveying) members of younger age groups have been raised in times when some de-familialising reforms had already been initiated. Hence, this interpretation would hint at a cohort effect. However, since cohort and age cannot be distinguished in a da-

taset with one single cross-section, this difference may also be due to an age effect (with every cohort showing similar attitudes at a given age).

When asked “who should pay for eldercare?”, there is a clear age gradient in Japan, with the younger respondents expecting the government to pay more often and the elderly mostly seeing this responsibility with the family. This would be consistent with the above interpretation that different cohorts were socialised in different times with different political environments. In Germany, most respondents expect the government to provide this care across all age groups, though, again, the share of those expecting the family to provide for eldercare is highest among elderly respondents.

The equivalent questions about providing and financing have been asked regarding childcare. With respect to the question “who should provide childcare?”, in Germany, young respondents tend to see the responsibility with the family although about one third prefers the government as the provider of childcare. Those most often preferring the government as a provider are those aged 30-49 and 50-64, hence those who are most likely to be currently in need of childcare. Among the elderly, around 40 percent prefer either the family or the government as a provider of childcare. In Germany, a notable difference in comparison to Japan is the relatively high popularity of NPOs as childcare providers, which mostly refers to the above-mentioned welfare institutions forming a strong part of conservative care regimes. In Japan, consistent with familialistic regimes, a large majority prefers the family and this share is even slightly higher among those who are under 65 years of age. Among young respondents, the share of those preferring the family to provide childcare is notably higher among females than males, though this pattern is reversed among those aged 30-49 and 50-64. Again, a cohort effect in the face of (albeit weakly) de-familialising policies might be an important reason here (though it may also be an age effect, since age and cohort cannot be distinguished here), as argued above.

When asked “who should pay for childcare?”, elderly respondents in Germany see the family more often responsible than the younger age groups do. In Japan, a majority in all age groups considers the family responsible for providing the cost of childcare. Those aged 30-49 and 50-64, though, have a higher share of considering the government to be in charge.

Table 19: Attitudes towards eldercare, Germany and Japan, column percent.

	16-29		30-49		50-64		65+	
	Male	Female	Male	Female	Male	Female	Male	Female
Attitude: "Adult children are an important source of help for elderly parents."								
Germany 2012 (n: 1,766)								
agree	0.68	0.47	0.49	0.36	0.49	0.34	0.61	0.51
disagree	0.23	0.38	0.34	0.47	0.30	0.44	0.21	0.27
neither	0.05	0.10	0.14	0.12	0.15	0.15	0.16	0.16
don't know	0.04	0.05	0.03	0.05	0.05	0.07	0.02	0.06
Japan 2012 (n: 1,212)								
agree	0.40	0.40	0.41	0.34	0.44	0.40	0.54	0.60
disagree	0.40	0.34	0.35	0.40	0.28	0.33	0.26	0.21
neither	0.09	0.17	0.20	0.18	0.24	0.20	0.15	0.16
don't know	0.11	0.09	0.04	0.08	0.04	0.06	0.05	0.04
	16-29		30-49		50-64		65+	
	Male	Female	Male	Female	Male	Female	Male	Female
Attitude: "Who should provide eldercare?"								
Germany 2012 (n: 1,766)								
family	0.42	0.41	0.45	0.46	0.62	0.52	0.56	0.59
government.	0.25	0.28	0.26	0.19	0.17	0.21	0.22	0.17
NPOs	0.20	0.16	0.15	0.17	0.13	0.14	0.10	0.11
private inst.	0.06	0.05	0.06	0.04	0.04	0.03	0.05	0.04
don't know	0.07	0.09	0.08	0.12	0.05	0.09	0.08	0.10
Japan 2012 (n: 1,212)								
family	0.48	0.50	0.57	0.51	0.57	0.46	0.65	0.60
government.	0.16	0.14	0.19	0.19	0.21	0.26	0.14	0.16
NPOs	0.03	0.06	0.05	0.05	0.01	0.03	0.05	0.02
private inst.	0.18	0.20	0.10	0.15	0.10	0.15	0.08	0.14
don't know	0.14	0.10	0.09	0.10	0.11	0.10	0.08	0.08
	16-29		30-49		50-64		65+	
	Male	Female	Male	Female	Male	Female	Male	Female
Attitude: "Who should pay for eldercare?"								
Germany 2012 (n: 1,766)								
family/eld.	0.32	0.22	0.32	0.28	0.36	0.27	0.30	0.38
government.	0.57	0.64	0.56	0.56	0.54	0.57	0.55	0.41
don't know	0.11	0.13	0.12	0.16	0.10	0.16	0.15	0.21
Japan 2012 (n: 1,212)								
family/eld.	0.31	0.30	0.45	0.33	0.41	0.35	0.55	0.49
government.	0.54	0.53	0.43	0.55	0.50	0.51	0.30	0.34
don't know	0.15	0.17	0.11	0.12	0.09	0.14	0.15	0.17

Source: ISSP (2016), own calculations.

Overall, in Germany and in Japan, older age groups tend to see more responsibilities with the family, while among younger age groups the government is relatively more often considered to be responsible. This difference may have consequences for intergenerational solidarity. When the elderly demand intrafamilial support more strongly than the younger, solidarity may be challenged. How these attitudes translate into actual actions, however, will be subject to quantitative analysis in the remainder of this chapter.

Table 20: Attitudes towards childcare, Germany and Japan, column percent.

	16-29		30-49		50-64		65+	
	Male	Female	Male	Female	Male	Female	Male	Female
Attitude: "Who should provide childcare?"								
Germany 2012 (n: 1,766)								
family	0.45	0.43	0.39	0.32	0.43	0.29	0.42	0.37
government	0.34	0.32	0.44	0.42	0.38	0.46	0.38	0.41
NPOs	0.03	0.05	0.03	0.05	0.07	0.06	0.09	0.05
priv. inst.	0.09	0.16	0.06	0.09	0.06	0.11	0.03	0.06
employer	0.03	0.01	0.02	0.00	0.00	0.01	0.02	0.00
don't know	0.07	0.04	0.07	0.11	0.06	0.07	0.07	0.11
Japan 2012 (n: 1,212)								
family	0.67	0.79	0.77	0.73	0.73	0.67	0.65	0.69
governm.	0.09	0.05	0.13	0.09	0.13	0.11	0.15	0.07
NPOs	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
priv. inst.	0.09	0.08	0.03	0.12	0.09	0.15	0.11	0.15
employer	0.02	0.01	0.00	0.00	0.00	0.01	0.01	0.01
don't know	0.13	0.06	0.07	0.06	0.04	0.06	0.08	0.08
	16-29		30-49		50-64		65+	
	Male	Female	Male	Female	Male	Female	Male	Female
Attitude: "Who should pay for childcare?"								
Germany 2012 (n: 1,766)								
family/eld.	0.32	0.22	0.29	0.28	0.35	0.31	0.42	0.43
governm.	0.53	0.64	0.63	0.58	0.56	0.58	0.51	0.41
employer	0.04	0.04	0.01	0.02	0.02	0.00	0.02	0.00
don't know	0.10	0.09	0.07	0.12	0.06	0.10	0.06	0.15
Japan 2012 (n: 1,212)								
family/eld.	0.51	0.54	0.51	0.46	0.50	0.59	0.64	0.65
governm.	0.36	0.31	0.40	0.44	0.41	0.33	0.28	0.25
employer	0.02	0.01	0.02	0.00	0.01	0.01	0.01	0.00
don't know	0.11	0.14	0.06	0.09	0.07	0.08	0.08	0.10

Source: ISSP (2016), own calculations.

IV.3 Research questions, hypotheses, data, variables, and methods

IV.3.1 Research questions

In this chapter on intergenerational family solidarity, it has so far been discussed under what material and institutional conditions, and with what kind of motivations, persons may make intergenerational transfers. In the face of demographic ageing and all the above-discussed challenges that come with it, it shall be further investigated in this chapter what the determinants driving intergenerational intrafamilial solidarity are, whether these drivers have been strengthened or weakened over time, and whether there are institutional differences between the countries that also make a difference in terms of family-level solidarity.

With these questions in mind, hypotheses are generated below, after which the data sources are explained and discussed. While both in-kind and in-cash transfers are discussed below, the analytical focus shall lie on financial transfers because of data limitations regarding in-kind transfers. Therefore, in-kind or service transfers shall be discussed descriptively only, only they will also be included as a control variable in the quantitative analysis of financial transfers.

IV.3.2 Hypotheses

It has been shown in this chapter that the family plays a crucial role in intergenerational solidarity in both countries. This regards their institutional history especially but is also kept alive through public policies, though the specific policies differ across countries. These differences appear to be associated with the giving and receiving of non-financial transfers as was shown above. Regarding financial transfers, other or additional factors may be at play. Against the background of the above, the following hypotheses shall be worked with for the regression analysis:

- 1) Hypothesis 2.1: It has been shown above that compared to Germany, poverty rates in Japan are higher among younger adults and co-residence is more common, both being determinants of financial transfers according to previous studies. In addition, while the elderly in Japan eventually turn into net receivers of private transfers according to NTA data, this only starts from around age 80 (age group which is not included here). Considering these factors together, elderly persons in Japan are expected to show a higher likelihood of making downwards financial transfers than those in Germany. It is expected, thus, that country differences can be explained by differences in cultural and political institutions. After controlling for individual socioeconomic characteristics, however, these differences are expected to disappear.

- 2) Hypothesis 2.2: Amid dualisation and the resulting increase in inequality among working-age individuals, the risk of downward social mobility appears to be on the rise. Parents of higher social status, as measures in wealth and educational attainment, are expected to be especially worried about this. Because of this and their relatively higher capability to invest into their children, parents of high social status are expected to be more likely to make downward financial transfers than other groups. This pattern is expected to hold for both countries. As children of wealthy individuals are probably less likely in need, controlling for children's economic status the effect may be even stronger once the children's characteristics are accounted for.
- 3) Hypothesis 2.3: In both countries, the need for care is expected to increase in years to come. In order to ensure a good relation to their children and thus raise the likelihood of receiving care from them once in need, reciprocity is expected to be a determinant of downward financial transfers. Specifically, having previously received care and having a child living in close proximity, is expected to be positively correlated with providing financial transfers. This association is expected to hold for both countries.
- 4) Hypothesis 2.4: In Japan, as shown in the previous chapter, effective retirement is considerably higher than in Germany, and some parts of the pensions are also paid out only upon reaching age 65 (see chapter III). This delay in pension pay-out is expected to be associated with lower transfer giving. Hence, for Japan, but not for Germany, it is expected that the age group 60-64 shows a lower likelihood to make transfers compared to other age groups.
- 5) Hypothesis 2.5: The economic or business cycle, as it can put stress on household finances, is expected to have an impact on financial transfer giving. Specifically, in survey years that followed an economic recession, the likelihood of financial transfer giving is expected to be significantly lower than in other years. This tendency is expected to hold for both years.

IV.3.3 Data sources and data used

IV.3.3.1 Survey of Health, Ageing and Retirement in Europe (SHARE)

SHARE (Börsch-Supan 2017a, 2017b, 2017c, 2017d, 2017e) is a longitudinal survey on the life of elderly persons aged 50 years and above regarding their financial, health and social situations as well as their relations with other persons. Indirectly, SHARE contains information about the respondents' children. The survey has been carried out since 2004 and six waves have been published so far, though wave 3 has a different format and is therefore not suitable for this analysis. One merit of SHARE is that it is designed to be internationally comparable as it forms a part of the Gateway to Global Aging Data platform of the Center for Economic and Social Research at the University of

Southern California (CESR 2018). For this work, five waves (2004, 2007, 2011, 2013, and 2015) have been appended, originally adding up to 17,410 observations in Germany.

The sample has been limited to individuals aged 60 to 75 years. The reason is that by this measure, intergenerational transfers are most likely to take place between at most three generations. This, rather than allowing for four generations and a more complex dynamic between individuals, makes it better feasible to connect the theoretical argument with the empirical observations.⁴⁵ Deleting all respondents younger than 60 or older than 75, the sample was reduced by 8,451 observations. Also, those respondents who do not have any children were deleted from the sample. The reason is that though this means a simplification of the discussion, since persons without children are not analysed in a multivariate fashion, intergenerational transfers within the family are less likely to happen at least towards younger generations where someone has no own children. Deleting childless respondents, the sample is reduced by 1,075 observations. Deleting further the missing on main dependent and independent variables, the sample remains at 7,091 observations and 1,337 individuals. Depending on the dependent variable, downward financial transfers or downward or upward non-financial transfers, the number of observations will vary. The reason is that the survey divides questioning into household respondents (answering questions on non-financial transfers) and financial respondents (answering questions on financial transfers) so that not all questions in the survey are answered by the same person but instead, in some cases, are split up between living partners. Varying by dependent variables, thus, the final numbers of observations are as follows: 4,865 (downward financial transfers), 1,910 (downward non-financial transfers), 5,676 (upward non-financial transfers).

IV.3.3.2 Japanese Study of Aging and Retirement (JSTAR)

JSTAR (RIETI 2010, 2012, 2013a, 2013b, 2013c, 2017), being designed to be compatible with SHARE and the other surveys of the Gateway to Global Aging Data in principle has similar characteristics as those of SHARE. The first wave was carried out in 2007, and until now there have been waves representing four points in time (2007, 2009, 2011, and 2013). Strictly speaking, JSTAR is not nationally representative as data are collected at selected locations in Japan. In the first wave in 2007, five cities of Adachi, Kanazawa, Shirakawa, Sendai, and Takikawa were collected, which represented cities of different sizes, locations and living standards. For the 2009 wave, the cities of Tosu and Naha

⁴⁵ This step has a pragmatic, an empirical, and a conceptual reason. Pragmatically, in many datasets the oldest individuals at old-age are fewer in number so that fully including their age group might lead to biased statistical results. Empirically, at least for Japan as shown in the NTA data, transfer behaviour of the oldest elderly individuals is quite distinct from the younger elderly. To enable a thorough analysis, focusing on one group within the elderly seems advisable. Conceptually, given the sometimes-inexact wording of questions in the surveys used for this work, especially regarding in-kind transfers but also financial transfers, it is in parts difficult to clearly distinguish who is the beneficiary of a transfer. Once the sample for regression analysis is reduced to the younger elderly, some of the problems are avoided.

were added, and in 2011, Chohu, Hiroshima, and Tondabayashi joined. This set of ten cities was maintained for the 2013 data collection.

Once all waves are appended, the original sample, as in SHARE including individuals aged 50 years and above, consists of 22,125 observations. Deleting those aged below 60 or above 75, the sample was reduced by 7,413 observations. Another 1,478 cases were deleted by not considering childless elderly persons. Upon deletion of missing values on main independent and dependent variables, the sample counts 12,585 observations and 1,082 individuals. As in the case of SHARE, the number of observations varies according to the dependent variable, for the same reason of questioning being divided into financial respondent and household respondent.⁴⁶ Varying by dependent variables, thus, the final numbers of observations are as follows: 8,922 (downward financial transfers), 3,901 (downward non-financial transfers), 11,083 (upward non-financial transfers).

IV.3.4 Variables

IV.3.4.1 Dependent variables

IV.3.4.1.1 Financial transfers

Regarding financial transfers, the dependent variable is “made financial transfers”. While both, made and received, intergenerational transfers are shown below, it will be seen that made financial transfers are considerably more common in both countries, which is consistent with the aggregate National Transfer Accounts data shown above (see chapter II). Therefore, regression analysis shall focus on financial transfers made by (elderly) respondents to their children or grandchildren. The dependent variable is binary, hence, it only gives information about the existence of a transfer but not its amount. The reason is that SHARE only included the amounts of transfers in waves 1 and 2. JSTAR includes transfer amounts, but there are mostly missing values on this variable. Apart from this, despite the attempt of both sides to make their respective surveys compatible, comparison is faced with limitations given the independent design of each survey.⁴⁷

In SHARE, two variables have been combined to construct the dependent variable for this analysis. The first one asks: “Not counting any shared housing or shared food, have you or your partner given any financial or material support to any person inside or outside this household amounting to 250 Euro or more?” In a follow-up question, it is asked to whom such a transfer is made. For this work,

⁴⁶ In addition to this division, JSTAR suffers from a large number of missing values on the dependent variable of downward financial transfers. Upon consultation with the authors of the survey, these values have been deleted.

⁴⁷ As will be shown below various questions are asked in different ways or contain different answer categories. Some questions, which do appear in one survey, are absent in the other. In addition, since the surveys contain some translation errors from the original Japanese version into the English version, researchers without knowledge of the Japanese language face additional difficulties.

transfers to children, step-children, children-in-law, or grandchildren are included.⁴⁸ The second question on financial transfers asks: “Not counting any large gifts we may have already talked about/since our last interview, have you or your partner given a gift or money, goods, or property worth more than 5,000 Euro?” Again, a follow-up question verifies the type of recipient and children, step-children, children-in-law, or grandchildren are included.

Furthermore in JSTAR, two variables are combined to construct the dependent variable that is worked with below. The first one asks: “In the past year, did you or your spouse give money for food or living expenses to anyone else?”⁴⁹ If the answer is yes, a follow-up question asks about the recipient. Respondents giving the answer “child/child’s spouse/grandchild” are included as financial transfers here. The second question asks: “Do you expect to give someone else a gift or inheritance?”⁵⁰ Equivalently to the first question, if in the follow-up question it is specified that the recipient is a child/child-in-law/grandchild, this is considered a downward financial transfer for the purpose of this analysis. Including this variable may appear controversial since it includes inheritances as well as planned gifts that are not yet made. However, including this variable is advisable since in Japanese culture, the giving of financial transfers typically coincides with festivities and annual occasions. Financial gifts form an important part of Japanese familial relations, and excluding this variable would mean to underestimate transfer giving and family solidarity.⁵¹ In turn, since the variable in the original dataset comes together with planned inheritances, there may be a bias towards overestimating financial transfers in comparison with Germany where large gifts are included but not necessarily bequests (though also not explicitly excluded and no other variable in the dataset asks about bequests either). Another limitation regarding comparability is the difference regarding the cut-off amount of what is considered a financial transfer. In SHARE, this only starts from 250 Euro and 5,000 Euro respectively, while in JSTAR no amounts are specified so that this matter is up to the consideration of the respondent.

The dependent variable for estimations on financial transfer, hence, includes the categories “yes” and “no.” With financial transfers being a dichotomous dependent variable, the sample size is reduced further because of filters in the datasets, which single out financial and family respondents in

⁴⁸ Specifically, this includes the following categories: child, step-child/current partner’s child, son-in-law, daughter-in-law, and grandchild.

⁴⁹ In the original questionnaire, the question reads: “過去1年間で、回答者（や配偶者）は他の方に食費や生活費を直接出したことがあるか”. The hereby relevant answer categories for considering an intrafamilial intergenerational transfer are: “子供・義理の子供・孫”.

⁵⁰ In the original questionnaire, the question reads: “遺産や生前贈与を残す予定はあるか”. The hereby relevant answer categories for considering an intrafamilial intergenerational transfer are: “子供・義理の子供・孫”.

⁵¹ This step was decided upon consultation with Rikiya Matsukura, generational economist at Nihon University, Tokyo. For further reference on Japanese elderly’s substantial saving for downward transfers, also see Horioka and Niimi (2018).

case more than one person per household participated in the survey. To estimate financial transfers, only financial respondents are included (see above).

IV.3.4.1.2 Non-financial transfers

IV.3.4.1.2.1 Upwards transfers, eldercare

As discussed above, non-financial transfers may go upwards, with an elderly person being a recipient, and downward, which in this case means that an elderly person is making the transfer. Here, non-financial transfers are private care services. In the relevant questions of the original questionnaires, as shown below, formal eldercare provided by family members is not explicitly excluded, so that in the case of Germany, family member-provided eldercare for cash benefits may be included in the answers. Upwards transfers are therefore eldercare and downwards transfers represent grandchild-care. Again, both variables are dichotomous, and information about the extent of transfers (hours of care, for instance) is in both datasets very limited so that it is mostly disregarded here.

Regarding upwards non-financial transfers, one question from SHARE is considered, which asks: "Thinking about the last twelve months, has any family member from outside the household, any friend or neighbour, given you any kind of help listed on this card?" The information to be read out from the mentioned card contains: "1. Personal care, i.e. a) dressing, including putting shoes on and socks, b) bathing or showering, c) eating e.g. cutting up your food, d) getting in or out of bed, e) using the toilet, including getting up or down. 2. Practical household help, e.g. with home repairs, gardening, transportation, shopping, household chores. 3. Help with paperwork, such as filling out forms, settling financial or legal matters." Respondents that answered "yes" are considered recipients of private care. There is one caveat: although a follow-up question asks who was the provider of such private care this information is left out for the purpose of this work. The reason is comparability, as this information is very limited in the care of JSTAR.

In JSTAR, the equivalent information comes from three questions. The first one asks: "In the past year, have you received any of the following kinds of help from family members, relatives, friends, neighbors, etc.: personal physical care, help with housework, filling out documents, or listening to concerns and offering advice?" The second one asks: "In the past year have you received help with personal physical tasks such as changing clothes, bathing, eating, going to the bathroom, or other personal tasks involving physical contact?" Eventually, the third one asks: "In the past year, have you received help with household tasks, such as cooking, doing laundry, changing light bulbs, moving furniture, shopping, or tending the garden?"⁵² "Yes"-answers are considered to be care services. Be-

⁵² In the original questionnaire, the formulation reads: "介護を受けた経験" for the first question, "日常の身の回りの世話" for the second, and "家事に関すること" for the third question.

cause of the scarce information on who provided these care services, however, the decision was to refrain from specifying the provider of care and thereby having a larger number of observations.

The variable that has been constructed on this basis, despite these considerations and compromises, still has a share of missing values of around 16 percent. For the descriptive statistics shown below, these missing values are not considered. Since the rather high share of missing values is an additional limitation to the quality of the data, no regression analysis has been carried out. Rather, only more general associations will be observed. The same holds for upwards non-financial transfers, as is argued below.

IV.3.4.1.2.2 Downwards transfers, grandchildcare

As eldercare, the measures of grandchildcare have to be considered with care as well. In JSTAR, respondents are not asked whether or not they provided childcare or grandchildcare but only how many hours or minutes they provided on a normal business day or weekend day respectively.⁵³ In SHARE, in turn, the question asks: “During the last twelve months, have you regularly or occasionally looked after your grandchild/your grandchildren without the presence of the parents?” The expression “without the presence of the parents” is not included in the questions of the JSTAR dataset and it may be an important difference limiting comparability (and hence lead to an overestimation of grandchildcare in JSTAR et vice versa for SHARE). In SHARE, possible answers are “yes” and “no.” If “yes” is answered, a next question asks about frequency with the highest frequency being “almost every day.” To make the two datasets as much comparable as possible, the newly constructed binary variable includes those responses from JSTAR that show at least one hour every day of provided childcare. For the 2007 wave, where relevant variable asks about the provision of grandchildcare together with errands like “shopping for daily needs”, the cut-off amount of hours has been set to a minimum of three hours. The reason for choosing three hours rather than one or two is that this way the share of positive responses resembles those of the other waves the most, which appears a plausible approach to provide for comparability. From SHARE, the newly constructed variable includes those observations that answered “yes” to having regularly provided grandchildcare, and then “almost every day” regarding frequency in the follow-up question. All other answers are considered as “no” cases (no regular grandchildcare provided). For SHARE, only grandchildcare to the offspring of the respondent’s first three children are included here, so that there may be some degree of underestimation of the provision care, though most respondents do not have more than three children. Here, the share of missing values is even higher than in the case of received eldercare services (see previous subsection), accounting for two thirds of the sample (69 percent for Germany and 63 per-

⁵³ In the original questionnaire, the two relevant questions read: “平日に費やした一日あたりの時間: 子どもや孫の世話(時)” for weekdays and “休日に費やした一日あたりの時間: 子どもや孫の世話(時)” respectively.

cent for Japan, even upon restricting the sample to those respondents who actually have grandchildren). Nevertheless, descriptive statistics will give some valuable insights into the associations of providing transfers and characteristics of the donor and recipients.

IV.3.4.2 Independent variables

IV.3.4.2.1 Characteristics of respondent

It is the attempt to make both surveys as much comparable as possible, which in the case of some variables is more straightforward than in others. Unproblematic variables include gender and marital status, both of which are presented in a dichotomous manner, “male” or female” and “married” or “not married” respectively. Regarding age group, respondents have been divided into three categories, “60-64”, “65-69”, and “70-75” respectively. On birth cohort group, there are five groups: “1935 and older”, “1936-1940”, “1941-1945”, “1946-1950”, and “1951-1955.” The variable on educational attainment follows the ISCED 1997 framework (OECD 1999). Categories here are: “high school or less”, “vocational”, “academic”, and “other/missing.” Regarding self-reported health of the respondent, three categories are included here: “Good or average”, “Not good or poor”, “don't know, no answer/missing.” The variable on “working status” asks if the respondent is currently working in return for monetary compensation, and it is divided into: “Yes”, “Not or temporarily not”, “no information/missing.”

More difficult to compare directly are the two variables on wealth. “Real estate assets” is still straightforward as both SHARE and JSTAR ask in the questionnaire whether the respondent owns the house he or she is living in or whether the respondents owns other real estate. This variable is dichotomous with categories “yes” and “no” so that no information on the value of the owned real estate is provided. Regarding financial wealth, there are more notable methodological differences between the two surveys. In JSTAR, it is asked in four questions whether the respondent or his/her wife holds stocks, bonds, fixed income or other securities.⁵⁴ In SHARE, in turn, instead of being asked whether or not they hold financial assets, the amount is asked.⁵⁵ Again for reasons of comparability, it has been decided to dichotomise this variable in a “yes” or “no” format. For Germany, the cut-off amount above which a respondent is considered to be holding significant financial assets has

⁵⁴ In the original questionnaire, the relevant questions read: “自分名義の債券を持っているか”, “自分名義の株式を持っているか”, “配偶者は預貯金を持っているか”, “配偶者名義の債券を持っているか”, “配偶者名義の株式を持っているか.”

⁵⁵ The two relevant questions read as: “About how much do you and your husband/wife/partner currently have in bank accounts, transaction accounts, saving accounts or postal accounts?”, and: “Overall, about how much interest or dividend income did and your husband/wife/partner receive from your savings in bank accounts, bonds, stocks or mutual funds in the last year? Please give me the amount after taxes.”

been set at 10,000 Euro. While this is a somewhat arbitrary value, sensitivity analysis has shown that when half the amount is chosen, for instance, results do not change significantly (see appendix).

IV.3.4.2.2 Characteristics of 1st and 2nd child respectively

Indirectly through the elderly respondent, both SHARE and JSTAR provide information on the (adult) children of those individuals represented in the surveys. For this work, information on the first and second child, if applicable, of every respondent has been included. The easily comparable variables, following the same logic as those regarding the respondents, include: gender, marital status, and education. In addition, a dichotomous variable on having children is included (grandchildren to the respondent), consisting of the categories “none” and “one or more.” A variable on the child’s employment status includes the variables: “full-time employment”, “part-time/irregular/self-employed”, “in school or unemployed”, “on leave/carer/housemaker/retired/others”, and “unknown/missing.” To shed light on social mobility, a variable on the difference of educational attainment between the respondent and the child has been constructed. This includes the categories “parent’s education higher”, “same level”, “child’s education higher”, and “other/no info/missing.”

The variable on the living proximity between the respondent and the child is more difficult because the surveys ask about this information in different ways. In SHARE, proximity is asked in kilometres of distance of the respondent’s household and the child’s.⁵⁶ In JSTAR, answer categories are: “same house”, “same building”, “same town/village”, “same prefecture”, “different prefecture”, “abroad”, “don’t know”, “refused to answer.”⁵⁷ Here, each survey’s variable is simplified to provide for as high a degree of comparability as possible. The categories in the unified sample are named as: “same house/same building/ same house or less than 1 km away” (1), “same town/ less than 25km away” (2), “same prefecture/different prefecture/abroad/ 25km and more away” (3), “other/missing.”

Two more variables on the children of the respondents include age group and birth cohort. The former is divided into the categories “0-29”, “30-39”, “40-49”, and “50+”. The latter, birth cohort, is grouped into “1980/younger”, “1975-1979”, “1974-1970”, “1969-1965”, “1960-1964”, “1959/older”, and “no info/missing” for the first child. For the second child, it is: “1985/younger”, “1980-1984”, “1975-1979”, “1974-1970”, “1969-1965”, “1964/older”, and “no info/missing.”

⁵⁶ Answer categories are: “In the same household”, “In the same building”, “Less than 1 kilometre away”, “Between 1 and 5 kilometres away”, “Between 5 and 25 kilometres away”, “Between 25 and 100 kilometres away”, “Between 100 and 500 kilometres away”, “More than 500 kilometres away.”

⁵⁷ In the original questionnaire, the answer categories read as: “同じ玄関をもつ家”, “同じ建物敷地内”, “同じ市町村内”, “同じ都道府県内”, “他の都道府県”, “国外”, “わからない”, “回答拒否”.

IV.3.4.2.3 Other variables

Additional control variables include the year of the survey, and the country. The latter obviously consists of the categories “Germany” and “Japan.” The former has the years 2004, 2007, 2009, 2011, 2013, and 2015. For Germany, however, the survey was not carried out in 2009 so that there are no observations for Germany in 2009. The same holds for Japan and the years of 2004 and 2015. Eventually, a variable indicating the business cycle has been added to the pooled sample. Taken from the World Bank’s database (2018), an average of annual economic growth of each country, representing the two years prior to any survey year in the sample, has been calculated. This factor variable is considered as an indicator for the business cycle of economic boom and bust, which may have an impact on transfer giving.

IV.3.5 Method and analytical strategy

As mentioned and explained above, because of data limitations, regression analysis is only carried out for financial transfers, while non-financial transfers are considered in a descriptive way. In turn, non-financial transfers are included as control variables in the analysis of financial transfers. In order to test the hypotheses, the datasets from SHARE and JSTAR have been pooled and appended so that single individuals are included in the sample several times at different points in time. The dependent variable being categorical and the nature of the data longitudinal, a logit random effects logic is applied to the data. In addition, to get a closer understanding of the association between parental wealth and the socioeconomic situation of the offspring, interactions are carried out.

IV.4 Non-financial transfers

IV.4.1 Juxtaposition of upward and downwards transfer

Table 21 shows the occurrence of non-financial transfers in both directions, with the elderly respondents receiving (upwards) and giving (downwards). Two things are important to note in the beginning. Given these limitations, firstly, cross-country comparison has to be taken with great care, and secondly, especially grandchildcare in the Japanese sample may tend to be overestimated. Bearing the above-mentioned limitations in mind, a general picture appears to be the following: grandchildcare on a daily basis is very common in Japan, and not very common in Germany. In turn, eldercare is hardly common in Japan but more common in Germany. This result appears to be in line with the discussions of family and policy institutions above. Regarding childcare, both policy provisions and public opinion is leaning more strongly towards the family as a key player compared to Japan. Regarding eldercare, the opposite is true at least on a policy level. In Japan, the welfare state is not allowing for family members to provide formal eldercare and cash in public benefits for it in return, whereas this is possible in Germany. This may be one reason why 21.6 percent of the elderly re-

spondents in Germany state that they have been provided with eldercare but only 6.4 percent of respondents in Japan do so (though it is also possible that Germany's elderly are frailer). Regarding the provision of grandchildcare, the picture is reversed. 63 percent of respondents in Japan state they have provided grandchildcare on a daily basis (though the 63 percent of missings or "don't know" answers of the total sample are left out here) while only 15.8 percent of those in Germany do (where 69 percent of the total sample have missing values or state "don't know").

Table 21: Provision of grandchildcare and receipt of private eldercare, Germany and Japan, column percent.

<u>Germany: provided grandchildcare</u>		<u>Japan: provided grandchildcare</u>	
	Total		Total
No	84.24		37.45
Yes	15.76		62.55
Total	100		100
Obs.	1,910		3,901
<u>Germany: received private eldercare</u>		<u>Japan: received private eldercare</u>	
	Total		Total
No	78.45		93.62
Yes	21.55		6.38
Total	100		100
Obs.	5,676		11,083

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

IV.4.2 Downward transfers, intrafamilial grandchildcare

Table 22 shows the provision of grandchildcare according to characteristics of the respondents. It can be seen that in both countries, it tends to be men rather than women providing grandchildcare and that the likelihood of provision decreases with age. In Japan, though, the age group 65-69 show a higher likelihood than those aged 60-64, which is probably explained by the higher effective retirement age in Japan. Regarding birth cohort, currently younger cohorts show a higher likelihood of providing transfers, except for the youngest in Japan. This is consistent with the pattern regarding age groups. Differentiating transfers by year of survey (period), however, shows for Japan that the likelihood of providing grandchildcare has decreased over time. This may be explained by population ageing in general: as the share of the oldest among the elderly increases, the likelihood of providing transfers decreases. This effect cannot be seen in Germany so far, however. Regarding self-reported health of the respondent, unsurprisingly, good health is associated with a higher likelihood of giving non-financial transfers.

Table 23 shows the provision of grandchildcare by characteristics of the first child.⁵⁸ Similar to self-reported health, those respondents who have not already received non-financial transfers are more likely to provide grandchildcare. Unmarried children, in turn, appear to be more likely to enjoy grandchildcare support than those who are married in both countries. Regarding the (adult) child's

⁵⁸ As sensitivity check, the same has been carried out regarding the second child and the results look similar. See appendix.

employment status, there is some difference between Germany and Japan. While in Germany, part-time, non-regularly and self-employed children are relatively most likely to receive support, in Japan it is those children who are on leave or housemakers who receive support most often. One reason behind this might be that in Japanese families, grandchildcare providing parents tend to come from that adult child who is taking over the role of the housemaker. Regarding living proximity between the respondent and the first child, closer proximity is clearly associated with a higher likelihood of grandchildcare provision. However, it needs to be noted that for Japan, even those children who live in a different prefecture or farther away still receive grandchildcare support fairly often, which hints at grandchildcare being overestimated by the output from the JSTAR datasets.

Table 22: Provision of grandchildcare by characteristics of respondent, column percent.

Germany: cohort of respondent							Japan: cohort of respondent					
	=<1935	1936-40	1941-45	1946-50	1951-55	Total	=<1935	1936-40	1941-45	1946-50	1951-55	Total
No	90.2	89.67	80.73	81.72	76.85	84.24	40.21	41.22	34.82	34.99	44.8	37.45
Yes	9.8	10.33	19.27	18.28	23.15	15.76	59.79	58.78	65.18	65.01	55.2	62.55
Total	100	100	100	100	100	100	100	100	100	100	100	100
Germany: gender of respondent							Japan: gender of respondent					
	Male	Female	-	-	-	Total	Male	Female	-	-	-	Total
No	87.28	81.85				84.24	41.22	33.97				37.45
Yes	12.72	18.15				15.76	58.78	66.03				62.55
Total	100	100				100	100	100				100
Germany: age of respondent							Japan: age of respondent					
	60-64	65-69	70-75	-	-	Total	60-64	65-69	70-75	-	-	Total
No	79.17	82.95	88.50			84.24	35.74	31.63	44.94			37.45
Yes	20.83	17.05	11.50			15.76	64.26	68.37	55.06			62.55
Total	100	100	100			100	100	100	100			100
Germany: year of survey							Japan: year of survey					
	2004	2007	2011	2013	2015	Total	2007	2009	2011	2013	-	Total
No	85.64	84.71	88.13	81.38	84.17	84.24	31.14	36.16	38.8	43.82		37.45
Yes	14.36	15.29	11.87	18.62	15.83	15.76	68.86	63.84	61.2	56.18		62.55
Total	100	100	100	100	100	100	100	100	100	100		100
Germany: health of respondent							Japan: health of respondent					
	Good	Not good	n.a.	-	-	Total	Good	Not good	n.a.	-	-	Total
No	82.96	85.53	85.26			84.24	36.75	40.00	45.45			37.45
Yes	17.04	14.47	14.74			15.76	63.25	60.00	54.55			62.55
Total	100	100	100			100	100	100	100			100
Obs.						1,910						3,901

Source: SHARE (Bärsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Table 23: Provision of eldercare by characteristics of 1st child, column percent.

Germany: respondent received private care						Japan: respondent received private care						
	No	Yes	no info	-	-	Total	No	Yes	no info	-	-	Total
No	83.78	85.75	84.11			84.24	37.1	47.87	17.65			37.45
Yes	16.22	14.25	15.89			15.76	62.9	52.13	82.35			62.55
Total	100	100	100			100	100	100	100			100
Germany: married 1 st child						Japan: married 1 st child						
	Yes	No	No info	-	-	Total	Yes	No	-	-	-	Total
No	90.43	82.43	83.84			84.24	45.62	34.53				37.45
Yes	9.57	17.57	16.16			15.76	54.38	65.47				62.55
Total	100	100	100			100	100	100				100
Germany: employment status 1 st child						Japan: employment status 1 st child						
	Full-time	Non-reg.	School/no job	Leave/carer	No info	Total	Full-time	Non-reg.	School/no job	Leave/carer	No info	Total
No	84.41	81.42	88.04	85.98	86.67	84.24	37.79	38.9	40.68	33.54	44.19	37.45
Yes	15.59	18.58	11.96	14.02	13.33	15.76	62.21	61.1	59.32	66.46	55.81	62.55
Total	100	100	100	100	100	100	100	100	100	100	100	100
Germany: residence distance of 1 st child						Japan: residence distance of 1 st child						
	<1km	<25 km	>=25 km	No info	-	Total	Cores.	Same town	Same pref.	No info	-	Total
No	63.88	86.51	93.51	84.04		84.24	30.39	30.65	44.42	37.5		37.45
Yes	36.12	13.49	6.49	15.96		15.76	69.61	69.35	55.58	62.5		62.55
Total	100	100	100	100		100	100	100	100	100		100
Obs.						1,910						3,901

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

IV.4.3 Upward transfers, intrafamilial eldercare

Table 24 shows upwards non-financial transfers by socio-economic characteristics of the respondent. What can be seen clearly is that in both countries, it is the older birth cohorts and older age groups who are most likely to receive eldercare. The same, to an even stronger extent, is true for self-reported health. Hence, as much as this can be judged on by providing only descriptive statistical output, the clearest predictor for receiving eldercare is health rather than age. Regarding the year of survey (period), the same trend that was shown for Japan regarding grandchildcare provision cannot be seen regarding eldercare: it appears not to be the case that over time, or in the course of demographic ageing, the share of elderly respondents who receive private eldercare has been increasing over the last years. There may be several reasons for this, for example a change in living arrangements, but descriptive analysis arguably cannot capture this. On gender, in turn, a similar pattern can be seen as above in both countries: women are more likely to receive eldercare. One reason may be their higher life expectancy compared to men, another may be direct reciprocity as it also women who provide grandchildcare more often.

Table 24: Receipt of eldercare by characteristics of respondent, column percent.

<u>Germany: cohort of respondent</u>							<u>Japan: cohort of respondent</u>					
	=<1935	1936-40	1941-45	1946-50	1951-55	Total	=<1935	1936-40	1941-45	1946-50	1951-55	Total
No	70.99	78.91	77.31	79.34	81.74	78.57	92.46	91.44	94.9	95.77	97.44	94.17
Yes	29.01	21.09	22.69	20.66	18.26	21.43	7.54	8.56	5.1	4.23	2.56	5.83
Total	100	100	100	100	100	100	100	100	100	100	100	100
<u>Germany: gender of respondent</u>							<u>Japan: gender of respondent</u>					
	Male	Female	-	-	-	Total	Male	Female	-	-	-	Total
No	80.65	76.71				78.57	95.42	92.97				94.17
Yes	19.35	23.29				21.43	4.58	7.03				5.83
Total	100	100				100	100	100				100
<u>Germany: age of respondent</u>							<u>Japan: age of respondent</u>					
	60-64	65-69	70-75	-	-	Total	60-64	65-69	70-75	-	-	Total
No	80.91	77.26	77.53			78.57	95.66	95.01	92.28			94.17
Yes	19.09	22.74	22.47			21.43	4.34	4.99	7.72			5.83
Total	100	100	100			100	100	100	100			100
<u>Germany: year of survey</u>							<u>Japan: year of survey</u>					
	2004	2007	2011	2013	2015	Total	2007	2009	2011	2013	-	Total
No	74.62	73.94	79.78	80.5	79.69	78.57	94.06	91.28	95.18	95.64		94.17
Yes	25.38	26.06	20.22	19.5	20.31	21.43	5.94	8.72	4.82	4.36		5.83
Total	100	100	100	100	100	100	100	100	100	100		100
<u>Germany: health of respondent</u>							<u>Japan: health of respondent</u>					
	Good	Not good	n.a.	-	-	Total	Good	Not good	n.a.	-	-	Total
No	83.65	71.85	73.29			78.57	96.57	86.38	68.75			94.17
Yes	16.35	28.15	26.71			21.43	3.43	13.62	31.25			5.83
Total	100	100	100			100	100	100	100			100
Obs.	5,676						11,083					

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Table 25: Receipt of eldercare by characteristics of 1st child, column percent.

<u>Germany: respondent provided grandchildcare</u>							<u>Japan: respondent provided grandchildcare</u>					
	No	Yes	no info	-	-	Total	No	Yes	no info	-	-	Total
No	75.64	78.34	80.03			78.57	93.81	95.94	93.5			94.17
Yes	24.36	21.66	19.97			21.43	6.19	4.06	6.5			5.83
Total	100	100	100			100	100	100	100			100
<u>Germany: married 1st child</u>							<u>Japan: married 1st child</u>					
	Yes	No	No info	-	-	Total	Yes	No	-	-	-	Total
No	79.71	77.67	79.77			78.57	94.83	93.91				94.17
Yes	20.29	22.33	20.23			21.43	5.17	6.09				5.83
Total	100	100	100			100	100	100				100
<u>Germany: employment status 1st child</u>							<u>Japan: employment status 1st child</u>					
	Full-time	Non-reg.	School/no job	Leave/carer	No info	Total	Full-time	Non-reg.	School/no job	Leave/carer	No info	Total
No	76.45	79.3	82.64	79.38	82.05	78.57	94.78	92.93	94.59	93.53	87.82	94.17
Yes	23.55	20.7	17.36	20.62	17.95	21.43	5.22	7.07	5.41	6.47	12.18	5.83
Total	100	100	100	100	100	100	100	100	100	100	100	100
<u>Germany: residence distance of 1st child</u>							<u>Japan: residence distance of 1st child</u>					
	<1km	<25 km	>=25 km	No info	-	Total	Cores.	Same town	Same pref.	No info	-	Total
No	76.33	77.16	78.16	79.73		78.57	95.03	93.89	93.96	96.15		94.17
Yes	23.67	22.84	21.84	20.27		21.43	4.97	6.11	6.04	3.85		5.83
Total	100	100	100	100		100	100	100	100	100		100
Obs.	5,676						11,083					

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Table 25 shows eldercare provision in association with characteristics of the first child.⁵⁹ This result has to be regarded with care as it is not specified here who the provider of eldercare is (though adult children appear to be a likely case). In both countries, similar to the pattern of grandchildcare provision, it is those respondents who have not provided grandchildcare that are most likely to receive eldercare. In both countries, respondents whose first child is unmarried are more likely to receive care compared to those whose first child is married. Regarding employment status, parents whose first child is working full-time are the most likely to receive eldercare, while in Japan this applies to parents whose first child is working part-time, though the likelihoods do not appear to differ strongly. Similarly on living proximity, the difference is not marked very strongly. One reason may be that if the first child is living far away, another child or family member may provide eldercare.

Major changes in living arrangements and over the years of the surveys being carried out, thus, appear to be observable more regarding downwards non-financial transfers than upwards non-financial transfers. In other words, current trends notably in population ageing and changes in living arrangements appear to have an impact on the support adult children and their children receive rather than on the support elderly parents receive. This, tendency, in turn, appears to be seen more clearly in Japan than in Germany.

IV.5 Financial transfers

IV.5.1 Summary statistics

Table 26 shows the summary statistics with regard to information on the respondent. On the dependent variable, downward financial transfers, missing values have been omitted since almost all of these are systemic missing values explained through filters in the sample according to which per household there is only one financial respondent (all other individuals will show missing values; the reason for not deleting these observations entirely is that many of those provide information on non-financial transfers). Leaving out these missing values, the sample is left with 4,865 observations for Germany and 8,922 for Japan, slightly more than 40 percent of which make transfers in Japan, which compares to almost 38 percent in the German sample. Regarding upwards financial transfers, it can be seen that, consistent with the aggregate output of NTA data, this is not a common pattern in either country. Hence, analysis shall focus on downward transfers. The sample being unweighted after the deletions mentioned above, we can yet see a rather even distribution across age groups with the Japanese sample being slightly older on average, which is also mirrored in the distribution age groups and birth cohorts. In both samples, the vast majority is married, though the distribution

⁵⁹ Again, as sensitivity analysis, the same calculations have been made for the second child. See appendix.

is across gender is rather balanced. A major difference regards educational attainment: in the Japanese sample, more than three quarters only have a high school degree or less, which applies to only 12 percent of the German sample. In turn, more than half of the sample in Germany has vocational

Table 26: Summary statistics, characteristics of respondent, column percent.

Variable	Category	Germany	Japan
Financial transfers to children or grandchildren (downwards)	No	62.08	59.34
	Yes	37.92	40.66
Financial transfers from children or grandchildren (upwards)	No	96.81	70.38
	Yes	3.17	9.71
	Don't know/missing	0.02	19.92
Gender	Male	50.17	47.7
	Female	49.83	52.3
Age group of respondent	60-64	35.27	30.16
	65-69	32.19	31.39
	70-75	32.54	38.44
Birth cohort group of respondent	1935 and older	7.46	8.78
	1936-1940	22.77	28.41
	1941-1945	28.35	31.52
	1946-1950	24.25	26.24
	1951-1955	17.16	5.05
Marital status of respondent	Married	76.55	82.75
	Not married	23.45	17.25
Educational attainment of respondent	High school or less	12.05	76.62
	Vocational	55.87	11.17
	Academic/high skill	31.63	11.9
	No info/missing	0.45	0.3
Holding financial assets?	None	32.44	12.92
	Yes	60.66	86.25
	Don't know	6.91	0.83
Owning real estate?	None	65.9	33.97
	Yes	24.83	55.65
	Don't know	9.27	10.38
Self-reported health	Good or average	56.3	76.71
	Not good or poor	35.29	22.71
	Don't know/no answer	8.41	0.58
Respondent currently working?	Yes	17.02	44.08
	No	81.58	55.72
	No info/missing	1.4	0.2
Respondent received private care?	No	73.81	93.36
	Yes	20.95	6.14
	No info/missing	5.24	0.49
Respondent provided grandchildcare?	No	32.54	15.79
	Yes	5.53	26.43
	No info/missing	61.93	57.78
Total number of observations		4,865	8,922

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

training, which only 11 percent in the Japanese sample have. One explanation for this difference is the specific circumstances of the post-war cohorts in Japan, for whom university was mostly out of reach. This changed significantly with later cohorts as can be seen in the next two tables showing summary statistics on the 1st and 2nd child respectively. Regarding wealth, the Japanese sample

shows a higher share on both financial and real estate assets, the background of which has been explained above. In the case of financial assets, one important reason is the difference between the two questionnaires. In the case of real estate assets, the share of home ownership has been found to be higher in Japan in other studies already. In a similar way, the share of elderly respondents that are still working for pay is considerably higher in Japan. In turn, considerably less respondents in Japan receive private eldercare, while more provide grandchildcare, as already mentioned above.

Table 27: Summary statistics by characteristics of 1st child, column percent.

Variable	Category	Germany	Japan
Gender of 1 st child	Male	52.79	51.58
	Female	44.30	48.42
	No info/missing	2.92	0
Age group of 1 st child	0-29	4.54	2.40
	30-39	31.37	35.91
	40-49	50.11	44.17
	50+	10.50	5.08
	info/missing	3.47	12.44
Birth cohort group of child	1980 and younger	10.01	5.51
	1975-1979	14.08	12.81
	1970-1974	22.12	25.53
	1965-1969	24.25	25.73
	1960-1964	17.76	14.20
	1959/older	8.30	4.79
	No info/missing	3.47	11.42
Marital status of child	Married	34.47	31.66
	Not married	55.68	68.34
	No info/missing	9.85	0
1 st child having children?	None	23.86	8.11
	Yes	40.41	85.34
	Don't know/missing	35.72	6.55
Educational attainment of child	High school or less	3.86	40.29
	Vocational	47.42	22.84
	Academic/high skill	33.24	33.82
	No info/missing	15.48	3.05
Difference of education between 1 st child and respondent	parent's education higher	12.91	6.69
	same level	46.41	46.48
	child's education higher	24.93	43.51
	other/no info/missing	15.75	3.32
1 st child's employment status	Full-time employment	55.60	67.19
	Non-regular employment	19.16	12.55
	School or unemployed	6.76	2.93
	Leave/carer/retired/other	8.04	14.75
	No info/missing	10.44	2.58
Living proximity of 1 st child?	<1km/same house	13.32	22.97
	<25km/same town	20.21	25.21
	=>25km/same country	22.86	51.38
	No info/missing	43.62	0.45
Total number of observations		4,865	8,922

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Table 27 and 28 show summary statistics regarding characteristics of the 1st and 2nd child respectively. While the age and birth cohort distributions, as well as those regarding gender and marital status, are rather similar between the two countries, one major difference is proportion of children being

substantially higher in the Japanese sample. Educational expansion over the decades can be seen in both countries, with children having higher educational levels than their parents more often than

Table 28: Summary statistics by characteristics of 2nd child, column percent.

Variable	Category	Germany	Japan
Gender of 1 st child	Male	43.45	44.59
	Female	31.72	43.5
	No info/missing	24.83	11.91
Age group of 1 st child	0-29	7.11	4.77
	30-39	32.11	41.52
	40-49	31.39	28.93
	50+	4.09	1.15
	info/missing	25.3	23.63
Birth cohort group of respondent	1985/younger	4.75	2.03
	1980-1984	8.08	7.25
	1975-1979	14.37	17.25
	1974-1970	17.41	24.99
	1965-1969	17.06	18.08
	1964/older	13.03	8.43
	no info/missing	25.3	21.97
Marital status of respondent	Married	22.51	33.28
	Not married	25.73	54.66
	No info/missing	51.76	12.06
1 st child having children?	None	20.35	40.57
	Yes	27.95	41.1
	Don't know/missing	51.7	18.33
Educational attainment of respondent	High school or less	3.64	36.82
	Vocational	37.12	21.45
	Academic/high skill	24.69	27.3
	No info/missing	34.55	14.43
Difference of education between 1 st child and respondent	parent's education higher	10.48	6.52
	same level	35.52	41.36
	child's education higher	19.26	37.46
	other/no info/missing	34.74	14.66
1 st child's employment status	Full-time employment	43.06	59.06
	Non-regular employment	12.58	10.4
	School or unemployed	5.96	2.7
	Leave/carer/retired/other	5.65	14.06
	No info/missing	32.74	13.79
Living proximity of 1 st child?	<1km/same house	10.52	19.95
	<25km/same town	16.28	20.87
	=>25km/same country	18.5	46.79
	No info/missing	54.7	12.39
Total number of observations		4,865	8,922

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

not, though this tendency is stronger in Japan. A difference that remains in the educational system is Germany's high share of vocational training, which is explained by the dual system of apprenticeship and schooling characteristics of German labour market training. Employment status patterns are relatively similar in Germany and Japan, though the share of full-time employment, in this sample, is higher in Japan. An important difference regards living proximity between respondent and child. Co-

residence or living within close proximity is more common in Japan for both the 1st and 2nd child, which can be expected to be associated with stronger transfer giving in Japan.

IV.5.2 Results of multivariate analysis

This section shows the results of regressions with the pooled and separate samples of Germany and Japan. As in the previous chapter, a stepwise modelling approach is taken to see how the outcome variables change once certain variables, which are added to the estimations. The steps of addition are straightforward: model 4a only includes three aggregate variables, which are the country dummy, the year of surveying,⁶⁰ and the 2-year average economic growth before the year of survey. In addition, one individual variable fundamental to any discussion here is included, which is the age group of the respondent. For model 4b, individual information on the respondent has been added. These first two steps will help scrutinise hypothesis 2.1 (country effect: respondents in Japan showing a higher likelihood of transfers than those in Germany, until individual variables are included). Following up on these two models, the variables country and age and country and year (dummy) will be interacted in order to further scrutinise the effects of these variables.

Models 4a and 4b also give first hints regarding hypothesis 2.2 (social reproduction: educational attainment and financial and/or real estate wealth having a positive impact on the odds of making downward financial transfers in either country), hypothesis 2.3 (reciprocity: those respondents who have received a transfer are more likely to make one; and they may make a transfer in order to receive one back), hypothesis 2.4 (age effect: younger elderly being less likely to make transfers in Japan, but not in Germany), and hypothesis 2.5 (business cycle: in years of higher economic growth during the previous two years, the probability of making a transfer is higher). To scrutinise them more closely, however, information on the 1st and 2nd child is added to the pooled sample in model 5a. Models 5b (Germany) and 5c (Japan), in turn, show country-separate effects of the variables and allow rejecting or supporting the hypotheses on a country basis. In additional steps, two decisive variables (wealth of the respondent and employment status of the 1st child) are interacted so that the effect of their joint appearance can be accounted for.

Turning to table 29, results of the pooled sample are shown. Model 4a, the most basic model, shows a strong country effect with respondents from the Japanese sample having 44 percent higher odds than those from the German sample (reference category). There is also a growth effect, which is significant at the 99-percent level and shows that a one-unit increase in the 2-year average growth be-

⁶⁰ For the pooled sample, the year of survey has been dichotomised into those years until 2009 (2004, 2007, 2009) and those after (2011, 2013, 2015). The reason is that survey years differ across country: SHARE has been carried out in 2004, 2007, 2011, 2013, and 2015, while JSTAR has been generated in 2007, 2009, 2011, and 2013. By dichotomising these years (only for the pooled sample) it has been ensured that there are observations in both countries for every category.

fore the year of survey is associated with 23 percent higher odds of making a downward financial transfer. The age variable shows no significance, and the year dummy only does at the 90 percent level (with elevated odds for the years 2011-2015, though this effect might be dampened by including the growth variable).

Table 29: Model 4a-b, pooled data, logistic random effects regression, dependent variable: made downwards intergenerational financial transfer, odds ratios.

		Model 4a	Model 4b
		OR	OR
Country (ref.: Germany)	Japan	1.44***	0.91
Survey year dummy (ref.: 2004-2009)	2011-2015	1.10*	1.22***
Econ. growth (2y-avg. before survey)		1.23***	1.24***
Age group respondent (ref.: 70-75)	60-64	1.03	0.87*
	65-69	1.05	0.95
Gender (ref.: male)	Female		0.73***
Marital status (ref.: married)	Unmarried		1.01
Currently working (ref.: yes)	No/currently not		0.97
	No info/missing		1.16
Education (ref.: academic)	High school or less		0.45***
	Vocational		0.63***
	No info/missing		0.44
Assets real est. (ref.: yes)	No		0.23***
	Don't know		0.56***
Assets financial (ref.: yes)	No		0.60***
	Don't know		0.66***
Self-reported health (ref.: very good/good)	Not good/poor		0.76***
	No info/missing		1.27
Received upward financial transfers (ref.: no)	Yes		1.72***
	No info/missing		3.42***
Received private care (ref.: no)	Yes		1.41***
	No info/missing		0.97
Provided grandchildcare (ref.: no)	Yes		0.93
	No info/missing		0.88*
Constant		0.33***	1.57***
Insig2u		3.43***	2.48***
Number of observations		13787	13787

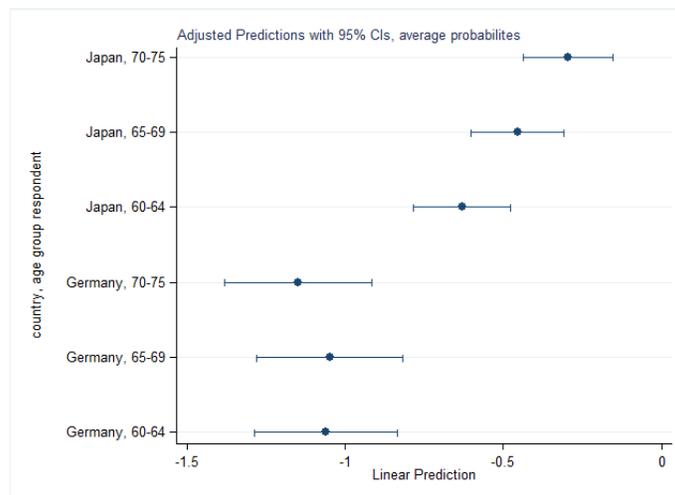
Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

In model 4b, additionally including individual information on the respondent, the effect of the year dummy has become considerably stronger (the later years now show 22 elevated odds, compared to the early years, at the 99 percent level). In turn, the country effect has vanished, which supports hypothesis 1.1. Model 4b also shows that in the pooled sample, women have 27 percent lower odds than men (reference category) to make downward financial transfers, and that those with lower self-reported health show lower odds than those in good health (reference category). For hypothesis 2.2 (social status reproduction), there is strong support in the pooled sample. Compared to those with an academic degree (reference category), having lower educational attainment lowers the odds of making a transfer by 37 percent for those with vocational training and 55 percent for those with no more than a high school degree. Wealth is also strongly significant: having no financial assets lowers the odds by 40 percent (compared to those who have financial assets, reference category), while

having no real estate wealth is associated with 77 percent lower odds (compared to those who own real estate, reference category). There is also some first support for hypothesis 2.3 (reciprocity) in that having received private care is associated with 41 higher odds compared to not having received such care (reference category), and having received upward financial transfers even increases the odds of making a downward transfer by 72 percent (compared to not having received an upward financial transfer, reference category).

Figures 35 and 36 show plotted regression results of the interactions of country and age group (figure 35) and country and year dummy (figure 36) in predicted probabilities. It can be seen that in Japan, the youngest age group (60-64), many of whom are not yet receiving their pension and still on the labour market, have lower predicted probabilities of making transfers than the other age groups (this is also shown in model 5c including controls for characteristics of the 1st and 2nd child). In Germany, in turn, no such effect can be seen. This result is further supporting hypothesis 2.4 (age effect).

Figure 35: Interaction of country and respondent's age group, dependent variable: made downwards intergenerational financial transfer, average probabilities.



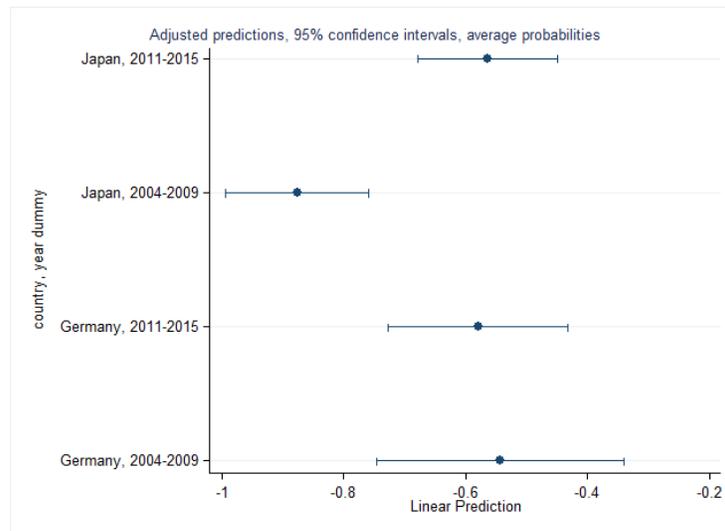
Controlled for: econ. growth, year, gender, marital status, working status, educational attainment, real estate assets, financial assets, self-reported health, received upwards financial transfers, received private care, provided grandchildcare.

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Figure 36, showing the plotted interaction results of year and country, Japan indicates considerably lower predicted probabilities of making transfers in the years between 2004 and 2009 (which for Japan includes values from 2007 and 2009). This range of years includes the time of the global financial crisis from 2008, which hit Japan's economy (and Japanese household finances) particularly hard. Economic effects on Germany, in turn, were relatively lower. The time between 2011 and 2013 (including values for 2011 and 2013 for Japan), in turn, is the time of the 2011 Great Tohoku Earthquake, which also triggered a recession. However, this event also provoked widespread donations,

which may be one reason the predicted probabilities for Japan are considerably higher in this year range. For Germany, in turn, predicted probabilities do not differ greatly. While the first range (covering 2004 and 2007) for Germany do not include the immediate years of the global financial crisis, the years from 2011 have been marked by rather stellar economic growth for Germany. As expected, transfers appear to have remained largely unchanged. This result supports hypothesis 2.5 (business cycle effect).

Figure 36: Interaction of country and year (dummy), dependent variable: made downwards intergenerational financial transfer, average probabilities.



Controlled for: econ. growth, age group, gender, marital status, working status, educational attainment, real estate assets, financial assets, self-reported health, received upwards financial transfers, received private care, provided grandchildcare.

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Table 30 shows regression results of models 5a-c, which include information on the respondent's 1st and 2nd child. While only the output for the 1st child is shown, results for the 2nd are mostly the same. In the pooled model (5a), the economic growth variable is still significant with almost identical odds as in the previous model. This gives further support of hypothesis 2.5 (business cycle effect). The other variables also remain mostly unchanged. In turn, regarding information on the respondent's 1st child, model 5a shows that not the 1st child having children is associated with 21 percent lower odds that the respondent will make a transfer (the reference category is that the 1st child has one child or more). In addition, there is further support for reciprocity shown in the effect of the 1st child's living proximity: the nearer the child lives the higher the odds are that the parent will make a downward financial transfer. For instance, compared to those parents whose 1st child live within 1 km distance (reference category), those respondents whose 1st child lives in the same town or within 25 km distance have 23 percent lower odds of making a downward financial transfer. This supports hypothesis 2.3 (reciprocity) because those children who live far away are less likely to provide non-financial

transfers to their parents. Regarding the child's employment status, only those parents whose 1st child is in education or unemployment have higher odds to make a transfer.

Table 30: Model 5a-c, pooled and separated country data, logistic random effects regression, dependent variable: made downwards intergenerational financial transfer, odds ratios.

		Model 5a (pool)	Model 5b (GER)	Model 5c (JP)
		OR	OR	OR
Country (ref.: Germany)	Japan	0.80*		
Survey year (ref.: 2007)	2004		0.95	
(model 5a: year dummy, ref: 2004-2009; category shown right: 2011-2015)	2009			0.80**
	2011	1.23***	0.44***	0.92
	2013		1.76***	0.88
	2015		1.01	
Econ. growth (2y-avg. before survey)		1.22***		
Age group respondent (ref.: 70-75)	60-64	0.85*	1.11	0.68***
	65-69	0.93	1.13	0.85*
Gender (ref.: male)	Female	0.72***	0.81**	0.65***
Marital status (ref.: married)	Unmarried	1.04	0.72***	1.45***
Currently working (ref.: yes)	No/currently not	0.95	0.92	0.96
	No info/missing	1.06	1.29	0.61
Education (ref.: academic)	High school or less	0.40***	0.40***	0.57*
	Vocational	0.58***	0.69**	0.74
	No info/missing	0.08*	0.00	0.43
Assets real estate (ref.: yes)	No	0.23***	0.54***	0.07***
	Don't know	0.65**	0.82	0.44**
Assets financial (ref.: no)	Yes	0.60***	0.53***	0.61***
	Don't know	0.66***	0.47***	0.80*
Self-reported health (ref.: very good/good)	Not good/poor	0.77***	0.71***	0.81**
	No info/missing	1.10	0.96	0.33**
Received upward financial transfers (ref.: no)	Yes	1.68***	2.83***	1.40***
	No info/missing	3.42***	0.00	3.28***
Received private care (ref.: no)	Yes	1.42***	1.54***	1.39**
	No info/missing	1.33	1.34	0.91
Provided grandchildcare (ref.: no)	Yes	0.94	0.84	0.97
	No info/missing	0.88*	0.79	0.86*
1st child's gender (ref.: male)	Female	1.00	1.01	0.93
	Don't know/missing	1.13	5.60*	-
1st child married (ref.: yes)	No	0.94	0.98	0.96
	Don't know/missing	1.30	1.17	-
1st child has children (ref.: yes)	No	0.79**	0.88	0.72**
	Don't know/missing	0.54***	0.60**	0.53**
1st child's living proximity (ref.: <1km/same house)	<25km/same town	0.77***	0.96	0.72***
	=>25km/same country	0.71***	0.95	0.66***
	No info/missing	0.73**	1.01	0.80
1st child's empl. status (ref.: full-time emp.)	Non-regular	1.13	1.22*	1.10
	School/ unempl.	1.43**	1.48**	1.35
	On leave/ carer/other	1.14	1.18	1.18
	No info/missing	0.87	0.96	0.96
1st child's education (ref.: academic)	High school or less	0.97	1.01	0.87
	Vocational	0.98	1.04	1.07
	No info/missing	0.24	0.00	7.44
Constant		2.74***	2.21*	2.73**
Insig2u		2.41***	1.58***	2.71***
Number of obs.		13787	4865	8922
Controlled for: age gr., children, educ.diff. (c1); age gr., gender, marital, empl. stat, children, educ. , educ.diff.(c2)				

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Turning to the separate models (5b for Germany, 5c for Japan), some country-specific results appear. Firstly, the education variable shows strong effects in Germany (compared to those with an academic degree, the reference category, those with vocational training and no more than a high school degree have 31 percent and 60 percent lower odds respectively) but not in Japan. In turn, real estate assets and financial assets are strongly and highly associated with making transfers in either country: in Germany, having no real estate assets lowers the odds of making a downward financial transfer by 46 percent (compared to those with real estate assets, reference category), while in Japan the absence of real estate assets is even associated with a 97 percent decrease in the odds. Having no considerable amount of financial assets (compared to those who do, which is the reference category) the odds of making a transfer are 47 percent lower in Germany and 39 percent lower in Japan. These results give strong support of hypothesis 2.2 (social status reproduction). The positive effects of having received private care or upward financial transfers are present in either country, which lends support to hypothesis 2.3 (reciprocity).

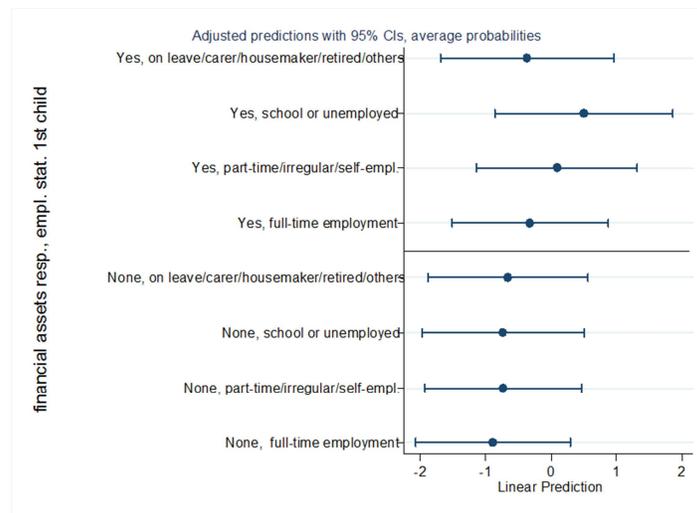
Turning to the country-specific effects of the characteristics of the 1st child, living proximity of the (1st) child is significant in Japan but not in Germany. In Japan, compared to those respondents whose 1st child lives in the same building, the odds of those whose 1st child only lives in the same town are 18 percent lower. Parents whose 1st child live in the same prefecture or country even have 44 percent lower odds of making a downward financial transfer. No such effect can be observed in Germany. Considering the different policy settings regarding eldercare (Germany allows for family members to provide eldercare and receive the benefits in return, while Japan only allows for professional non-family providers of formal care), the significant levels of Japan can be interpreted as direct reciprocity: since family members get no government incentive to take care of their elderly relatives, they are being incentivised by the elderly in terms of downward financial transfers. In this sense, further support of hypothesis 2.4 (reciprocity) is seen here. In turn, the variable on the 1st child's employment status is not significant in Japan, but it is in Germany: those parents whose children are in education or unemployment have 48 percent higher odds of making a transfer compared to those whose 1st child is in full-time employment (reference category). Hence, need-based transfer giving appears to be present in Germany, but it cannot be observed in Japan.

To further test the association of the respondent's as well as the 1st child's socioeconomic position, two interactions are undertaken with the same control variables as in models 5b (Germany) and 5c (Japan). Figures 37 and 38 show plotted regression results of interactions between financial wealth of the respondent and the employment status of the 1st child (figure 37 for Germany, figure 38 for Japan), while figures 39 and 40 show results of respective interactions between real estate wealth of

the respondent and employment status of the 1st child (figure 39 for Germany, figure 40 for Japan), all of which are shown in predicted probabilities.

In Germany's case, neither interaction shows observable differences in the predicted probabilities. In other words, in combination it does not make a difference whether in a parent-child dyad the parent is wealthy or not, or whether the 1st child is in employment or not. This result does not change whether parental wealth is operationalised as real estate or financial assets. Without such interactions, however, parental wealth and child's financial needs both are associated with higher odds (compared to the respective reference categories) of a downward financial transfer occurring.

Figure 37: Interaction of having financial assets and 1st child's employment status, Germany, dependent variable: made downwards intergenerational financial transfer, average probabilities.



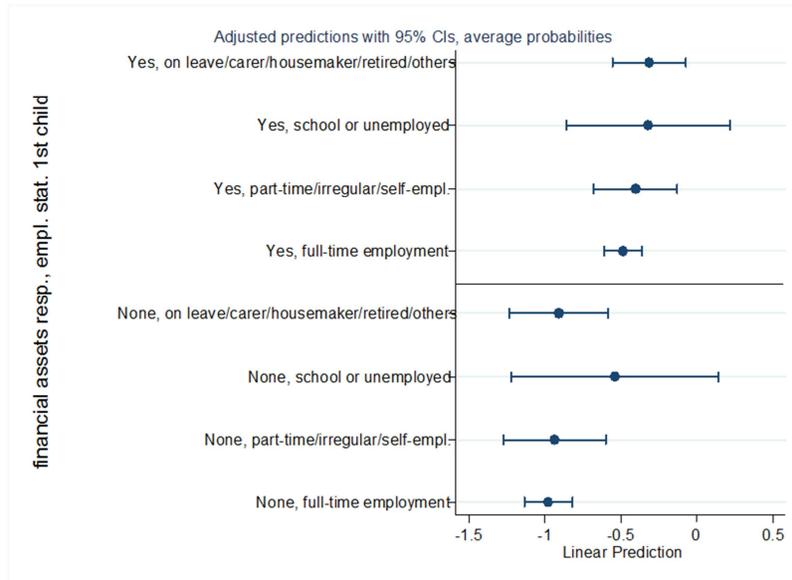
Controlled for: country, econ. growth, year, gender, marital status, working status, educational attainment, real estate assets, self-reported health, received upwards financial transfers, received private care, provided grandchildcare.

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

In Japan, a different picture can be seen: figures 38 and 40 show that in either model, parental wealth comes with higher predicted probabilities regardless of the employment status of the 1st child. Once parental wealth is provided (either real estate or financial), respondents whose children are in education or employment have higher predicted probabilities to make transfers. This is remarkable since as mentioned above, no transfer amount is included in this estimation but instead, it

is only about whether or not a transfer of any amount is made.⁶¹ As a comparison between Germany and Japan, it can be said that firstly, both countries show support of hypothesis 2.2 (social status reproduction). In addition, making downward financial transfers in Japan appears to be more conditional on parental wealth than in Germany.

Figure 38: Interaction of having financial assets and 1st child's employment status, Japan, dependent variable: made downwards intergenerational financial transfer, average probabilities.

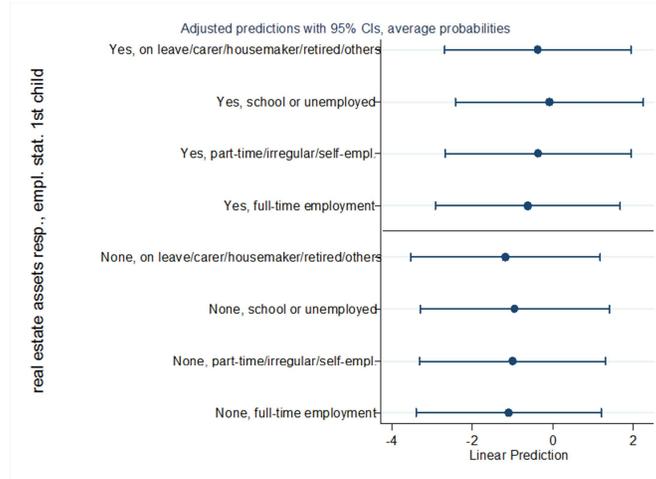


Controlled for: country, econ. growth, year, gender, marital status, working status, educational attainment, real estate assets, self-reported health, received upwards financial transfers, received private care, provided grandchildcare.

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

⁶¹ When a random effects logistic regression is applied, comparing the combinations of categories in the interacted variables for significant differences, the picture looks slightly different: for Germany, among those respondents with financial (or equally real estate) wealth, those whose 1st child is in school or unemployment have significantly higher odds of making a transfer than those whose child is in full-time employment (reference category: presence of financial/real estate wealth of the respondent and full-time employment of the 1st child). Among those parents without financial (or equally real estate wealth), it makes no significant difference what the employment status of the 1st child is. Those respondents without (financial or real estate) wealth, in turn, have lower odds of making a transfer compared to those than those with wealth in any combination of employment status of the 1st child. In Japan, the results show no significant difference among either those respondents with or without financial or real estate wealth as to what the employment status of the 1st child is. In turn, as shown above in table 30, it does make a significant difference whether or not the respondent has real estate or financial wealth respectively (thus comparing having wealth or not without an interaction with the child's employment status). The significance levels are shown in the appendix.

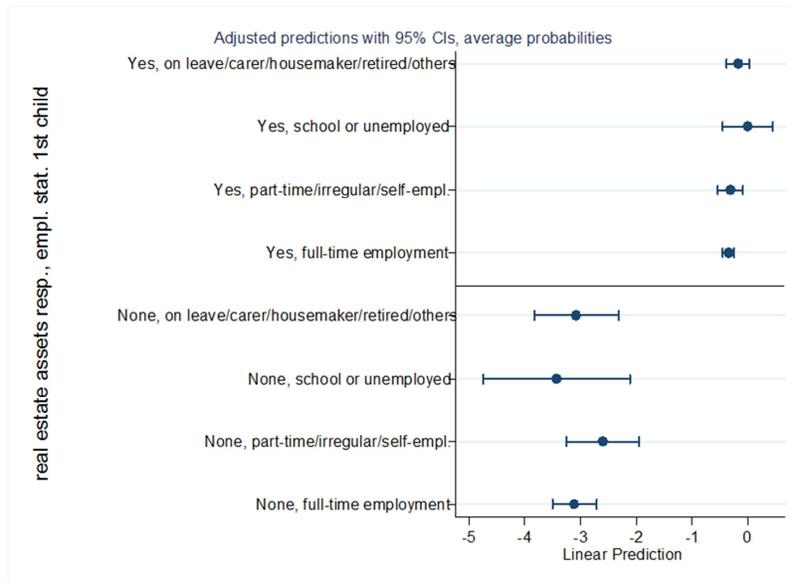
Figure 39: Interaction of having real estate assets and 1st child's employment status, Germany, dependent variable: made downwards intergenerational financial transfer, average probabilities.



Controlled for: country, econ. growth, year, gender, marital status, working status, educational attainment, real estate assets, self-reported health, received upwards financial transfers, received private care, provided grandchildcare.

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Figure 40: Interaction of having real estate assets and 1st child's employment status, Japan, dependent variable: made downwards intergenerational financial transfer, average probabilities.



Controlled for: country, econ. growth, year, gender, marital status, working status, educational attainment, real estate assets, self-reported health, received upwards financial transfers, received private care, provided grandchildcare.

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

IV.6 Discussion

This chapter has analysed intergenerational level on the family level. Following a discussion of relevant theories and the developments of the immediately relevant social, economic and political institutions within each country as well as differences between them, quantitative analysis has been carried out. Due to data limitations, the discussion of non-financial transfers could only be made on a descriptive level. Random effects Logit modelling has been applied to financial transfers.

Overall, it has been shown that family solidarity is strong in both countries. Within the scope analysed here, financial transfers occur mostly downwards, from the elderly to their adult children. While upward financial transfers also happen, they are not common. Regarding non-financial transfers, eldercare appears to be more common in Germany and grandchildcare occurs more often in Japan. Bearing all data limitations in mind (regarding both the above-mentioned difficulties in operationalising variables and the lack of information on transfer amounts), it appears that within the family, overall, downward transfers occur more often in Japan than in Germany as both downward financial and non-financial transfers are found more often. Upward transfers, in turn, happen more often in Germany when it is non-financial but more often in Japan when it is financial. This higher occurrence of downward transfers in Japan compared to Germany is interesting against the background of the analysis in the previous chapter on intergenerational solidarity on the societal level as well as the structure of the welfare state in each country. In Japan, there appears to be more tension between generations on a societal level, but also more downward support across generations in the family.

One interpretation of this pattern is that elderly persons know about their relatively favourable position and want to share this with their relatives. Another, more cynical interpretation would be that in order to secure the relatively generous support through the welfare state, the elderly give a share of it back to younger age groups as a form of appeasement. This latter interpretation, which follows a rational choice logic, appears less plausible than the former once one considers the still higher poverty share among the elderly compared to younger adults (see chapter II). While the poverty increase in Japan over the last years has been the highest among young adults, the form of sharing within the family that has been observed here appears to be solidary, and not strategic, in fact. To investigate this more closely, however, further analysis, and more data, would be necessary.

Regarding solidarity specifically, it could be shown that it tends to be women providing grandchildcare while it tends to be men providing financial transfers. In turn, women are more likely to receive eldercare. In both Germany and Japan, it tends to be the older elderly and especially those who are not in good health who receive eldercare more often. Also, the probability of receiving eldercare is

higher if the (1st) child is not married. This may hint at reciprocity as respondents are also more likely to provide grandchildcare if the (1st) child is not married. Another important factor appears to be close living proximity. The closer the respondent and the (1st) child live together, the more likely is grandchildcare. In Japan, the group most likely to provide grandchildcare is not the youngest as in Germany, but the age group 65-69. It is the same group that is also most likely to provide downward financial transfers in Japan. One important reason is likely the longer labour life in Japan.

On downward financial transfers, it has been found that in both countries there is strong evidence for reciprocity, which in the case of Japan (but not in Germany) includes living proximity of parent and child. The business cycle appears to be of importance as well. Amid dualisation and rising inequality within (working-age) generations, there has also been found strong evidence for social status reproduction in both Germany and Japan. Those parents who are wealthy (with real estate and/or financial assets) are more likely to make transfers and once an interaction of parental wealth and the child's labour market position was carried out, the effect still remained significant. In the presence of parental wealth, only those children in unemployment or schooling are more likely to receive private downward financial transfers compared to those children in full-time employment. Those in non-regular employment, in turn, receive no preferential treatment although they are strongly disadvantaged on the labour market in both countries.⁶² Especially in Japan, compared to the presence of parental wealth, any child's labour market position in combination with the absence of parental wealth comes with a significantly lower likelihood of transfers. In other words, whether or not a financial transfer is made appears to depend more strongly on the parent's situation than the (1st) child's.

Against this background, the foundation of the family of a network of support, which overall appears to be strong in both countries, is facing some considerable challenges. Though the available data for the analysis in this chapter only covers time ranges of 11 (Germany) and 6 years (Japan) respectively, which does not allow for far-reaching conclusions, the combination with the descriptive statistics provided further above at least allows pointing to some such challenges ahead. In an environment where (real estate and financial) wealth (especially in Japan) appears to be the most important indicator for financial transfers, it is a worrying outlook (especially for Japan) that currently younger birth cohorts appear to have less wealth compared to their predecessors. This may hint at a lower likelihood of downward (financial) transfers in the future. In addition, living proximity between parents and children, which is significant in Japan for financial transfers and important for both coun-

⁶² Unfortunately, both SHARE and JSTAR lack information on the spouse/partner of the respondent's child. The spouse of a respondent's child, who is in non-regular employment, may be a labour market insider in full-time employment. In such cases, it is not straightforward to interpret the child's labour market status as an indicator for low social status and a possibly precarious financial situation.

tries for non-financial transfers, has been changing towards fewer three-generational households and lower proximity over the last decades (see chapter II). If this trend continues, this may have an adverse effect on transfer giving (possibly financial and most likely non-financial). Such an effect would likely be felt more strongly in Japan where firstly, grandchildcare (and non-financial transfers) is more common and co-residence in living in close proximity has been more typical.

The family as a network of support has been shown to be of crucial importance in both countries. In the light of demographic ageing and increasing need for support, individuals help each other across generations in both financial and non-financial ways. The family, hence, seems to be capable of carrying the considerable burden that comes about amid population ageing. Especially regarding financial transfers, however, such support comes with a challenge. Financial solidarity takes place more often where the parents dispose of wealth, in other words, it takes place considerably less often if the elderly parents are not wealthy. Since the social status of parents tends to be strongly associated with the social status of their children, financial family solidarity appears to exclude those who would need support the most urgently: adult children who are not successful on the labour market and also have parents that are not wealthy. This socioeconomic dimension of family solidarity is a challenge to social solidarity as a whole. In a scenario where the welfare state is on the retreat and the burden on the private household is becoming heavier, which considering the demographic developments in both countries appears likely to happen, a further familialisation of intergenerational solidarity comes as a double-edged sword: on the one hand, it integrates generations and indeed eases the increasingly heavy burden on public finances (especially on a family level). On the other hand, however, it may contribute to increasing intragenerational inequality as some important intergenerational support is not available to all strata of society. This constellation, in turn, may affect solidarity across the whole of society.

V Conclusions

V.1 Summary and discussion of main findings

V.1.1 General summary

This study has investigated how intergenerational solidarity evolves in the light of demographic ageing, accounting for institutional, economic and political influences. As has been discussed in the introduction, no consensus has been reached on whether and to what extent population ageing is associated with intergenerational conflict. One reason for the lack of agreement has been different working definitions of the terms conflict and solidarity, another has been the often one-dimensional analysis of the topic. In an attempt to make a substantive contribution to this strand of literature, intergenerational solidarity here has been considered in a two-dimensional sphere consisting of the societal and the family level. This analysis has employed data from attitudinal surveys from Japan and Germany (ISSP, SHARE and JSTAR) in order to include the crucial element of demographic ageing and the evolution of intergenerational relations being a dynamic process over time.

In the subsections below, results for the two country cases of this study, Germany and Japan, will be discussed, after which these findings will be placed in the context of the two-by-two matrix that was proposed at the end of chapter II. As alluded to in the introduction, the findings of this study are or will be relevant for a much broader set of countries. If the 20th century was the era of population explosion, the 21st century will be that of demographic ageing. With more than half of the world's population living in countries of below-replacement level fertility today, and the projection of this share rising to more than two thirds by 2040-2050 (UN 2017), the vast majority of the world will face challenges similar to those of ageing societies such as Germany and Japan today. Understanding these cases, thus, contributes to understanding the intersection between demographic ageing on the one hand and political, economic and social life on the other.

V.1.2 The case of Germany

As has been shown at length in this study, Germany's population is projected to continue its process of demographic ageing. As the share of old-age dependents is rising, dualisation on the labour market has been becoming continuously more apparent while at the same time the pension system has turned out to be financially unsustainable. While the government's age-wise spending composition is today favouring old-age recipients, this tendency has been weakened over time. Hence, in the face of demographic ageing, Germany's welfare state has adjusted its priorities towards non-old age groups. Though the welfare state has become more liberal in terms of both the pension system (no-

tably by incentivising private saving and raising retirement age for most types of workers) and the labour market, spending on new social risks and families has been increased over time. Over the last years, Germany experienced rather stellar economic growth and the government has lately tended towards consolidation in fiscal terms.

In this broader political and economic context, intergenerational solidarity, in fact, has strengthened. On the societal level, across age groups and social strata (here measured as employment status, extracted from WVS) only a small minority thinks that “Older people get more than their fair share from the government.” Based on ISSP data, considerably more than half of the population prefer more government spending on old-age. Despite the financially unsustainable pension system (or because of it) the share of those preferring more old-age expenditure has increased over the past 20 years (from 1996 to 2016). Lately, compared to earlier waves of ISSP, it has been young age groups who show most support of more old-age expenditure.

Regarding (labour market) insiders and outsiders, Germany has shown a (implicit) preference-wise coalition between outsiders and retirees, while their antagonists are (labour market) insiders: outsiders and pensions show significantly more support for higher old-age spending compared to insiders. This finding suggests outsiders tend to associate increased old-age expenditure with something they would stand to gain from in net terms (equal to retirees), while for insiders the costs (of a higher tax burden and so on) would outweigh possible benefits. Ironically in this sense, other things being equal, more precarisation (or stronger and more widespread dualisation) would appear to strengthen overall intergenerational solidarity. At the same time, however, an amplified intragenerational conflict would likely be a result of such a tendency.

However, only considering the latest results of Germany (the changes from the ISSP wave of 2006 to that of 2016) insider-outsider effects disappeared. In fact, preferences for more old-age spending have risen across age groups and social strata. Certainly, a decrease in intragenerational inequality cannot be the reason for this preference convergence because no such convergence in incomes has taken place (rather the contrary has happened amid dualisation). In contrast, one explanation for this convergence is that in the context of both relatively solid public finances and stellar economic growth over the last years, as well as the prospect of (otherwise) increasing old-age poverty, there just appears to be a more general social consensus over the desirability of strong intergenerational policies (towards old-age). In addition, Germany has in the past successively lowered the level of pension payouts while private saving has been encouraged, both of which tends to pose a financial burden to private households (see chapter IV).

On the family level as well, findings for Germany show strong intergenerational solidarity. In general, as shown in terms of NTA data, the elderly are net receivers of public transfers but net donors of private transfers (in financial terms). In addition (based on the SHARE datasets), more than one third of the elderly aged 60-75 with grandchildren in Germany indicate to have made downward financial transfers in the previous one year. Almost one fourth of elderly respondents (with grandchildren, aged 60-75) indicate to have regularly provided grandchildcare. In turn, 15 percent have received private eldercare. Regarding these findings, no tendencies of decline of downward financial transfers can be shown. Rather, the opposite appears to be the case (though some of the increase in more recent years appears to be explained by macroeconomic circumstances such as economic growth).

While intergenerational solidarity on the family level appears strong and robust, a clear socioeconomic gradient can be seen. Not only mechanisms of reciprocity but also social status reproduction can be observed. Rather than on the living conditions of the child, whether or not downward financial transfers occur is determined by the parents' socioeconomic status. Wealthy respondents have significantly higher odds of making transfers than those who do not own real estate or financial assets. In other words, while the family is a network of support that its members can often rely on, some types of members can only do so to a lesser extent than others. For those persons who are disadvantaged by the welfare state (for example as outsiders) and do not have wealthy family members (or none at all) the family as an institution does not appear to be as strong a network of support. This latter point of social stratification in terms of family solidarity is a challenge that Germany is facing today and likely will be in the future. Considering the overall strong support for more government spending on the societal level, however, Germany at least has favourable conditions to enact supportive policies to address this problem. In addition, the need for intergenerational policies is also growing because of the increasing number of childless and/or single elderly who cannot draw on the family as a network of support to the same extent as those elderly persons with children (and/or a spouse) can.

V.1.3 The case of Japan

Compared to Germany, Japan's population has been ageing even faster and is projected to continue to do so. Confronted with the challenge of a quickly growing population of elderly dependants, Japan's welfare state has over the last decades expanded on a major scale, most of the resources of which have been dedicated to old-age expenditure. At the same time, Japan's labour regulations have been loosened and spending programmes on families and new social risks have, despite increases over time, remained considerably more modest than respective schemes in Germany. In the meantime, and partly provoked by government policy, Japan has experienced considerable tenden-

cies of dualisation. As in Germany, the growing population of (labour market) outsiders is strongly disadvantaged by the welfare regime with lower incomes and lower expected pension payouts. Since the burst of a speculation bubble in the early 1990s, Japan's economic growth has mostly been below the government's expectations and especially in the last years, government debt has risen to levels previously unseen.

In this context, intergenerational solidarity on the societal level has been weakened over time. Based on WVS data, a considerable part of the Japanese population thinks that "Older people get more than their fair share from the government." And while based on ISSP data slightly more than half of all respondents prefer increases in government spending on old-age (when one considers the average of all waves together), this share has consistently fallen over time and stood at only 46 percent in the 2016 wave. This is a trend that points to the opposite direction compared to Germany.

In addition, a clear age effect has emerged in Japan. While preferences were considerably more similar in 1996 and also 2006, a strong cleavage is found in the 2016 wave. There is also a strong cohort effect with later birth cohorts showing significantly less support for further increases in old-age government spending compared to earlier cohorts. This notably regards those birth cohorts who entered the labour market after the burst of the speculation bubble in the early 1990s and thus were fully exposed to an increasingly dualistic labour market.

In the sense of Mannheim's concept, these persons who entered the labour market in the post-bubble era thus show important characteristics of a political generation: they have a common source of discontent (an unstable labour market and an unsustainable pension system paired with government debt levels so high that there appears to be little room for manoeuvring for the government) and, compared to other groups of society, form a common interest regarding intergenerational policies. Among those birth cohorts born between 1971 and 2000, support levels for more government spending on old-age range between 33 (1981-1990) and 39 percent (1991-2000). Conversely, government spending on old-age does not appear to be a policy issue that is associated with certain political persuasions. The variable of political persuasion (considering oneself as left, centre, right, or nothing) is not significant in Japan (whereas it is in Germany, with left-of-centre individuals showing more support for increases in government spending on old-age).

In a similar light, as the absence of such a "political gradient", also no outsider effect can be observed in Japan. Hence there is no significant difference between (labour market) insiders and outsiders regarding their preferences on increases of old-age expenditure. This is remarkable since, similarly to Germany, outsiders in Japan are strongly disadvantaged by the welfare regime at both levels, intragenerational as well as intergenerational. One interpretation of this finding is that the

intergenerational disagreement is so strong that labour market outsiders and insiders appear to find it equally unfavourable to raise old-age government expenditure (although, as shown in chapter II, the elderly still have the highest poverty risk in Japan, and later birth cohorts will likely face similar problems).

On the family level, this tension appears to be eased in light of strong intrafamilial solidarity. According to NTA data, the elderly in Japan are net receivers of public transfers but until high old-age remain net donors of private (downward financial) transfers. Similar to and apparently even more strongly than in Germany, about 40 percent of Japanese elderly respondents indicate to have made downward financial transfers in the respective years before surveying.⁶³ Considerably more often than elderly respondents in Germany, 63 percent of those in Japan are also regularly providing grandchildcare. In turn, 6 percent are receiving private eldercare.

Over time, while in Germany the shares mostly remained constant across years of surveying, the shares of Japanese respondents regularly providing childcare has fallen steadily from 69 percent in 2007 to 56 percent in 2013. The share of those receiving private eldercares appears to have remained constant, at low levels, between 6 and 5 percent. In other words, though the observed time range is rather short (to date, JSTAR has covered the years 2007, 2009, 2011, and 2013), there appears to be a shift in the direction of non-financial transfers with relatively less flowing from old to young (grandchildcare). In terms of downward financial transfers, in turn, no significant change over time can be observed though the correlation with economic growth is significant (with increasing average growth during the two-year period before surveying the likelihood of transfers increases).

A similarity with Germany is Japan's clear social stratification in intergenerational solidarity on the family level. Regarding downward financial transfers, wealthy parents show higher odds than those who are not wealthy. As in Germany, mechanisms of reciprocity and social status reproduction appear crucial to intergenerational solidarity on the family level. In times of dualisation, again, this pattern shows one major problem when social solidarity is left to the family: those most likely to benefit do not appear to be those most likely to be in need but rather those who are lucky to have family members with the right socioeconomic characteristics.

In contrast to Germany, social stratification in the family sphere appears difficult to be levelled out on the societal level in Japan. Public support for more government spending on old-age has been falling and a considerable part of society thinks the elderly are already getting more than their fair share. Partly, this appears to be explained by the heavy old-age bias of the welfare state while the

⁶³ Here, however, the tendency of overestimation of the Japanese data has to be borne in mind. See chapter IV for a discussion.

need for support has also been increasing among younger age groups. For social solidarity, the developments in Japan clearly show strong challenges lying ahead: the public shows increasingly less excitement for supporting a growing population of elderly, while the family as an institution does not appear capable of supporting all members in either direction, (age-wise) upwards or downwards. In turn, with lower levels of wealth among later birth cohorts in Japan, the capability among the elderly of the future to support the rest of the family may also decrease. Though the data do not allow showing such an effect in a multivariate fashion today, such challenges may be approaching if the observed trends continue.

V.1.4 Classification into typology of intergenerational solidarity

V.1.4.1 Criteria for classification

At the end of chapter II, a two-by-two matrix of intergenerational solidarity has been proposed. How can Germany and Japan be positioned in this matrix? For classification, an explorative approach has been taken,⁶⁴ the results of which are shown in figure 41 and details are discussed below.

Figure 41: Classification of Germany and Japan into matrix of intergenerational solidarity.

		Country classification	
		Germany	Japan
Societal level solidarity	Overall share of persons preferring increases in old-age expenditure	55%	53%
	Age gradient in preference for increases in old-age expenditure	-8%	-10%
	Overall share of disagreement to statement that "Old people get more than their fair share from the government"	92%	37%
	Age gradient of disagreement to statement that "Old people get more than their fair share from the government"	-5%	-12%
	Classification	strong	weak
Family level solidarity	Overall occurrence of downward non-financial transfers	16%	63%
	Overall occurrence of upward non-financial transfers	21%	6%
	Overall occurrence of downward financial transfers	38%	41%
	Classification	strong	strong

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), WVS (2014), ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

On preferences for old-age expenditure, West and East Germany have been grouped together (because for final classification, regions are not considered). Regarding the two measures of age gradient, the difference between those aged less than 65 and those aged 65+ has been calculated. Thus, negative values indicate that the respective outcome referred to is higher among the old-age group (compared to the non-old).

The societal solidarity dimension includes the overall support for increases in old-age expenditure as well as its age gradient (based on ISSP data). The same two measures are included regarding the perception of intergenerational fairness and the fair share that old people are receiving from the government (based on WVS data). Regarding family solidarity, while both financial and non-financial

⁶⁴ For a larger number of country cases cluster analysis would be a viable option for classification.

transfers are included, flows in both directions are only included for financial transfers.⁶⁵ On both dimensions the average values of all available survey waves have been calculated (though for VWS there is only one). Thus, no development over time is considered in this matrix but rather the overall picture of the years analysed.

Turning to societal solidarity first, it can be seen that over the three survey waves combined (1996, 2006, 2016), slightly more than half of the sample in each country shows a preference for more government spending on old-age. Also in both countries, there is an age gradient with younger persons showing less support for spending increases than older persons. Regarding the questions whether “Older people get more than their fair share from the government”, the picture differs considerably. Both the age gradient (younger persons disagreeing to the statement more often) and the overall share of disagreement are considerably higher in Japan than in Germany. Based on these outcomes, with considerable disagreement regarding attitudes in Japan (across age and overall regarding the statement on intergenerational fairness), Japan has been classified into “weak solidarity”. Germany, in contrast, where differences are considerably smaller, has been classified into “strong solidarity.”

There is further support for this classification once the development over time (regarding policy preferences based on ISSP) is taken into account: as shown in chapter III, the tendency that older persons show more support for old-age spending disappeared in Germany (in fact in the 2016 wave, this age gradient reversed, with younger persons showing more support for increases in old-age expenditure compared to older age groups). In Japan, in contrast, an age gradient emerged (with younger persons showing significantly less support than older persons in the 2016 survey). Also overall, the share of those preferring more government spending on old-age increased in Germany but decreased in Japan. Thus, while societal solidarity in Germany is strong, it can also be said that it has been strengthening. In Japan, *ceteris paribus*, societal solidarity has been weakening.

When classifying countries in terms of family solidarity, it needs to be taken into account that to provide (intergenerational) support requires considerable effort and sometimes sacrifice (different from indicating attitudes or preferences). In other words, percentage values well below 50 percent can still indicate a considerable level of solidarity. Bearing this in mind, results for Germany (showing the average values of the SHARE waves of 2004, 2007, 2011, 2013, and 2015) indicate that intergenerational solidarity is a common phenomenon in both directions. Overall, 16 percent of elderly in Germany respectively have made downward non-financial transfers (grandchildcare) and 38 percent have made downward financial transfers respectively. 21 percent of the elderly have received up-

⁶⁵ Upward financial transfers are not considered here because, as discussed in chapter IV, they do not play a major role in either country and were not further analysed in this study.

ward non-financial transfers (private eldercare). Overall in Japan (showing the average values of the JSTAR waves of 2007, 2009, 2011, and 2013), even 63 percent of elderly respondents have provided downward non-financial transfers (grandchildcare) and 38 percent have made downward financial transfers. Regarding upward non-financial transfers, only 6 percent of respondents have received such services (private eldercare). Against this background, though there are relatively lower downward non-financial transfers in Germany (compared to Japan) and lower upward non-financial transfers in Japan (compared to Germany), the overall picture still shows that intergenerational transfers are common in both countries. Thus, both Germany and Japan are classified into “strong solidarity” in the family dimension.

Again considering developments over time, there is further support for this classification. When comparing the first and the last year of survey in each country, there are mostly only slight changes. Regarding the provision of upward non-financial transfers (private eldercare), values have almost remained constant. In Germany (between 2004 and 2015), occurrence decreased by 5 percentage points while in Japan the decrease (between 2007 and 2013) yielded 2 percentage points. Regarding the provision of downward non-financial transfers (grandchildcare), there was a modest 2 percentage point increase in Germany but a 13 percentage decrease in Japan. The occurrence of downward financial transfers (compared to 2007 in both countries), in turn, showed significant increases for Germany in 2011 and 2013, while it showed no significant changes in Japan. In other words, while the overall level of intergenerational intrafamilial transfers appears to be relatively lower in Germany compared to Japan, there were some increases in Germany (downward financial transfers) and some decreases in Japan (downward non-financial transfers) over time. Overall, the family appears to be a strong network of support with transfers continuing to be a common phenomenon in both countries across most categories hereby observed.

V.1.4.2 Results of classification

Reconsidering the matrix proposed at the end of chapter II, as shown in figure 42, the following categorisation has resulted from the analysis. Germany, with strong societal solidarity and strong family solidarity, shows a strong basis for further intergenerational policies. In the logic of this outcome, there appears to be a favourable environment for addressing the challenges that have been discussed in this study (such as a growing elderly population, increased poverty risk, an unsustainable pension system). In Japan, in turn and following this stylised terminology, societal solidarity is weak but family solidarity is strong. There appears to be, thus, weakened potential to address the challenges the country faces in the light of demographic ageing, which are highly similar to those in Germany (a further growing proportion of old-age dependents, increasing precariousness at all age groups, an unsustainable pension system).

Figure 42: Matrix of intergenerational solidarity, potential for solidary policies.

		Family level	
		Strong	Weak
Societal level	Strong	Strong basis for intergenerational policies (1) – Germany	Welfare state can compensate for lack of family support (3)
	Weak	Little potential for intergenerational policies (2) – Japan	Open intergenerational conflict, collapse of solidarity (4)

V.1.4.3 Limitations of classification

It has to be noted that these classifications contain by no means all that is important regarding the results of this study. For instance, the above-discussed cohort effects are not accounted for, and the age gradients are highly stylised due to dichotomisation (old vs. non-old). Also, this typology is blind to social stratification: no wealth or outsider effects are included. In general, typologies as the one shown above contain a considerable degree of generalisation and can at best be a rough approximation to the real developments.

There are at least three important reasons why such categorisations are running at risk of simplification. Firstly, several important developments are unified in one dimension. Secondly, since intergenerational relations are fundamentally a dynamic phenomenon, especially once it is considered in the light of demographic ageing, developments over time have to be considered for both dimensions, which is not easily possible in such a representation. Thirdly, dichotomising the two dimensions into strong and weak inevitably simplifies matters (already because no medium state is considered). However, considering the two dimensions as two extremes of a continuum, which would theoretically be preferable, would require quantifying and weighting all of their elements. Such a step, in turn, would appear to be equally prone to simplification. Bearing these qualifications in mind, however, the results do summarise important parts of the results of this study and especially allow showcasing some notable differences that have appeared in the two countries.

V.1.4.4 Final considerations

With the above in mind, the overarching research questions, posed at the end of chapter I, shall be very briefly reconsidered. The first one asked under what conditions population ageing is associated with weakened intergenerational solidarity. Based on the two countries studied here, it appears that government finances and the sustainability of pensions, as well as dualisation and the resulting prospect of future old-age poverty risk, play an important role in the fate of societal level solidarity (as observed in Japan). On the family level, however, solidarity is secured by means of intimate relationships. The case of Japan, which shows weakened societal solidarity, may be extreme given its very fast population ageing and unprecedentedly high government debt levels. In this regard, Germany, where challenges are similar but important policy and economic tendencies are reversed, points in the opposite direction.

The second research question asked under what conditions the family as an institution may mitigate or resolve challenges to solidarity that are taking place on the societal level. While it has been shown for both countries that the family does serve as a bulwark against frictions in society, the element of social stratification, again, is important to note. Reciprocity and social status reproduction, much more than the financial need of the child, have been found to be important drivers of downward financial transfers from elderly parents to (adult) children. In other words, one important determinant of solidarity is the wealth of the donor. This indicates that not everybody is participating in solidarity in the same way, which in principle poses a policy challenge in both countries.

The third research question asked whether weak intergenerational solidarity and strong intergenerational solidarity have to be understood as mutually exclusive scenarios or whether it may be possible that both coexist. Provided the typology hereby proposed and the results obtained within its coordinates, it could be shown how both strong and weak solidarity across generations can be present at the same time. It has also been shown how the often used term generational conflict can be thought of as a special scenario of intergenerational relations. The concept of intergenerational conflict here is used with caution in that it simultaneously requires weak levels of solidarity in both the societal and the family sphere. Following this logic, neither Germany nor Japan is experiencing an intergenerational conflict today. Considering the dynamics observed in this study, however, especially Japan may be moving towards such a scenario of conflict if current trends continue.

V.2 Limitations and suggestions for further research

V.2.1 Limitations

This study comes with a number of limitations. Though various sources of descriptive data (NTA, WVS, ISSP) have been used and in addition, longitudinal (JSTAR, SHARE) and repeated cross-sectional formats (ISSP) have been analysed in a multivariate fashion, important questions remain unanswered. It would be desirable to have a longer time series or a higher number of repeated cross sections. This would not only allow a better understanding of developments over time, but also a clearer distinction of effects of age, period, and cohort. While data on the past is unlikely to be newly generated, future survey data will alleviate this problem. Other limitations of the data regard their quality. Starting with ISSP, additional questions regarding the role of government would be helpful. For instance, it would be insightful to analyse conceptions of intergenerational justice (for the analysis of which, in the course of this study, WVS had to be consulted, as discussed in chapter III). Regarding SHARE and JSTAR, challenges appear to be considerably stronger. Though these datasets (and all those under the umbrella of Global Aging Data) are designed to be compatible, comparability is in fact limited. Various questions are asked in slightly (but importantly, as discussed in chapter

IV) different ways, which compromises analytical scrutiny. In addition, surveys have so far not always been carried out in the same years, which is another limitation to comparability. In addition, high shares of missing values on important variables have been a drawback: most notably, information on the amounts of transfers in both financial and non-financial terms is unfortunately scarce.

V.2.2 Suggestions for further research

Other limitations of this study are also related to the scope of this study (and can only partly be explained by data constraints). For instance, although some distinctions have been made within Germany (East and West), this analysis has not focused on regional differences within the two countries. As is well-known, rural and urban areas tend to be affected by demographic ageing in different ways. Some of the indicators by which they can be expected to differ include living arrangements or living proximity between parents and children, (real estate) assets, or educational attainment. Such differences may picture, especially on the family level, different patterns of intergenerational solidarity. Such regional differentiations could be researched in future studies.

Another suggestion for future research, based on the matrix of intergenerational solidarity suggested in this study, regards to investigate paths and mechanisms of transition of countries within the typology. In other words, what are typical evolutions of intergenerational solidarity depending on economic, political and institutional developments over time? In a similar logic, studies have already analysed the transition of welfare regimes (see for example: Bosch and Jansen 2010; Seeleib-Kaiser 2002; Ferragina and Seeleib-Kaiser 2011). For related analysis in this case, it would help to include a larger set of countries in order to understand more general patterns.

Including more countries into the comparison would be worthwhile in more general. Considering the data used for this study, this would indeed be feasible. Those countries that have both, longitudinal surveys following the concept of Global Aging Data (2018) as well as ISSP (2018), include to date: further European countries from the SHARE dataset, the US (Health and Retirement Study), England (English Longitudinal Study of Aging), Mexico (Mexican Health and Ageing Study), India (Longitudinal Aging Study in India), South Korea (Korean Longitudinal Study of Aging), and China (China Health and Retirement Longitudinal Study). Such a comparison on a larger scale would certainly allow gaining more general insights, and thereby also put the results of this study at a test.

Besides including more countries, another way of enriching analysis would be to include more dimensions. Especially, it would be worthwhile to more closely study intergenerational policies that are directed towards young age. Though population ageing is essentially about the increasing share of old-age dependants, a fuller picture of intergenerational relations should also include an inquiry

into public support for young dependants. In this work, though this part has been included, it has not been at the centre of analysis.

On the basis of the results of this study, in addition to all the above, it would be especially interesting to investigate the connection between public debate (or discourse) and intergenerational relations. For despite the explanations for the evolution of intergenerational relations that were offered here, there emerges a new puzzle: after all, why did Germany experience such a strong upwards shift in preferences for old-age expenditure overall and even across age groups and social strata (the wording of the survey question remained unchanged)? Important explanations could be found in public debate and dominant narratives of what demographic ageing means for a society. To investigate this, stakeholder interviews and content analyses of (mainstream) media and parliamentary debates as well as political party agendas may be a useful approach. The link between public debate or dominant narratives and policy change has been assumed to be direct in other intergenerational policy fields. For instance, Henninger et.al (2008) and Seeleib-Kaiser and Toivonen (2011a) have argued that Germany's 2007 family reform could be realised because public debate had opened a window of opportunity for an overhaul. In a similar fashion, Germany (and in a different way Japan too) may today be ripe for pension reform. Regarding this policy field in particular, a comparison could be made with earlier pension reforms that were undertaken in both Germany (see chapter III, also: Börsch-Supan and Wilke 2004; Hinrichs 2012; Rürup 2002; Sinn 2000) and Japan (see chapter III, also: Horioka, Suzuki, and Hatta 2007; Okumura and Usui 2014; Takayama 2012) and respective public debates from those years. It would certainly be worthwhile to study to what extent the link between public debate or dominant narratives and intergenerational relations or solidarity actually exists (and how this may differ across countries).

V.3 Policy recommendations

V.3.1 Assumptions underlying recommendations

This study was by a fair degree motivated by its author's concerns over the future of intergenerational solidarity and the conviction that the institutionalised sharing of resources is a political and societal achievement that is worth safeguarding and strengthening. As this work has been structured, it is clear that institutionalised sharing refers to both the societal and the family level, hence one which is state-run (societal solidarity) and one where the state has little influence (family solidarity). Both dimensions are important ones that any country, especially those with an ageing population, cannot do without. Both Germany and Japan (and indeed the ageing industrialised countries as a whole) have seen increasing (labour market) dualisation. The policy recommendations below depart from these assumptions.

V.3.2 Raise the state's profile of dealing with new social risks

As alluded to by Esping-Andersen (2002), social vulnerability or poverty risk is path-dependent over the life cycle, in other words: those facing such risks at young age tend to be more prone to the same or additional risks at older age. It is hence straightforward to argue for a comprehensive strategy on new social risks, which notably include combining family and work (most frequently this regards single parents), the risk of one's labour skills becoming obsolete (mostly regarding the low-skilled at working-age), the risk of too low returns on educational investments (mostly regarding the young and high-skilled).

The specifics of policy strategies go beyond the scope of this study. How to tackle new social risks has been addressed by other authors (see for example: Bonoli 2007; Esping-Andersen 2002). Promising approaches include active labour market policies, public expenditure for families (cash and services), services for persons at old-age, and spending on social assistance (cash and services). Bonoli (2007) additionally includes universal basic pensions and universal access to healthcare as an important pillar especially for non-regular workers.

What is more crucial than the specifics in this context is to stress that strengthening of policy support for those prone to new social risks is not just important for the prevention (or at least mitigation) of increasing inequality on the intragenerational but also on the intergenerational level. As argued above, mitigating inequality on the intragenerational level will have positive effects regarding intergenerational equality.

Indeed, additional public support for those exposed to new social risks is needed in both countries. The main two reasons are that firstly, both countries have been experiencing strong tendencies of dualisation on the labour market over the last decades (in addition to older dualisms such as that based on gender). Secondly, both countries' welfare regimes institutionally discriminate against labour market outsiders, which, among other disadvantages such as lower incomes, results in lower expected pensions. An engaging welfare state in this regard would help prevent high poverty risks among the elderly of the future.

V.3.3 Further de-familialise care

Population ageing comes with an increasing need for care. At the same time, as shown above (especially in chapter IV) the conditions for the family to fulfil its traditional role as a network of mutual support is becoming increasingly difficult. In both Germany and Japan, albeit to varying degrees, it has been mostly women providing care work to elder (and younger) persons. To further complicate matters, with female labour market participation still on the rise, the increasing need for care (due to demographic ageing) is being confronted with an arguably falling capacity of family members to

provide this care. This trend is exacerbated by the increasing number of single elderly households and childless elders, many of whom cannot count on traditional family ties as a network of mutual support.

If it is the aim to promote self-determination of family members to pursue their own lives as much as possible, the only policy response appears to be a further de-familialisation of care by means of an engaging welfare state. Such a welfare state leaves it up to parents whether one (of the two) stays at home to look after a child and whether it is family members taking care of the elderly.

It is important to note that a radical expansion in public care systems (potentially for both elderly and children) may not only be considered as a cost factor but also an investment: firstly, it sets free labour capacities of family members and secondly, it creates jobs in the care sector.

V.3.4 Raise retirement age

Population being the consequence of various favourable developments such as overall improving health conditions and increasing longevity, humans tend to live longer healthy lives. As has been argued in this study, pension systems in both countries are not financially sustainable in the long or medium run. Thus, future reforms in the name of system sustainability will be more burdensome to later birth cohorts and their effect only be mitigated if statutory retirement ages are raised as soon as possible. While the picture may look different for cases of hardship, there are thus at least two justifications, a financial and a moral one, for a considerably higher statutory retirement age in both Germany and Japan (and indeed various other ageing economies). Firstly and financially, later retirement (by imposing a higher statutory age) is one lever by which the burden on the pension system can be eased. This is especially the case today as some members of the large baby boomer cohort (mostly in Germany) or of the second baby boomers (first in Japan as the post-war baby boomers were born earlier than in Germany) are still about to retire. If a large cohort collectively postpones retirement, a considerable amount of public resources can be preserved. Secondly and morally, as long as technological levels of progress still require humans to be engaged in labour in order to provide for social prosperity, those who are in a position to work may be asked to do so. If humans today lead longer healthy lives, they can lead longer labour lives. This second argument would arguably strengthen intergenerational solidarity on the societal level and raise public support for intergenerational policies (as discussed in chapter III).

Indeed, as was discussed above, retirement ages have been raised in both countries over the last few years. The policy measure as such is thus not a new one, which constitutes a promising condition to act further in this direction.

V.3.5 Attract labour migration

Against the background of an ageing and eventually shrinking labour force, a comprehensive immigration strategy could contribute to solving problems of labour shortages. Most notably, the care sector can benefit from personnel from abroad. Although both countries, Germany and Japan, are already implementing such policies, both are still suffering from continuing undersupply (see for example: Buchan and Perfilieva 2006; Vogt 2018, 2017). While Germany's foreign national population has recently been growing due to a sudden influx of foreign nationals, notably consisting of refugees, Japan continues to accept very low numbers of immigrants except for high-skilled labour and workers migrating on a specific visa based on bilateral agreements (see chapter II). Labour migration policies allowing the influx of foreign nationals, coupled with initiatives to fully integrate such labour migrants into society, should, thus, be pursued further.

Both countries have been struggling with the idea of accepting a high(er) number of foreigners into their labour market and society. In Germany, this is best reflected in the success of the anti-immigration platform party AFD (Alternative für Deutschland, or Alternative for Germany) in the 2017 parliamentary elections, which attracted the third most votes of all parties (Der Bundeswahlleiter 2018). In Japan, opposition to comprehensive immigration policies can be interpreted to be even stronger than in Germany since migration as a policy issue has been largely ignored or disregarded by major political parties (Lill 2012). A further opening to immigration would, however, be in the demographic and economic interest of both Germany and Japan.

V.3.6 Feasibility of recommendations?

With the challenge of large public opposition against immigration in mind, the question of political feasibility is relevant with respect to all of the policies proposed here. While raising retirement has been suggested by many scholars and policymakers across countries as a remedy for old-age biased welfare states (see for example: OECD 2006), the other two main policy recommendations may provoke critical reactions. A popular critique may relate to fiscal constraints: how should a government spend more money on certain programs if its problem of demographic ageing is essentially one about the lack of fiscal sustainability of public services once relatively more persons become financially dependent (even once considerable raises in statutory retirement ages are priced in)? Three responses against such reservations are obvious (and by no means new), two of which have been alluded to in this section already.

Firstly, regarding new social risks, there is path dependency of poverty risk over the life cycle. Investing into (vulnerable) persons at young age can be expected to ease the necessity of helping them out

at old age. Hence, government spending is not necessarily a zero-sum game, and it is arguably less so the earlier in their life cycle individuals can benefit from such support.

Secondly, regarding more spending on care, there may be positive employment and thus purchasing power or demand effects to the economy once the need for (social) care is properly monetised. In other words, though such spending programmes would tend to cost more money to the public sector they can be considered investments on which beneficial returns can be expected.

Thirdly, regarding all remaining doubts of the “yes, but all this will still be costly” sort, the following needs to be said: yes, demographic ageing is costly. With higher retirement ages, some of this burden could (and should) be borne by those persons who have already reached higher ages themselves, while others should be borne by those at working-age. However, questions of (financial) affordability are not fundamentally questions about effects of age, cohort or period. Instead, they are about who has (access to) resources and who does not. In times of increased cross-border mobility of capital and recurring tax avoidance scandals, it should be a government’s priority to ensure or gain access to the necessary funds to provide for investments into social solidarity.⁶⁶ The findings of this study have to be read in this light: any challenges to the welfare state (and thus social solidarity) posed by population ageing should not lead to the conclusion that the government should retreat. Instead, it must be reorganised because it is (and will be) in dire need.

As shown at length in this study, to argue that the welfare state can no longer provide for intergenerational solidarity means to leave it to the family, which would further increase inequality as a whole and arguably jeopardise social solidarity as a cornerstone of the functioning of society. It would be a sad surrender of the welfare state when, after the “Golden Era” of the post-war decades, new proud times could just be approaching.

V.3.7 Wider context

Less than two decades into what Lutz, Sanderson, and Scherbov (2004) have called “the century of population ageing”, different patterns of intergenerational solidarity have become observable. Germany and Japan, two of the pioneers of ageing, are sharing the same demographic and resulting policy challenges but differ considerably in at least one important aspect: intergenerational solidarity in the societal sphere has been strengthening in Germany but weakening in Japan. This finding may make it appear that if an ageing country can choose its policy path in the face of ageing, following in Germany’s footsteps would be preferable over those of Japan. While it is true that for the policy

⁶⁶ How to approach this problem, obviously, is not the subject of this study.

challenges ahead Germany appears to find itself in a more favourable position, one should not dismiss the Japanese development as a lost case.

Japan's unprecedentedly high government debt levels are by far not exclusively to be explained by the welfare state's old-age spending bias (economic stimulus spending and disaster recovery after the Great Tohoku Earthquake in 2011, each plays an important role; see chapters II and III). Thus, the government debt ratio, the notable increase of which has coincided with the population's declining tolerance for further old-age spending expansion, can partly be considered an exogenous factor.⁶⁷ This is to say that part of the vanishing intergenerational solidarity on the societal level may be due to external circumstances. As shown in chapter III, when asked whether "Older people are a burden on society", respondents in Japan agree even less often than those in Germany (though in Germany respondents show more societal solidarity on the policy level).

Besides all other relevant factors shown here, it could not be generally tested in this study to what extent it is a welfare state's (old-age) spending bias and to what extent it is a country's government debt ratio that drives people's discontent with the allocation of public resources. Such a step would require further country cases for comparison and possibly data that cover a longer sequence of years so that more within-country variation would become observable. What could be seen here, however, is that under certain circumstances population ageing comes with a widespread perception among society that public resources are increasingly limited. This indicates all the more that wise government policies and resource allocation, that take care of all groups of society, are a crucial factor for solidarity in the face of demographic ageing.

⁶⁷ In addition, different from countries of the Eurozone, Japan has full control over its central bank, which tends to allow higher debt taking of the public sector and to some extent even the monetisation of debt in terms of expansionary monetary policy.

VI References

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VII Appendix to chapter III

VII.1 Significance of interactions for outsider effects

Table 31: Model results of interactions between age and employment status, dependent variable: preference for government spending on old-age pensions, odds ratios.

Interacted variables	Reference category	Category	Germany		Japan	
			OR	z	OR	z
Age category, employment status	15-24, insider	15-24, outsider	2.13	2.51	0.86	-0.33
	25-34, insider	25-34, outsider	0.95	-0.32	0.75	-0.95
	35-44, insider	35-44, outsider	1.62	3.3	1.18	0.73
	45-54, insider	45-54, outsider	1.37	2.09	1.49	1.83
	55-64, insider	55-64, outsider	1.58	2.57	0.72	-1.4
	65-74, insider	65-74, outsider	1.27	0.35	1.37	1.04
	75+, insider	75+, outsider	-	-	1.95	0.9
Total number of observations			6570		3692	
Controlled for: year, educational attainment, living arrangement, gender, partner's employment status, political interest, political persuasion, East/West (Germany).						

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

Table 32: Significance of interactions between employment status and age, outcome variable: preference for more government spending on old-age pensions; odds ratios.

Interacted variables	Reference category	Category	Germany		Japan	
			OR	z	OR	z
Age category, employment status	Outsider, 15-24	Outsider, 55-64	1.24	0.62	0.77	-0.49
	Outsider, 25-34	Outsider, 55-64	1.55	1.93	1.21	0.53
	Outsider, 35-44	Outsider, 55-64	1.39	1.61	1.12	0.42
	Outsider, 45-54	Outsider, 55-64	1.64	2.43	0.70	-1.33
	Outsider, 65-74	Outsider, 55-64	1.48	0.83	0.47	-2.48
	Outsider, 75+	Outsider, 55-64	0.89	-0.43	0.55	-1.03
Total number of observations			6570		3692	
Controlled for: year, educational attainment, living arrangement, gender, partner's employment status, political interest, political persuasion, East/West (Germany).						

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

Table 33: Model results of interactions between gender and employment status (above) and educational attainment and employment status (below), dependent variable: preference for government spending on old-age pensions, odds ratios.

Interacted variables	Reference category	Category	Germany		Japan	
			OR	z	OR	z
Gender, Empl. status	male, insider	male, outsider	1.92	4.94	1.13	0.73
	female, insider	female, outsider	1.20	1.73	0.96	-0.26
Educ. attainm., Empl. status	Higher sec. or less, insider	Higher sec. or less, outsider	1.47	3.91	1.10	0.37
	Higher second./o., insider	Higher second./o., outsider	1.35	1.88	1.02	0.11
	Academic, insider	Academic, outsider	0.99	-0.04	1.04	0.18
	No info/missing, insider	No info/missing, outsider	2.59	1.77	1.66	0.54
Year, Empl. status	1996, insider	1996, outsider	1.42	3.18	1.24	0.93
	2006, insider	2006, outsider	1.71	3.51	0.69	-1.9
	2016, insider	2016, outsider	1.09	0.58	1.29	1.67
Total number of observations			6570		3692	
Controlled for: year, age category, educational attainment, living arrangement, gender, partner's employment status, political interest, political persuasion, East/West (Germany).						

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

Table 34: Model results of interactions between survey year and age category, dependent variable: preference for government spending on old-age pensions, odds ratios.

Interacted variables	Reference category	Category	Germany		Japan	
			OR	z	OR	z
survey year, age category	1996, 15-24	2006, 15-24	1.54	2.16	0.68	-1.5
	1996, 25-34	2006, 25-34	1.22	1.17	0.63	-1.98
	1996, 35-44	2006, 35-44	1.13	0.87	0.84	-0.84
	1996, 45-54	2006, 45-54	1.00	0.01	0.78	-1.18
	1996, 55-64	2006, 55-64	0.73	-1.94	1.38	1.62
	1996, 65-74	2006, 65-74	1.56	2.61	1.02	0.08
	1996, 75+	2006, 75+	0.86	-0.6	1.19	0.53
	2006, 15-24	2016, 15-24	4.17	4.96	0.61	-1.71
	2006, 25-34	2016, 25-34	3.95	6.27	0.53	-2.36
	2006, 35-44	2016, 35-44	3.60	6.42	0.56	-2.6
	2006, 45-54	2016, 45-54	4.62	8.2	0.60	-2.48
	2006, 55-64	2016, 55-64	4.36	7.38	0.53	-3.14
	2006, 65-74	2016, 65-74	2.88	4.49	0.69	-1.69
	2006, 75+	2016, 75+	2.83	3.62	0.91	-0.32
Total number of observations			6570		3692	
Controlled for: employment status, educational attainment, living arrangement, gender, partner's employment status, political interest, political persuasion, East/West (Germany).						

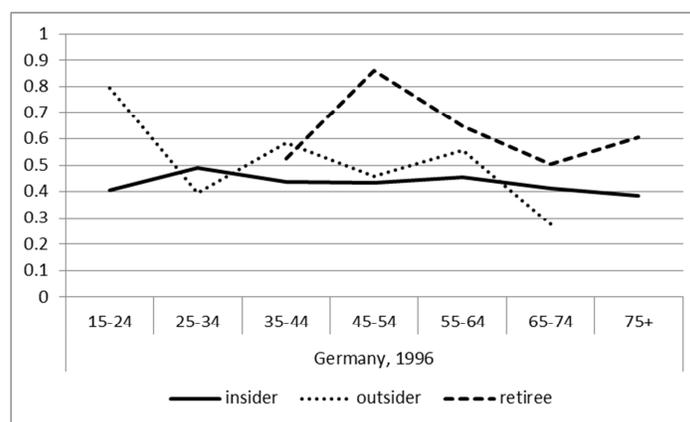
Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

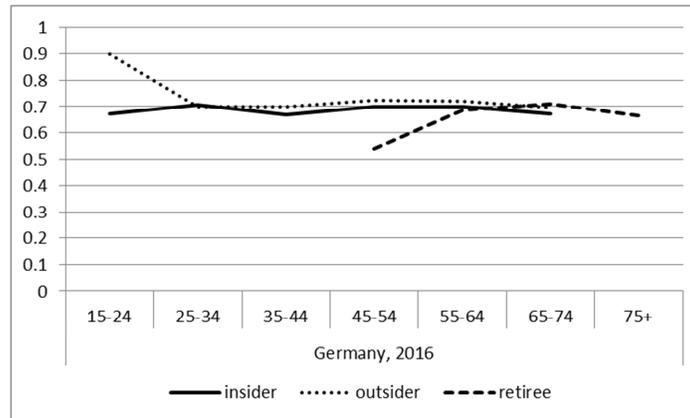
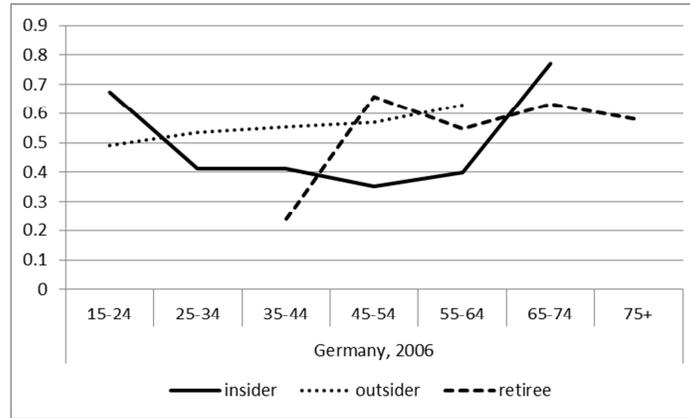
VII.2 Interactions of age and employment status by years

VII.2.1 Germany

Figures in this subsection show the results of interactions between age and employment for Germany across years. While an outsider effect among young age groups (outsiders showing more support for government spending than insiders) in 1996, this effect had turned around in 2006 and again switched back to the 1996 pattern in 2016. In general, outsiders at working-age mostly showed more support for more government spending on old-age than insiders, and retirees mostly topped the two other groups. However, these differences largely disappeared in 2016. An exception in 2016 is the age group 15-24 where an outsider effect is clearly marked.

Figure 43: Interaction of age group and employment status by year for Germany, dependent variable: preference for government spending on old-age pensions, average probabilities.





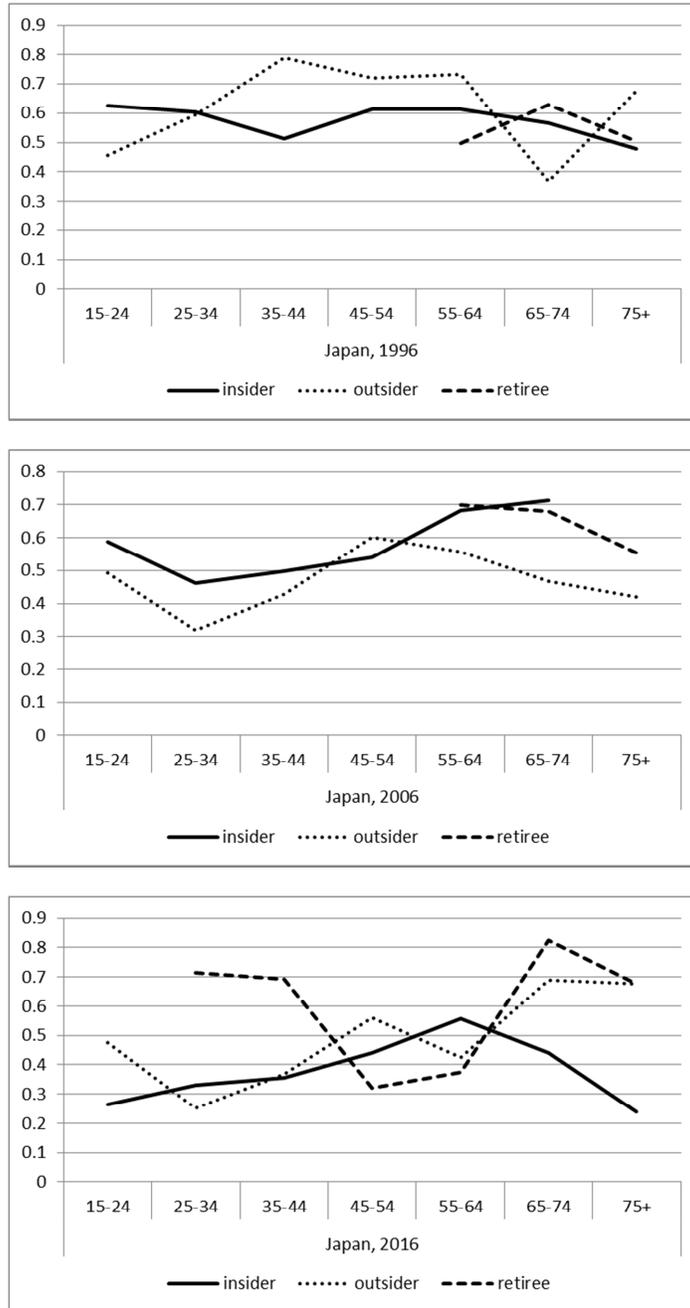
Controlled for: educational attainment, living arrangement, gender, partner's employment status, political interest, political persuasion, East/West.

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

VII.2.2 Japan

Figures in this subsection show the results of interactions between age and employment for Japan across years. As can be seen across figures, there are observable differences between employment statuses and age. However, these differ across years. While in 1996 outsiders showed higher support for more government spending than insiders across most of working-age (except for the youngest age groups), this picture was reverse in 2006 with outsiders mostly showing lower support than insiders (except for age 45-54). In 2016, again, outsiders showed higher support more often (except for age groups 25-45 and 55-64). Over the years, thus, while there are clear outsider effects observable, they do not show a consistent pattern in Japan.

Figure 44: Interaction of age group and employment status by year for Japan, dependent variable: preference for government spending on old-age pensions, average probabilities.



Controlled for: educational attainment, living arrangement, gender, partner's employment status, political interest, political persuasion.

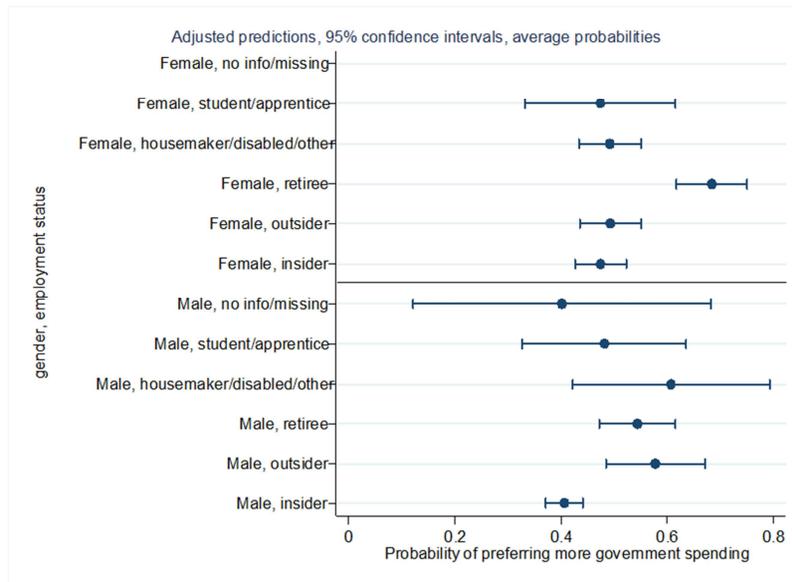
Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

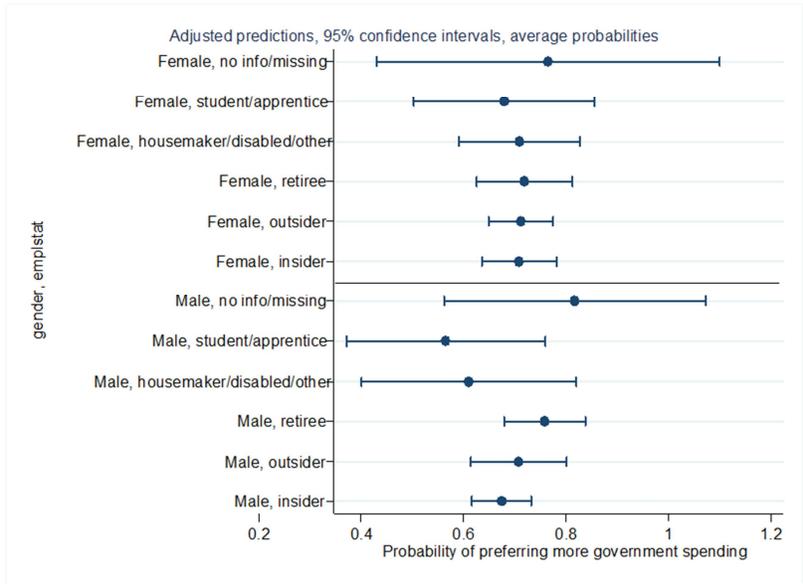
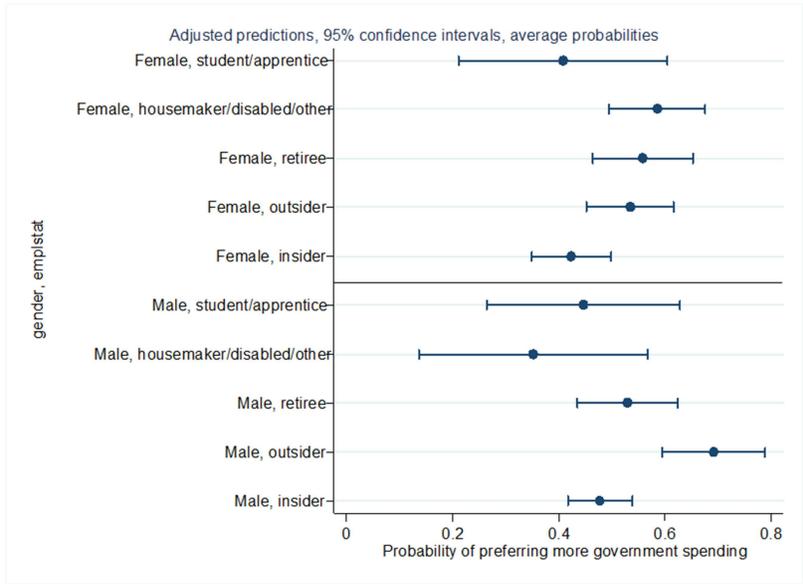
VII.3 Interactions of gender and employment status by years

VII.3.1 Germany

Figures in this subsection show the interaction effects between gender and employment status in Germany across years. In 1996 and 2006, there was an outsider effect among men (showing more support for spending than male insiders) though this effect disappeared in 2016. Among women, in turn, there is no such effect observable in any year. One interpretation for this gender difference is that (labour market) outsider women often have a male partner who is a labour market insider so that their preferences are those of a labour market insider (to check for this scenario, interactions between the partner's employment status and that of the respondents have been carried out, but no differences are observed; see below in this part of the appendix).

Figure 45: Interaction of gender and employment status by year (1996-2016 from top to bottom) for Germany, dependent variable: preference for government spending on old-age pensions, average probabilities.





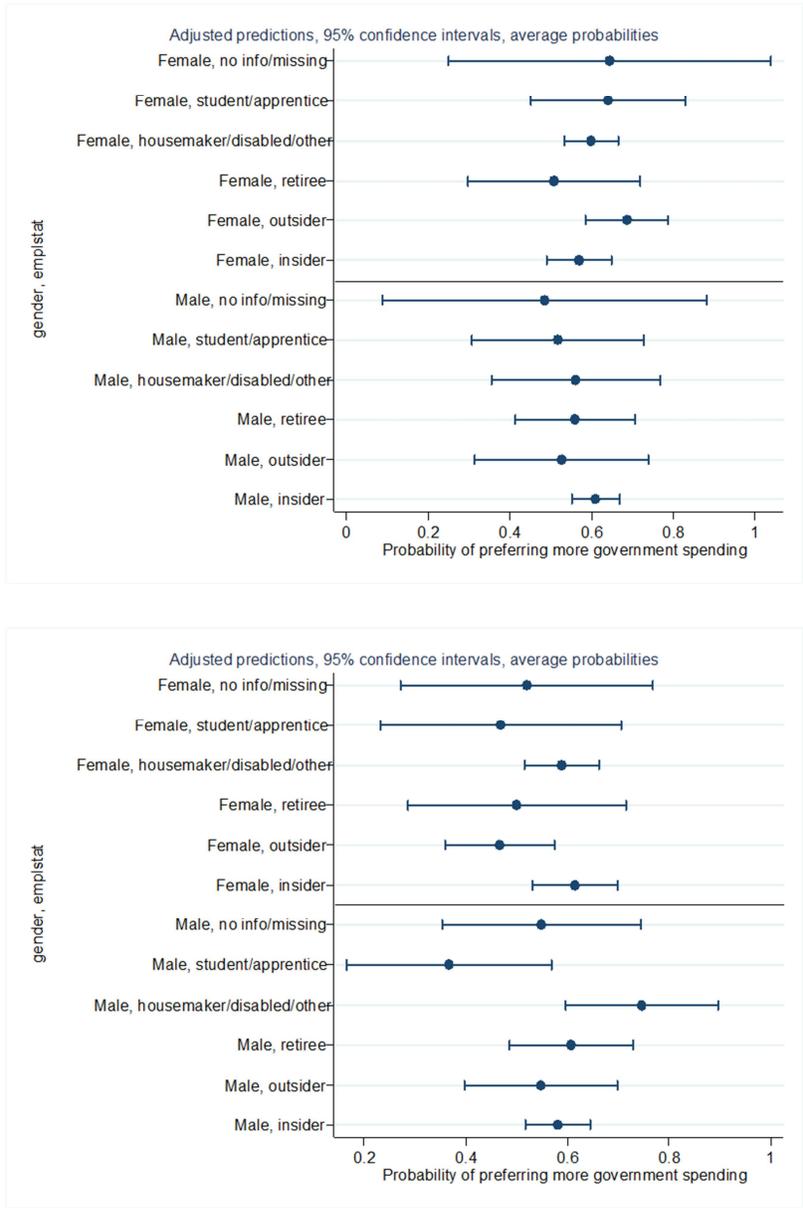
Controlled for: age category, educational attainment, living arrangement, partner's employment status, political interest, political persuasion, East/West.

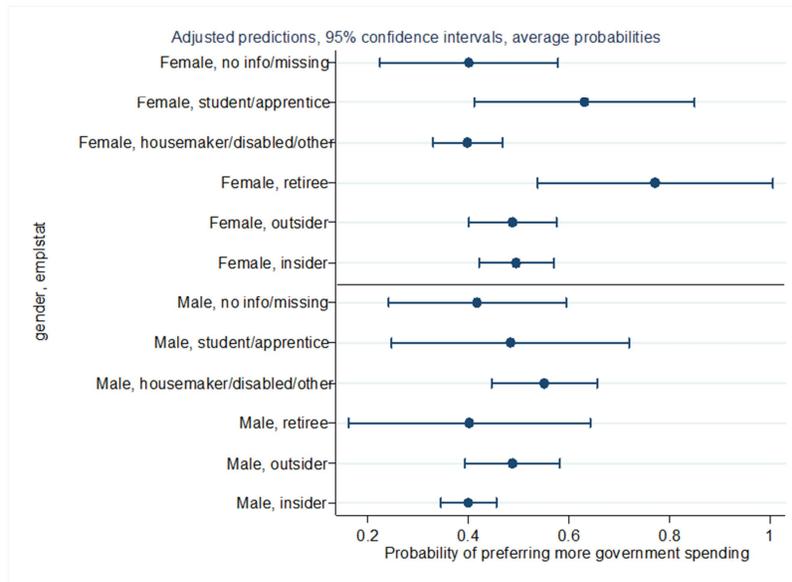
Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

VII.3.2 Japan

Figures in this subsection show the interaction results between gender and employment status across years for Japan. There does not appear to be an outsider effect for Japan marked by gender, as can be seen by the overlapping confidence intervals between the categories, which is the case for both genders in every year.

Figure 46: Interaction of gender and employment status by year (1996-2016 from top to bottom) for Japan, dependent variable: preference for government spending on old-age pensions, average probabilities.





Controlled for: age category, educational attainment, living arrangement, partner's employment status, political interest, political persuasion.

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

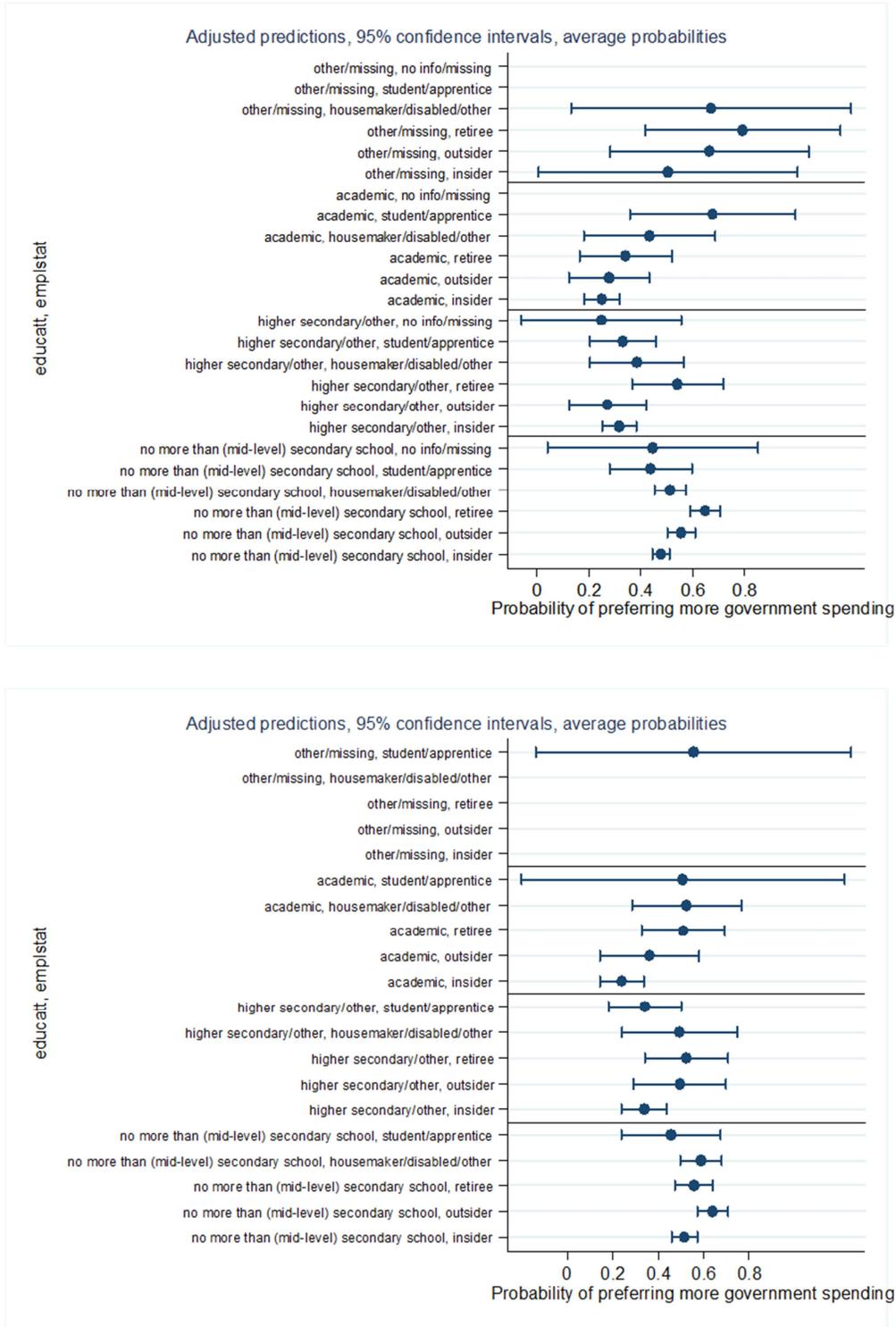
VII.4 Interactions of educational attainment and employment status by years

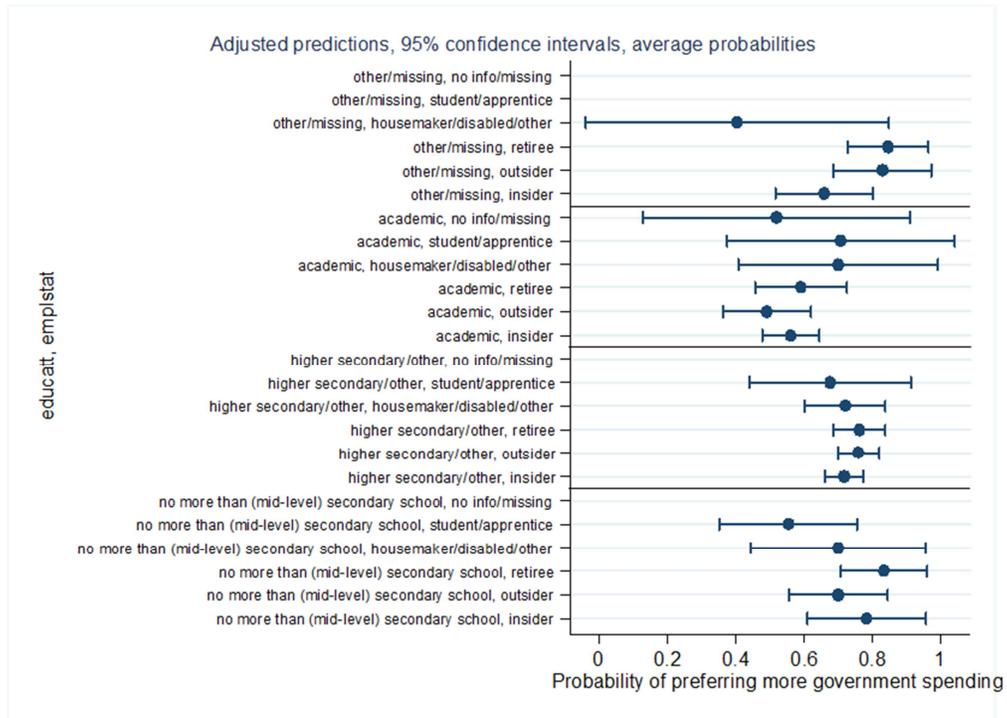
VII.4.1 Germany

Figures in this subsection show the interaction effects between educational attainment and employment status in Germany across years. Two general patterns can be seen here: Firstly, higher-skilled persons show lower levels of support for increases in government spending on old-age (as could be seen from the previous regression tables). Secondly, there is an outsider effect (more support than insiders) only among the low-skilled (and again, it vanished in 2016).

The pattern of outsider effects being pronounced among the lower-educated is consistent with the discussion above in that dualism hits those harder at lower income levels (which are typically correlated with education or skills). Thus, there appears to be an outsider gradient among the low-skilled in Germany but not among the high-skilled, which, though, was not observable in 2016.

Figure 47: Interaction of educational attainment and employment status by year (1996-2016 from top to bottom) for Germany, dependent variable: preference for government spending on old-age pensions, average probabilities.





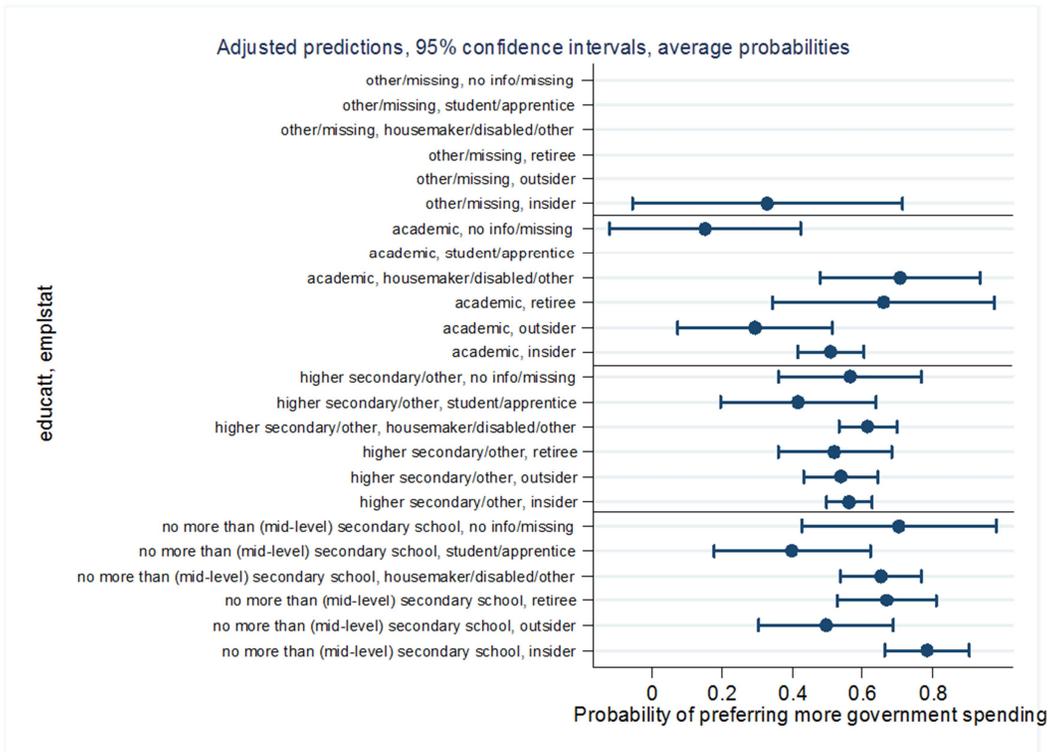
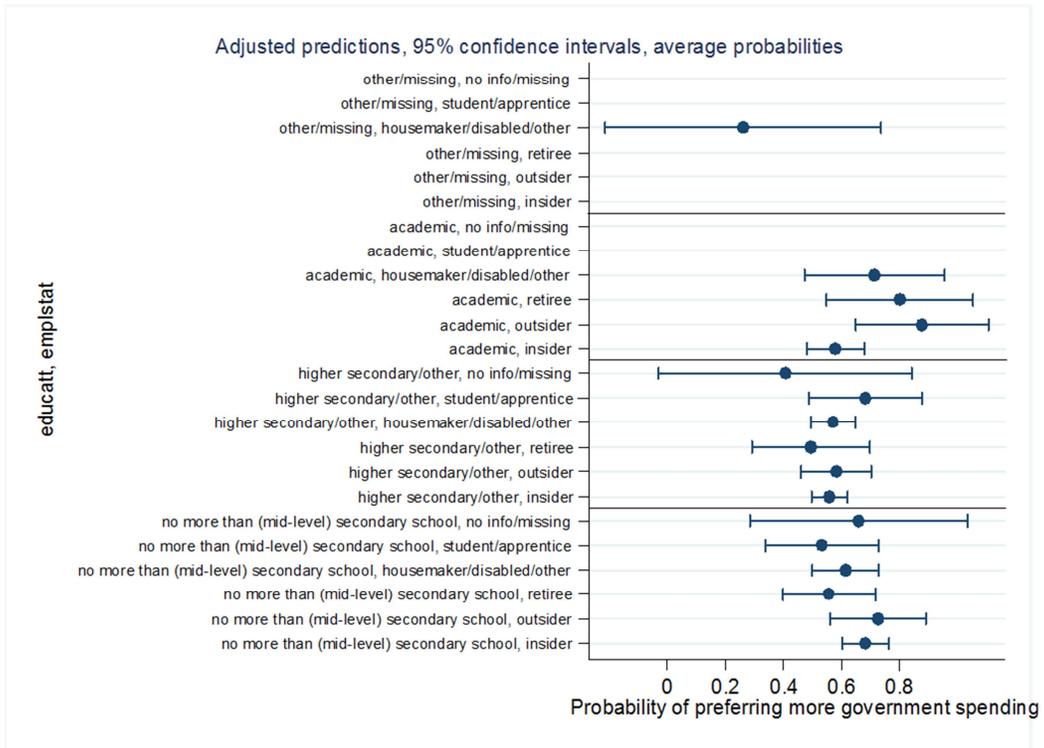
Controlled for: age category, gender, living arrangement, partner's employment status, political interest, political persuasion, East/West.

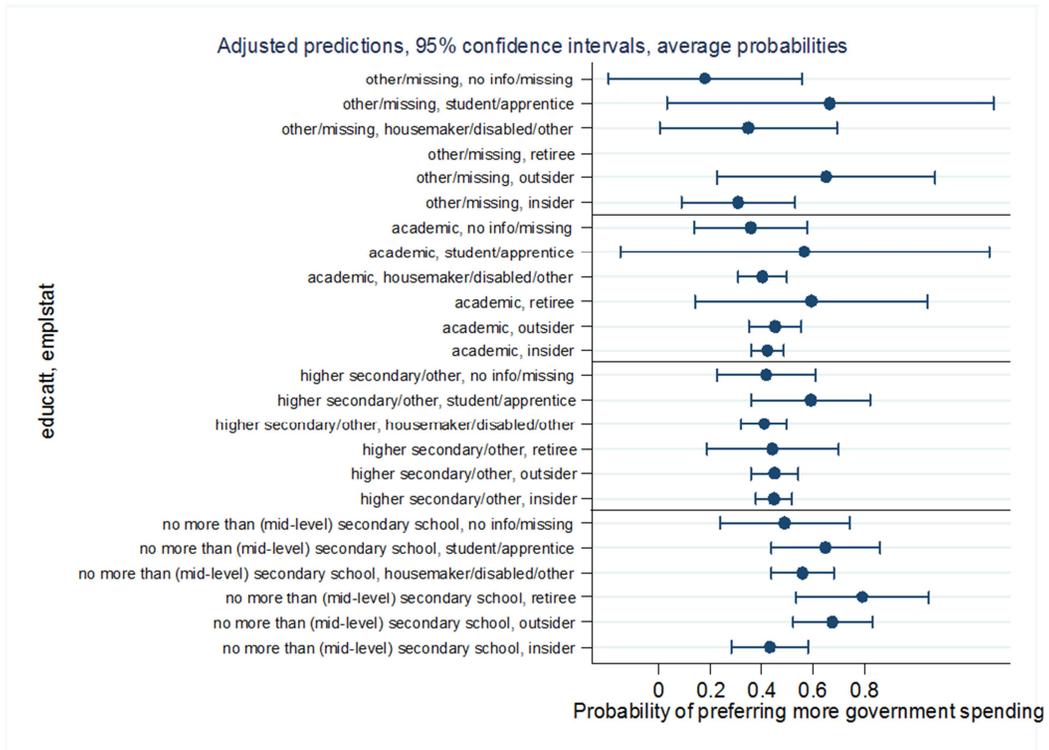
Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

VII.4.2 Japan

Figures in this subsection show the plotted results of interactions between educational attainment and employment status across years in Japan. Similar to the interaction with gender, an education-level marked outsider effect does not appear to have emerged over the years.

Figure 48: Interaction of educational attainment and employment status by year (1996-2016 from top to bottom) for Japan, dependent variable: preference for government spending on old-age pensions, average probabilities.





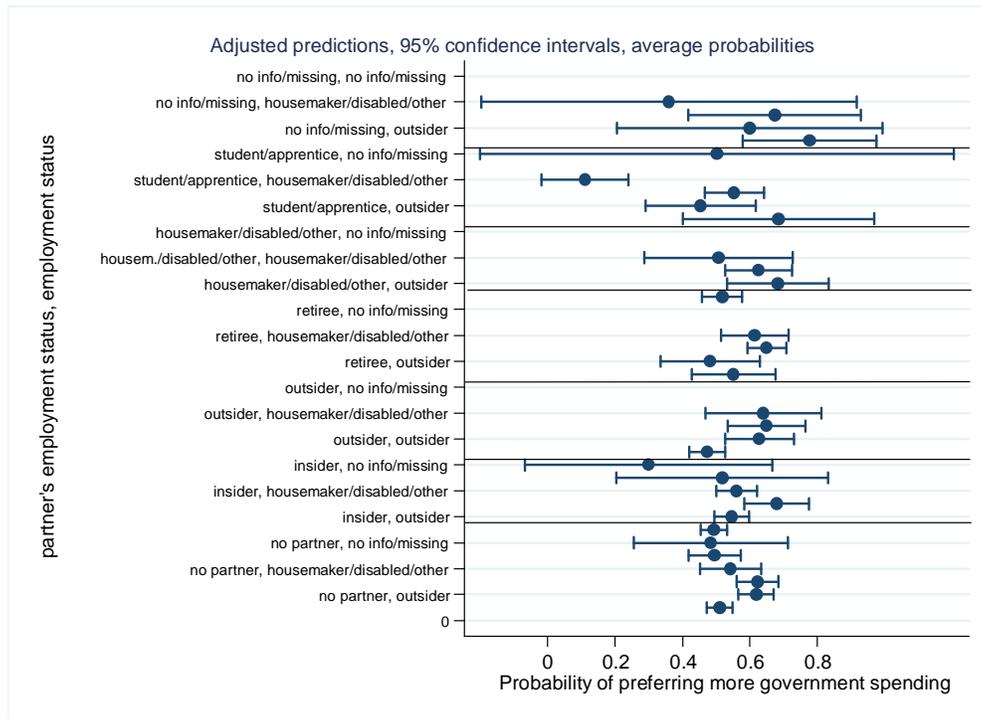
Controlled for: age category, gender, living arrangement, partner's employment status, political interest, political persuasion.

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

VII.5 Interactions of partner's employment status and respondent's employment status

VII.5.1 Germany

Figure 49: Interaction of partner's employment status and respondent's employment status by year for Germany, dependent variable: preference for government spending on old-age pensions, average probabilities.

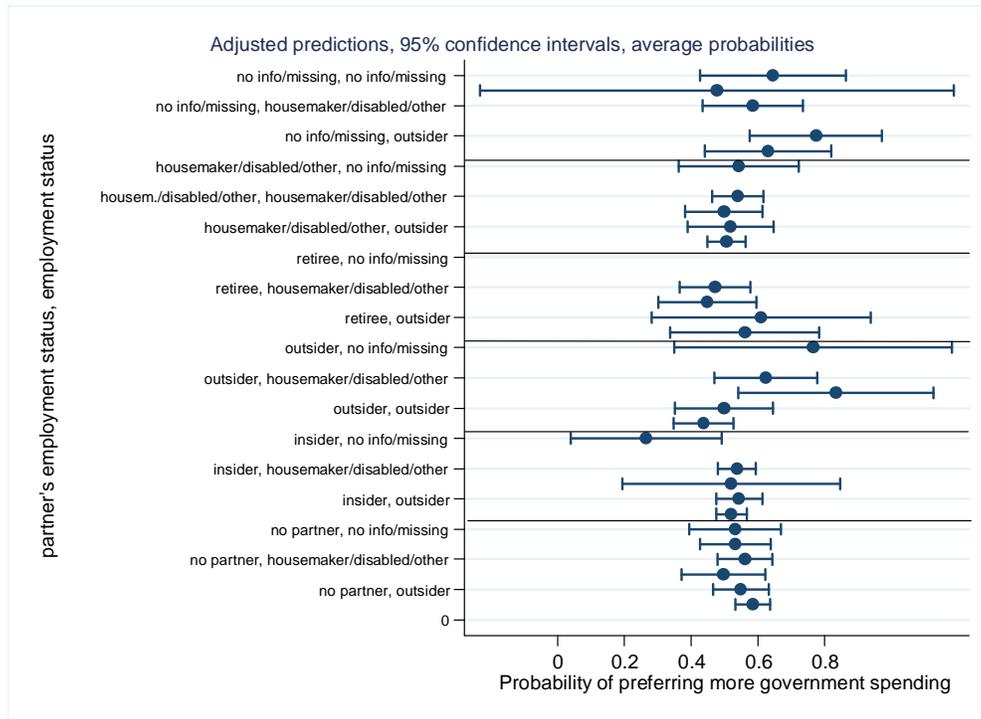


Controlled for: year, age category, gender, educational attainment, living arrangement,, political interest, political persuasion, East/West.

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

VII.5.2 Japan

Figure 50: Interaction of partner’s employment status and respondent’s employment status by year for Japan, dependent variable: preference for government spending on old-age pensions, average probabilities.

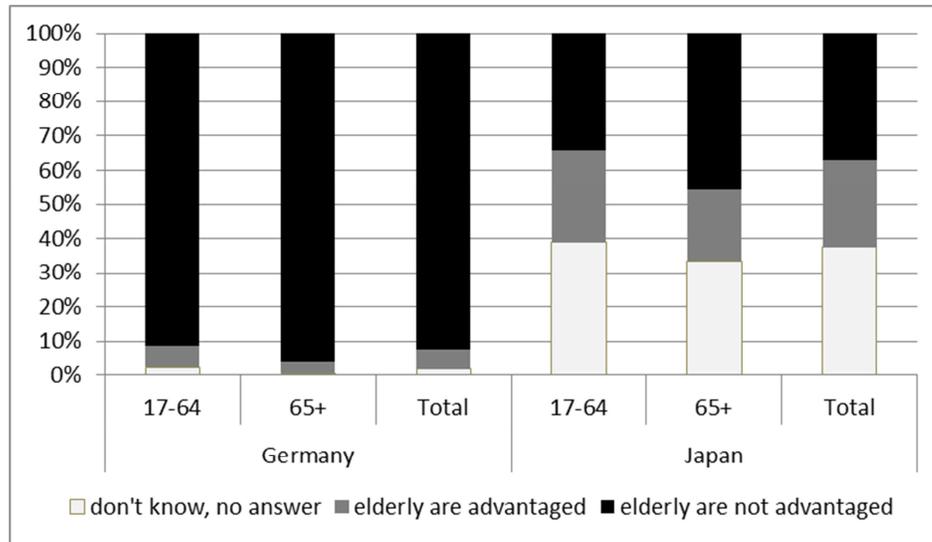


Controlled for: year, age category, gender, educational attainment, living arrangement,, political interest, political persuasion.

Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

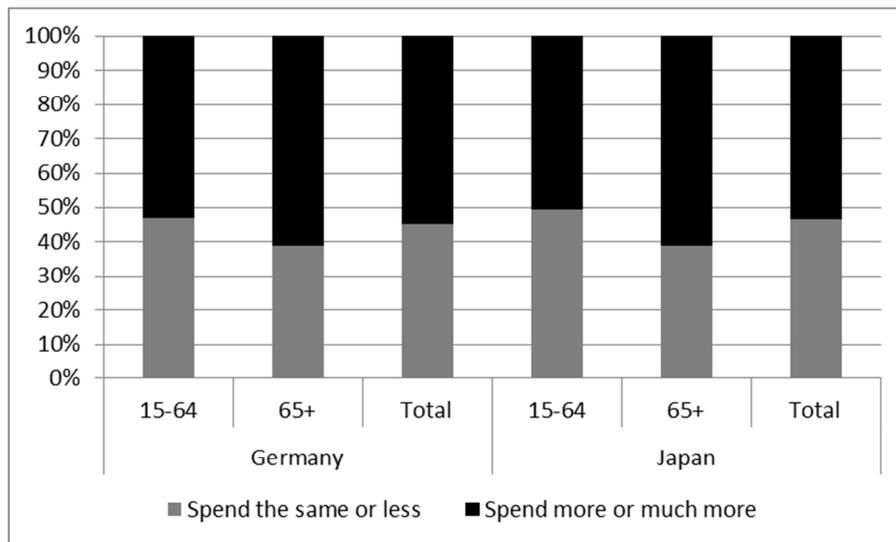
VII.6 Age gradient in preferences for government spending on old-age and intergenerational fairness

Figure 51: Age gradient regarding the statement “Older people get more than their fair share from the government”, by country and age group (dichotomous).



Source: WVS (2014), own calculations.

Figure 52: Age gradient regarding for more or much more government spending on pensions and old-age, by country and age group (dichotomous).



Source: ISSP (NHK 2018; GESIS 2008, 1999, 2017), own calculations.

VIII Appendix to chapter IV

VIII.1 Sensitivity analysis, grandchildcare/eldercare by charact. of 2nd childTable 35: provision of grandchildcare by characteristics of 2nd child, column percent.

<u>Germany: respondent received private care</u>							<u>Japan: respondent received private care</u>						
	No	Yes	no info	-	-	Total	No	Yes	no info	-	-	Total	
No	83.78	85.75	84.11			84.24	37.1	47.87	17.65			37.45	
Yes	16.22	14.25	15.89			15.76	62.9	52.13	82.35			62.55	
Total	100	100	100			100	100	100	100			100	
<u>Germany: married 2nd child</u>							<u>Japan: married 2nd child</u>						
	Yes	No	No info	-	-	Total	Yes	No	No info	-	-	Total	
No	83.76	81.96	85.61			84.24	41.97	33.38	45.93			37.45	
Yes	16.24	18.04	14.39			15.76	58.03	66.62	54.07			62.55	
Total	100	100	100			100	100	100	100			100	
<u>Germany: employment status 2nd child</u>							<u>Japan: employment status 2nd child</u>						
	Full-time	Non-reg.	School/no job	Leave/carer	No info	Total	Full-time	Non-reg.	School/no job	Leave/carer	No info	Total	
No	83.91	84.25	89.69	81.97	84.31	84.24	37.51	33.6	46.9	33.62	42.95	37.45	
Yes	16.09	15.75	10.31	18.03	15.69	15.76	62.49	66.4	53.1	66.38	57.05	62.55	
Total	100	100	100	100	100	100	100	100	100	100	100	100	
<u>Germany: residence distance of 2nd child</u>							<u>Japan: residence distance of 2nd child</u>						
	<1km	<25 km	>=25 km	No info	-	Total	Cores.	Same town	Same pref.	No info	-	Total	
No	69.19	85.08	89.7	84.92		84.24	32.41	28.27	42.31	46.32		37.45	
Yes	30.81	14.92	10.3	15.08		15.76	67.59	71.73	57.69	53.68		62.55	
Total	100	100	100	100		100	100	100	100	100		100	
Obs.	1,910						3,901						

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Table 36: receipt of eldercare by characteristics of 2nd child, column percent.

<u>Germany: respondent provided grandchildcare</u>							<u>Japan: respondent provided grandchildcare</u>						
	No	Yes	no info	-	-	Total	No	Yes	no info	-	-	Total	
No	75.64	78.34	80.03			78.57	93.81	95.94	93.5			94.17	
Yes	24.36	21.66	19.97			21.43	6.19	4.06	6.5			5.83	
Total	100	100	100			100	100	100	100			100	
<u>Germany: married 2nd child</u>							<u>Japan: married 2nd child</u>						
	Yes	No	No info	-	-	Total	Yes	No	-	-	-	Total	
No	78.18	75.94	79.52			78.57	94.88	93.96	93.13			94.17	
Yes	21.82	24.06	20.48			21.43	5.12	6.04	6.87			5.83	
Total	100	100	100			100	100	100	100			100	
<u>Germany: employment status 2nd child</u>							<u>Japan: employment status 2nd child</u>						
	Full-time	Non-reg.	School/no job	Leave/carer	No info	Total	Full-time	Non-reg.	School/no job	Leave/carer	No info	Total	
No	77.17	75.85	75.51	74.78	81.21	78.57	94.42	94.03	95.97	94.08	92.86	94.17	
Yes	22.83	24.15	24.49	25.22	18.79	21.43	5.58	5.97	4.03	5.92	7.14	5.83	
Total	100	100	100	100	100	100	100	100	100	100	100	100	
<u>Germany: residence distance of 2nd child</u>							<u>Japan: residence distance of 2nd child</u>						
	<1km	<25 km	>=25 km	No info	-	Total	Cores.	Same town	Same pref.	No info	-	Total	
No	74.8	75.9	77.59	79.79		78.57	94.85	94.07	94.16	93.24		94.17	
Yes	25.2	24.1	22.41	20.21		21.43	5.15	5.93	5.84	6.76		5.83	
Total	100	100	100	100		100	100	100	100	100		100	
Obs.	5,676						11,083						

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

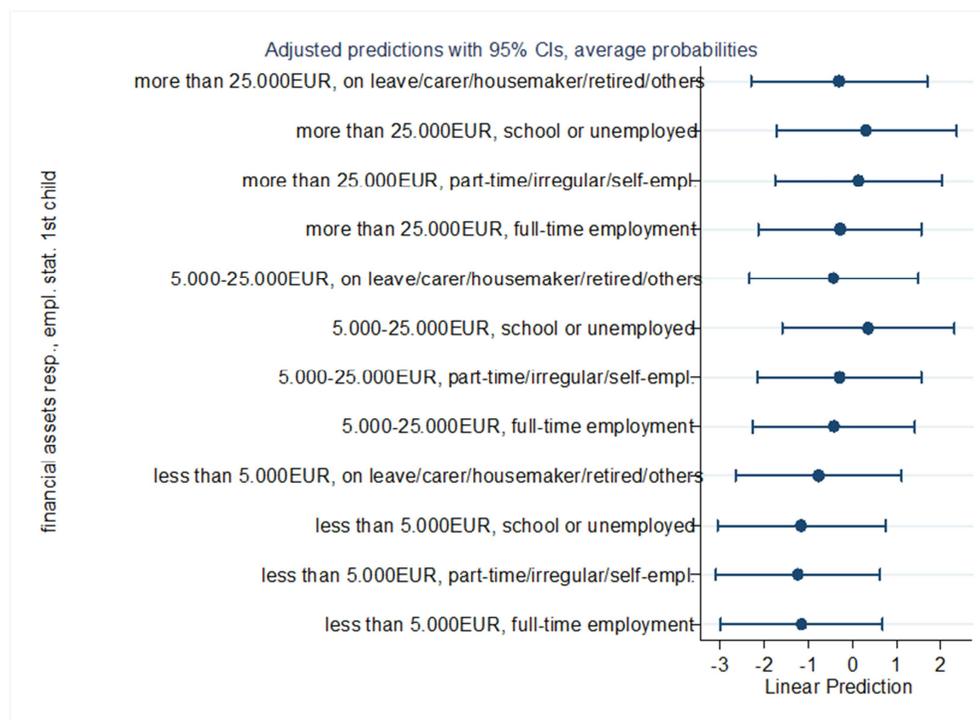
VIII.2 Sensitivity analysis, Germany higher cut-off values in financial assets

Figure 53: Model A.IV GER I-GER II, Germany with higher and lower cut-off values for financial wealth, logistic random effects regression, dependent variable: made downwards intergenerational financial transfer, odds ratios.

		Model A.IV (GER I)	Model A.IV (GER II)
		OR	OR
Survey year (ref.: 2007)	2004	0.95	0.95
	2011	0.44***	0.46***
	2013	1.76***	1.84***
	2015	1.01	1.04
Age group respondent (ref.: 70-75)	60-64	1.11	1.12
	65-69	1.13	1.15
Gender (ref.: male)	Female	0.81**	0.81**
Marital status (ref.: married)	Unmarried	0.72***	0.73***
Currently working (ref.: yes)	No/currently not	0.92	0.92
	No info/missing	1.29	1.33
Education (ref.: academic)	High school or less	0.40***	0.43***
	Vocational	0.69**	0.72*
	No info/missing	0.00	0
Assets real estate (ref.: yes)	No	0.54***	0.56***
	Don't know	0.82	0.84
Assets financial (ref. for GER I: <10,000 EUR) (ref. for GER II: <5,000 EUR) left: GER I; right: GER II	>10,000 (GER I) / 5,000-25,000 (GER II)	0.53***	0.47***
	>25,000 (GER II)	-	1.31*
	Don't know	0.47***	0.71***
Self-reported health (ref.: very good/good)	Not good/poor	0.71***	0.73***
	No info/missing	0.96	0.96
Received upward financial transfers (ref.: no)	Yes	2.83***	2.87***
	No info/missing	0.00	0
Received private care (ref.: no)	Yes	1.54***	1.56***
	No info/missing	1.34	1.25
Provided grandchildcare (ref.: no)	Yes	0.84	0.82
	No info/missing	0.79	0.78
1st child's gender (ref.: male)	Female	1.01	0.99
	Don't know/missing	5.60*	5.42*
1st child married (ref.: yes)	No	0.98	0.98
	Don't know/missing	1.17	1.13
1st child has children (ref.: yes)	No	0.88	0.9
	Don't know/missing	0.60**	0.62**
1st child's living proximity (ref.: <1km/same house)	<25km/same town	0.96	0.97
	=>25km/same country	0.95	0.96
	No info/missing	1.01	1.05
1st child's empl. status (ref.: full-time emp.)	Non-regular	1.22*	1.21
	School/ unempl.	1.48**	1.50**
	On leave/ carer/other	1.18	1.2
	No info/missing	0.96	0.96
1st child's education (ref.: academic)	High school or less	1.01	1.06
	Vocational	1.04	1.05
	No info/missing	0.00	0
Constant		2.21*	1.58
Insig2u		1.58***	1.54***
Number of obs.		4865	4865
Controlled for: age gr., children, educ.diff. (c1); age gr., gender, marital, empl. stat, children, educ. , educ.diff.(c2)			

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), own calculations.

Figure 54: Interaction of having financial assets and 1st child's employment status, Germany, dependent variable: made downwards intergenerational financial transfer, average probabilities.



Controlled for: country, econ. growth, year, gender, marital status, working status, educational attainment, real estate assets, self-reported health, received upwards financial transfers, received private care, provided grandchildcare.

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

VIII.3 Significance of interactions for country effects, wealth/social reproduction effects

Table 37: Significance of interactions between country and year dummy (above) and country and age group (below), outcome variable: made downwards intergenerational financial transfers.

Interacted variables	Reference category	Category	pooled	
			OR	z
Country, year (dummy)	GER, 2004-'09	GER, 2011-'15	0.96	-0.35
	JP, 2004-'09	JP, 2011-'15	1.37	4.37
Country, age group	GER, 60-64	GER, 65-69	0.01	0.11
	GER, 65-69	GER, 70-74	-0.09	-0.76
	JP, 60-64	JP, 65-69	0.18	2.11
	JP, 65-69	JP, 70-74	0.34	3.78
Total number of observations			13787	
Controlled for: econ. growth, year/age group, gender, marital status, working status, educational attainment, real estate assets, financial assets, self-reported health, received upwards financial transfers, received private care, provided grandchildcare, 1 st and 2 nd child's characteristics.				

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Table 38: Significance of interactions between financial assets of the respondent and employment status of 1st child (above) and real estate assets of the respondent and employment status of 1st child (below), outcome variable: made downwards intergenerational financial transfers.

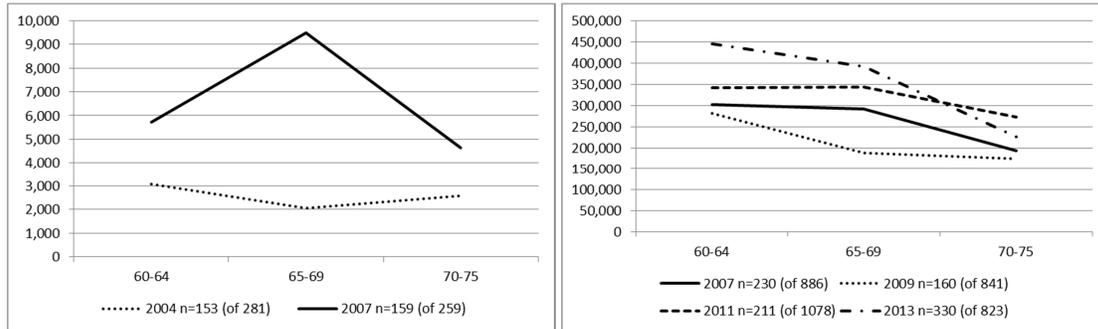
Interacted variables	Reference category	Category	Germany		Japan	
			OR	z	OR	z
Financial assets, empl. status 1 st child	Yes, full-time empl.	Yes, non-reg. empl.	1.51	1.92	1.08	0.53
	Yes, full-time empl.	Yes, school/unempl.	2.27	2.25	1.18	0.59
	Yes, full-time empl.	Yes, on leave/housem.	0.96	-0.14	1.19	1.24
	No, full-time empl.	No, non-reg. empl.	1.17	1.11	1.04	0.21
	No, full-time empl.	No, school/unempl.	1.17	0.73	1.55	1.23
	No, full-time empl.	No, on leave/housem.	1.26	1.18	1.07	0.38
Real estate assets, empl. status 1 st child	Yes, full-time empl.	Yes, non-reg. empl.	1.29	1.82	1.04	0.29
	Yes, full-time empl.	Yes, school/unempl.	1.70	2.34	1.41	1.48
	Yes, full-time empl.	Yes, on leave/housem.	1.28	1.27	1.19	1.49
	No, full-time empl.	No, non-reg. empl.	1.10	0.48	1.66	1.35
	No, full-time empl.	No, school/unempl.	1.16	0.54	0.73	-0.47
	No, full-time empl.	No, on leave/housem.	0.92	-0.27	1.04	0.08
Total number of observations			4865		8922	
Controlled for: econ. growth, year/age group, gender, marital status, working status, educational attainment, real estate assets/financial assets, self-reported health, received upwards financial transfers, received private care, provided grandchildcare, 1 st and 2 nd child's characteristics.						

Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

VIII.4 Amounts of financial transfers

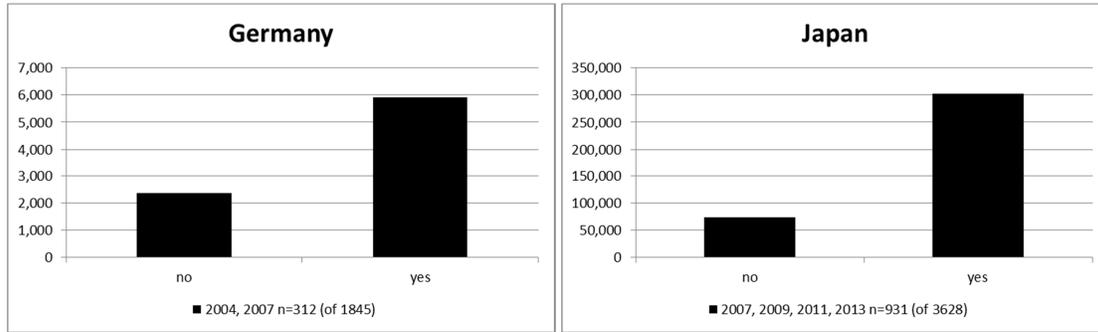
In both surveys SHARE and JSTAR, information on the amounts of financial transfers suffer from a very high share of missing values, which is the prime reason why the multivariate analysis has been carried out without transfer amounts. In SHARE, only waves 1 (2004) and 2 (2007) included transfer amounts, and while questions on transfer amounts are included in all waves of JSTAR, missing values are high. The figures below show transfer amounts for the years and cases available and divided up by some characteristics of the respondent or the 1st child respectively (below the figures are indicated the number of observations, for which information on the amounts is available, and in brackets the number of observations in the sample that have indicated to have made a financial transfer). In addition to low sample size, another major limitation here is that in both countries, the available observations seemingly tend to regard different types of financial transfers. This can be seen in the considerably different amounts of transfers: in the case of SHARE, mostly regular and smaller transfers have been mentioned by respondents. In JSTAR, in turn, the few available cases tend to regard large gifts and (planned) inheritance. This major limitation in comparability has to be borne in mind and hence, the data below rather serve for country-separate consultation (rather than for a cross-national comparison). Amounts have been converted into US-Dollar and adjusted by purchasing power parity of the respective year drawing on information of the OECD database (OECD 2018a).

Figure 55: Downward financial transfer amounts by age of respondent, for Germany (left) and Japan (right), in USD and PPP.



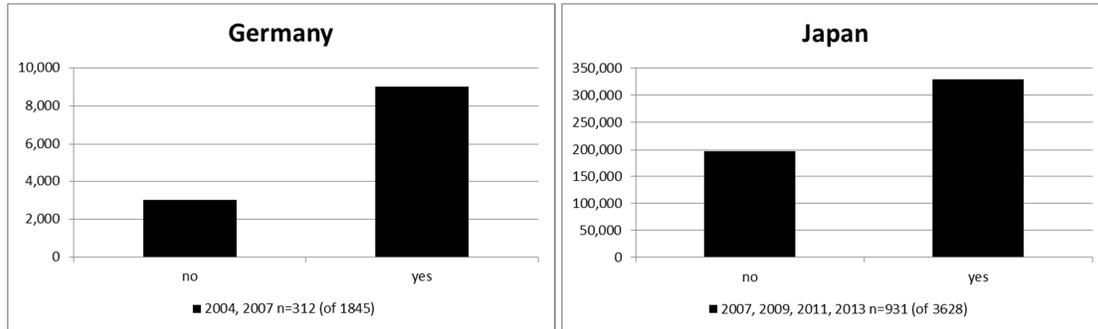
Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Figure 56: Downward financial transfer amounts by respondent's possession of real estate assets, in USD and PPP.



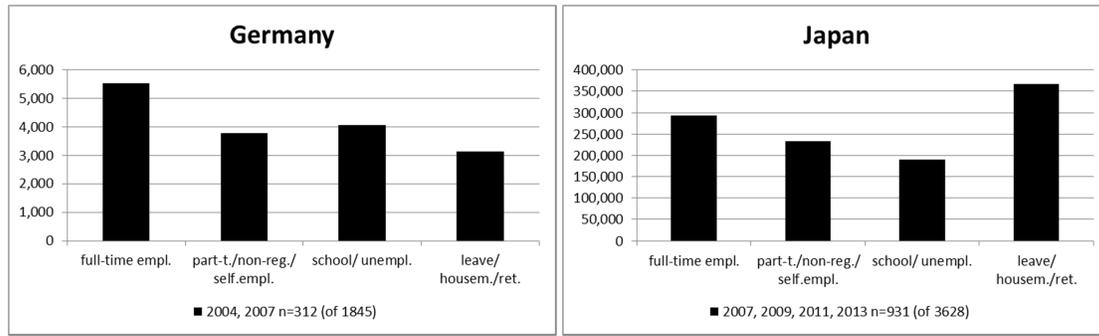
Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Figure 57: Downward financial transfer amounts by respondent's possession of financial assets, in USD and PPP.



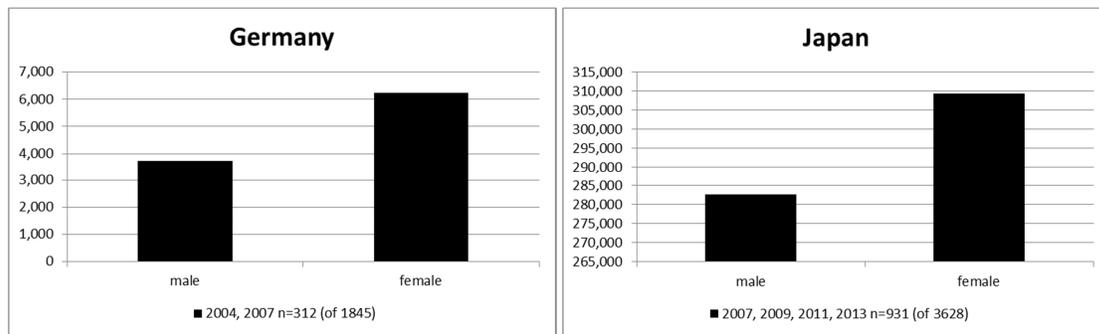
Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own

Figure 58: Downward financial transfer amounts by employment status of 1st child, in USD and PPP.



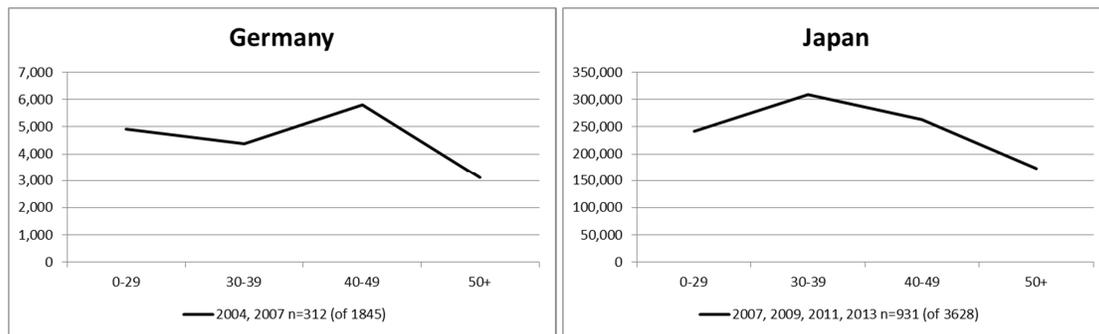
Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Figure 59: Downward financial transfer amounts by gender of 1st child, in USD and PPP.



Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.

Figure 60: Downward financial transfer amounts by age group of the 1st child, in USD and PPP.



Source: SHARE (Börsch-Supan 2017c, 2017d, 2017e, 2017a, 2017b), JSTAR (RIETI 2013b, 2013c, 2017, 2010, 2012, 2013a), own calculations.