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Equity, Justice, Interdependence: Intergenerational Transfers and the Ageing Population

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Equity, Justice, Interdependence:
Intergenerational Transfers and the Ageing Population.

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Abstract: The increase in the ratio of the elderly to the working age population as the demographic transition of low fertility and low mortality proceeds, has spurred a discussion concerning the equity of intergenerational transfers. The central question is if and how the state can afford the pensions and healthcare costs for growing older populations, and who should carry the burden. To a large extent, focus has been on public transfers while neglecting private transfers within families. There is also an obvious tendency of considering the impact of ageing in terms of pensions while health care has gained a lot less attention. A gender approach shows to be fruitful in the analysis of the costs and benefits of intergenerational transfers.

Sammanfattning: den ökande andelen av åldringar i och med att den demografiska transitionen med låga födelse- och dödstal fortskrider har lett till en debatt om rättvisa i transfereringar mellan generationer. Huvudfrågan är om och hur staten ska ha råd med pensioner och sjukvård för den växande äldre befolkningen, och vem som ska betala. I debatten har fokus varit på offentliga transfereringar medan privata transfereringar inom familjen har kommit i skymundan. Tendensen är också att diskutera följderna av våra pensionssystem, medan sjukvårdssystemen har fått mycket mindre uppmärksamhet. Ett genusperspektiv visar sig vara givande vid analyser av kostnader och förmåner i transfereringar mellan generationer.

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1. Intergenerational Justice or Generational Equity

The increase in the ratio of the elderly to the working age population as the demographic transition of low fertility and low mortality proceeds, has led to a broad and diverse debate on the economic impact of this transition. The current population ageing also happens at a time of an unprecedented old age care; in all Western countries the elderly have a guaranteed income support and health insurance coverage.

Retirement en masse as the baby boomers hit their mid sixties has spurred an intense discussion on whether it is possible, efficient and/or fair to maintain today's old age policies. Some of those who consider efficiency and affordability of age related policies also address themes such as justice, fairness and equity between generations, the most common term being 'generational equity'. However, studying this debate there is an apparent lack of definition of what generational equity actually consists of.

The notion of generational equity rests on the assumption that generations can be divided into reasonably well defined groups with specific needs and rights. At the heart of the matter lie financial, physical and emotional transactions between generations that tie them together. The basic idea is that if there is an intergenerational conflict of interests, present generations should take the utility of future generations into account when choosing their consumption. It is thus unjust to create and/or uphold policies for present generations which impose costs on future generations.

But any definition of generational equity is riddled with difficulties and the general case soon gets increasingly complex. How can intergenerational equity be defined given an unbalanced population growth? What happens when altruism is considered? Should unique historical events be compensated? How should the future costs of today's benefits be computed?

Terms and definitions add further confusion, since several types of equity coexist in the debate. There are at least four different norms of generational equity:

- The allocation of social spending at any given moment between younger and older people
- The just treatment of successive cohorts, e.g. ensuring that tomorrow's retirees get pensions equivalent to current pensions and other welfare benefits
- Equal sharing of costs for the welfare system between cohorts
- The right of just returns for contributions made during the lifetime, 'actuarial fairness'

Even the term 'generation' can be rather ambiguous since it has several meanings; birth cohort, family lineage (grand-parent, parent, child), a certain age or even a measure of time. It is not always made clear which one is applied. Above, the first claim of equity is a matter of equity between age groups while the second and third refer to birth cohorts.

The purpose of this paper is twofold: first I will map the current debate of generational equity. Second, I will give a research overview of the three main themes in the debate: generational conflict, public intergenerational transfers and private intergenerational transfers.

2. Outlining the Generational Equity Debate

The populations in the Western world are ageing. This has spurred a debate of what a just division of costs for public programmes would be. A rough description of the debate is a bipolar discussion. One side maintains the inherent injustice in our public programs; the young have to pay for the old which is unfair given an unbalanced population. The other side emphasizes the interdependence and reciprocity between age groups and cohorts. This complex debate contains several important themes such as intergenerational vs. intra-generational equity, gender inequality, the visible public transfers and the invisible private transfers. For a good understanding of the broader debate, knowledge of these different themes is crucial.

2.1 Background

From the 1930s until around the late 1970s, the elderly were generally described as discriminated and poor. Around this time several interest groups were formed to work for enhanced benefits for the elderly and social policies which increased the share of resources directed to elderly were adopted.

The change in the demographic composition with growing numbers of older people happened at the same time as inflation increased and growth rates declined. At this point, the extent of spending on the elderly became questioned. (Williamson and Watts-Roy 1999:10ff). In 1958, an article by Paul Samuelson raised concern for the welfare of future generations and came to be the takeoff of the generational equity debate. In 1971 John Rawls' advocated a social contract between generations to avoid intergenerational injustice in "A Theory of Justice" which became another landmark of the debate.

The debate of generational equity started as a part of a more general discussion of the welfare system. The central question is if and how the state can afford the pensions and healthcare costs for growing older populations, and who should carry the burden. The debate was initiated in the US and spread to New Zealand and several European countries.

Compared to the US, the discussion of generational inequity has up until recently been rare in Europe, despite the fact that the European populations have larger shares of old people. However, in recent years the discussion has become more common also in Europe. In Sweden, the government intends to set up "generational analysis" to assess the spread of costs between generations (Prop. 2004/05:2 p. 110). In December 2004 the Swedish minister for finance, Pär Nuder, made headlines when he referred to the baby boom generation as a "mountain of flesh"[1], a heavy burden for society to carry once they retire. Such remarks are clearly influenced by this debate.

[1] My translation of "köttberg".

Public transfers, mostly pensions, have dominated the debate while private transfers have been neglected. There is also an obvious tendency of considering the impact of ageing in terms of pensions while health care has gained a lot less attention.

Williamson and Watts-Roy (1999) present the debate as a polarised discussion between two opposite ideological frames; “the generational equity perspective” and “the generational interdependence perspective”. In reality the debate is not as clear cut, but sketching this debate as bipolar gives a good overview of the main arguments.

2.2 The Generational Equity Perspective

This perspective was formed in the US in the 1980s when some saw a coming conflict of interests between generations as it became increasingly clear that the increase in the ratio of the elderly to the working population would be steep. In 1984, demographer Samuel Preston (see e.g. Williamson 2003:1) found data showing that the status of the elderly had improved while that of children had deteriorated. This was interpreted as the elderly improving their condition at the expense of children, a claim which came to be a common base for argumentation by the generational equity proponents; overly generous spending on the elderly has made young adults and children considerably worse off. The status of children is still a matter of concern and e.g. Lee (2003:13) warns that programmes for children should be shielded from the growing pressures from the elderly.

The generational equity perspective proponents regard today’s public transfers between generations as unfair: the elderly gain at the expense of the younger and elderly today have welfare benefits which will not last for coming generations of elderly.

The debate has a clear political side to it as the generational equity perspective is largely promoted by republicans, conservative foundations and business along with researchers (Williamson et al 2003, Baker and Weisbrot 1999). This perspective mainly rests on the following assumptions and arguments:

- Young adults and children are disadvantaged because a disproportionate share of public resources is spent on the elderly.
- The elderly are a powerful political force that sees to their own interests at the expense of other age groups, a future source of conflict: an “age war” may emerge.
- The current old-age policies are unsustainable, due to the changing demographic structure, and therefore they are unfair to the following generations. Today’s workers may have to increase their support of the dependent population while at the same time consider the risk that public programs as they are known today, will be greatly reduced by the time they retire.

The remedy to the unjust system of today includes private funded social security policies instead of pay-as-you-go systems; growth has to be made a number one priority through increased saving and investment, public spending has to be cut. Those who see injustice rely on different ways of measuring generational imbalances of public benefits. Of these, generational accounting (se below) may be the most referred to.

Legros (2003) is a recent example of this debate: "[rising pension spending] has led to tax increases that much of the public believes to be too large….This situation cannot be sustained. The schemes' deficits are now obvious; furthermore, the development of generational accounting has shown that the tax burden will be heavy on future generations. The solidarity principle that undergirded the schemes is no longer respected and beneficiaries often appear to be better off than those who pay." (2003:111). She also stresses that retiree lobbies already have displayed a strong opposition in several countries and they will be even stronger in the future. To rescue an unsustainable pension system, Legros advocates raising the retirement age, her explicit argument being to "share the burden across generations" (2003:111). In the same line of thought, Kotlikoff and Burns (2004) outline a drastic scenario of financial collapse if politicians don't act fast and harsh to prevent the veritable shock of aging populations.

2.3 The Interdependence Perspective

The generational interdependence perspective is in many aspects a critique of the generational equity perspective above. This perspective hosts two main claims. The first is that different generations have common interests; they are interdependent. Policies that benefit the elderly may also benefit other groups, directly or indirectly. If public pensions are cut, working adults can be forced to provide for elderly parents. Unemployment benefits also benefit the elderly since this reduces the amount of children dependent on their elderly parents. The elderly can also gain from policies towards the young since this may enhance their productivity which pays the pensions. Several policies such as health insurance etc. benefit several age groups. The utility derived from altruistic feelings of satisfaction as friends, family, neighbours and others in society are cared for should be considered.

Their second claim is that the elderly must be viewed as a heterogeneous group. Equity between generations should be accompanied by equity along other lines, such as race, class and gender. Otherwise inequality within generations may be overlooked. The main arguments are:

- The elderly is not a homogenous group and face very diverse economic conditions.
- There is little evidence that policies toward the elderly are harmful to the welfare of children and young adults. Increased poverty among children has resulted from other factors, such as increases in single-parent households.
- The claim that elderly use their political power to promote unfair policies has no solid base, but rests on the fact that the elderly form a larger percentage of the electorate today than families with children.
- Interests of the elderly may to a large part coincide with the interests of other ages.
- Old-age policies are not unsustainable; therefore they are not unfair.
- The measurement of dependency ratios are arbitrary and while the dependency ratio of the elderly has increased, that of children has decreased.
- Private transfers within families should be taken into account when discussing generational equity.
- The generational equity perspective rests on the view that each generation should care for itself. This assumption is unjust since it neglects unique historical events like the Great Depression or war.

Williamson et al, themselves proponents of the generational interdependence perspective, argue that the generational equity standpoint has been more successful in communicating their claims since "the frame has appeal to many Americans because it resonates with individualism, a dominant value in American culture." (Williamson et al 2003:3). The generational interdependence perspective on the other hand underlines community obligation to provide for the poor, a much less popular standpoint. They also stress that part of the generational equity debate takes place in mass media and particularly news papers which are prone to using drastic terms which gets attention.

2.4 Focus Areas in the Scientific Debate of Generational Equity

The debate of generational equity evolves around a handful of topics or focus areas. Below I give a brief description of the most common topics which can serve as a map over the debate.

Intergenerational vs. Intra-generational Equity

A common critique is that intergenerational equity excludes other types of equity. There are several examples of important areas of potential inequality matters such as gender, race, education etc. Hamil-Luker (2001) quotes six scientists in the field arguing that the intra-generational differences are substantial to the point of overshadowing intergenerational differences.

It is in this context gender equality evaluations of intergenerational transactions should be seen. Williamson and Watts-Roy (1999) find that "…the debate over generational equity is a debate over whether or not to focus on one specific form of equity (age related) or to try to balance needs linked in several competing forms of equity, including those linked to race, class, and gender." (1999:4). Age is not a strong differentiator of public opinion, compared to cleavages such as gender, class or race etc. (Hamil-Luker 2001:398).

The Swedish government gives a recent example of the clash of considerations where intergenerational equity dominates other forms of equity. The government sees strong reasons to analyse welfare systems in terms of distributions of both costs and benefits between generations. Therefore they intend to build a capacity for current generational analyses[2]. "These analyses should when possible also examine the distribution of resources between women and men." (my translation, Prop 2004/05:111).

Gender Inequality

One line of thought in the debate is based on gender inequality, which intersects the above discussion of different types of equity. The most common method to assess intergenerational equity is through financial transfers. The methods for measuring financial transfers often fail to capture the complexity of the relative net contributions of different generations by neglecting the many forms of informal services that are usually provided within the family. "The claim of intergenerational inequity is thus based on a flawed and partial measure" (Ginn and Arber 2000:140).

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[2] What exactly such analyses should consist of is not mentioned, but it should refer to generational accounts described below.

Further, in Western societies motherhood has usually resulted in lower pensions due to the design of the pension programs. For the majority of British women e.g., motherhood results in lower income in later life due to interrupted labour force participation. The structure of a country's pension system influences the severity of the pension penalty of motherhood. While public pension systems tend to be universal and compensate somewhat for the effects of caring responsibilities, private pensions tend to be selective in coverage which can be disadvantageous for those without full-time continuous employment (Ginn and Arber 2000).

Ginn and Arber point out that the debate of intergenerational equity and privatisation of pensions largely has ignored existing gender inequalities of pension income and the likely impact of welfare state entrenchment on future generations of older women. "This omission is particularly serious since women constitute the majority of older people, especially among those aged over 75, and since older women are already more vulnerable to poverty than older men in most countries in the European Union." (2000:143).

Those who consider the health care system unsustainable often suggest downsizing of formal healthcare. This will lead to increases in informal healthcare, which mostly is carried out by women. The costs of such informal services lack transparency and heavy burdens are left for women to carry (Becker 2000).

Private Transfers

Intergenerational transfers often means public intergenerational transfers, although it is now a well-known fact that private transfers are substantial. Many argue that knowledge of private transfers and how they relate to public transfers is crucial for a good understanding of generational equity (see e.g. Attias-Donfut and Wolff 2000, Gulbransen and Langseter 2000, Kohli et al 2000).

Private transfers consist of all kinds of help, from baby sitting grandchildren to large bequests inherited by grown up children. While some private transfers, such as bequests, are obvious others are less so, e.g. staying in the parental home from time to time, occasional monetary support etc. Private transfers have a gender aspect, men and women tend to give different kinds of transfers (Attias-Donfut and Wolff 2000a).

Age Groups or Cohorts

A common critique of the generational equity debate is that it tends to confuse age groups and cohorts. "In policy-making circles, generational accounting techniques and claims about intergenerational justice have come to dominate on those occasions when the age-orientation of social policy regimes is under discussion." (Lynch 2001:415). If the old benefit at the expense of the young, it may merely reflect that different ages have different needs. Every cohort passes through the different stages of age, and thereby different stages of benefits and taxes. There will thus be intergenerational equity as long as allocation of public resources is not changed over their life course.

A Life Course Perspective

Marshall and Mueller (2002) are critical of the tendency to focus on population aging alone. They propose the life course perspective to better understand the implications of aging. The life course perspective focuses on processes rather than particular states, and sees time - both historical time and timing in ones life - and the changing contexts of lives as crucial. Since an individual's life course takes place in a context that is shaped by social norms, institutions, laws and regulations based on age or life stage as well as personal choices "…it is possible to refer to the life course as itself a form of social structure….We are interested in the ways in which social structure and process shape human lives over time, as it is structure that is probably most susceptible to policy leverage" (2002:2).

Marshall and Mueller (2002) argue that a great deal of public policy is based on a standardized life course which does not correspond to how people actually live their lives, and therefore policies tend to be unfair. They criticise the "pervasive institutionalization of the breadwinner/homemaker model" which remains, despite the fact that the institutions of work and family have changed dramatically (2002:15).

Generations as Social Groups

The notion of generational equity rests on the assumption that generations can be divided into reasonably well defined groups with specific needs and rights. A generation or cohort rather, has a meaning as a historical entity since a generation is made up of people with common historical experience.

But do generations develop distinctive identities? How are such identities shaped? There are several similarities between generations and classes, but also many differences. By definition, classes have common economic interests, and often develop a common identity and an awareness of the common economic interests which they may act collectively on. While classes have been thoroughly examined, there is much less sociological examination of generations as social movements (see e.g. Edmunds and Turner 2002).

John Vincent (2003b) notes that while it is relatively easy to generate a cultural sociology of generations examining the symbolic construction of identity, it is much less easy to be able to demonstrate the social consequences of cohorts developing common material interests: "However, common historical experiences may lead a generation to have more than simply a common sense of identity but also to develop collective economic interests such as property rights, occupational positions, public entitlements and pensions. When this happens, generations may take on a greater class like character and it becomes possible to see more clearly their role in social conflict and social change."

The question if people identify themselves as belonging to a particular generation, or if people grasp and act on their particular interests as a generation is crucial for the notion of generational conflict and perceived generational equity. However, there is yet little research on generation as identity.

Easterlin (1981) has studied the economic and social environment of successive cohorts which varies with the size of the cohort. In data from the U.S. he finds that large cohorts are disadvantaged due to labour market crowding. Such results seem to vary with the national institutional setup: Dahlberg and Nahum (2003) show that contrary to Easterlin's results, the Swedish baby boomers have had an advantage on the labour market.

A Crisis of the Welfare Systems?

The demographic transition is often described as a crisis, an alarming danger of collapsing welfare systems. Several important institutions such as the CIA, the World Bank and the IMF use the term 'crisis'. There are many examples; one is from a report on long-term demographic trends, where the CIA describes the aging populations as nothing short of a crisis: "Our allies in the industrialized world will face an unprecedented crisis of aging." (CIA 2001:6). "In fact, population aging in developed countries has already reached a "crisis level" (2001:29)." And in 1994, the World Bank wrote an influential report in 1994 called "Averting the Old Age Crisis".

Several researchers oppose to the use of the term crisis in this debate, see for example Baker and Weisbrot 1999, Binstock and Quadagno 2001, Quadagno 1999, Krugman 2004. "By framing the [public] programs as in crisis, advocates of the [generational equity] perspective create pressure for immediate and major changes to these programs." (Williamson et al 2003:4).

In his column in the New York Times, Paul Krugman (2004) allege those who call the US Social Security unsustainable and on the brink of collapse, for "inventing a crisis". He quotes projections made by the Congressional Budget Office which finds that the Social Security trust fund will run out 2052, when Social Security revenues from taxes still will cover 81 percent of promised benefits. Krugman therefore calls the long-run financing of Social Security for "a problem of modest size".

Tax Incidence and Sharing of Costs

A core theme in the debate is that due to aging populations, old age policies are unsustainable unless future generations carry a heavier burden, either through cut benefits or raised taxes. There are several techniques to measure the division of costs between generations. One of these techniques is called generational accounting (see below) which measures generational tax incidence. Most generational accounts show that future generations will see extremely large tax increases, a torch in the debate. Another view is that instead of focusing on costs as percentage of income, one should look at living standards. In this scenario, future generations will have higher living standards although they may pay higher taxes.

This fraction of the debate is very much alive today. In a recent book, "The Coming Generational Storm", Kotlikoff and Burns (2004) talk of a "fiscal child abuse" and propose new policy reforms of the US Social Security and Medicare programs. They advice individuals to take their own measures to protect their financial security in old age in case politicians don't respond to their warnings, to get a "life jacket".

Funded vs. Unfunded Pensions

A common claim is that a funded pension system would lead to greater generational equity than unfunded pay-as-you-go programs (Auerbach, Kotlikoff and Leibfritz 1999, Kotlikoff 2001, Kotlikoff and Baker 2004, Legros 2003). This is considered to be fairer since people then take more responsibility for their own income and, most important, future generations are not forced to pay for today's old age benefits. Pension systems in the Western countries were set up under the assumption of balanced population growth. As population growth is no longer balanced, proponents of generational equity argue the entire system has to be changed to match the new age composition.

Cohorts of different sizes will put costs of different size in front of them. A small cohort following a large cohort will have to pay a large bill and vice versa.

On the other hand, many stress the market risk associated with reliance on fully funded pension programs (Baker and Weisbrot 1999, Ginn and Arber 2000, Vincent 2003b). "In practice, the stock market down turn in the last two years has led to a push to restrict pension benefits – the financial markets have led a number of large companies to cut final salary schemes in favour of less certain contribution calculated schemes. In mid 2002 the pensions 'crisis' in the popular press is no longer a demographic one but rather one of stock market failure" (Vincent 2003b:11). In Sweden, a main news paper covered their front page with headlines claiming that Swedish pension funds are a fiasco due to poor performance, "savers risk halved pensions" (Dagens Industri 2004).

Further, many point out that since a pay-as-you-go system is already in place, changing to a funded system would not lead to any great increases in equity. Bravo and Uthoff (1999) remark that social security reforms that introduce a funded component to the system should make the implicit debt clear. The implicit debt is what is owed to the workers and retirees already in the present system. A complete substitution to a funded scheme as in e.g. Chile, Mexico and Bolivia implies that the government must take upon itself to pay substantial government liabilities that could be unbearably high in some countries. "This is an aspect often downplayed in reform discussions, which in their most optimistic presentations even advance the presumption that the U-F [unfunded to funded] reform will alleviate the fiscal social security burden, which we argue is not warranted." (1999:19).

Vincent (2003b) notes that English and French use different terms in the pension literature signalling different values. While the English use the expression "Pays-as-you-go", the French use a more technical and neutral term; "repartition" or even the rather positive term solidarity.

Age of Retirement

Another widely discussed theme is the age of retirement (Teitelbaum 2001, Legros 2003, Marshall and Mueller 2002, Willamson and McNamara 2001, Pestieau 2001, Sneddon Little and Trieste 2001, Cremer and Pestieau 2000, Vincent 2003a, Turner 2004). To a large extent the generational equity debate rests on the dependency ratio, i.e. the rate of non-working to working population. However, the dependency ratio could change dramatically, should the age of retirement be addressed.

In general the age 65 is used as the start of old-age dependency. Many question this measure. "The truth is that it no longer really refers to "dependency" nor, honestly, to "old age." (Teitelbaum 2001:36). Marshall and Mueller (2002) also stress that the stage of retirement is thought to be clearly defined, while research suggests that this view is inaccurate; both "early exit" and "blurred exit" from the labour market is common. Retirement behaviour seems to be related to the broader context of the career and is increasingly transitions over time.

The age 65 as the start for old-age dependency has two weak points: first, the actual age of retirement is much lower in many countries; second, the use of the age 65 as the start of old-age dependency is arbitrary since life expectancy has increased and the health of the young elderly has improved since it was chosen. With this in mind, it is still a fact that the ratio of elderly to non-elderly will reach levels never yet seen in our societies.

Global Interdependence

One aspect of aging and equity that has yet gained little attention is greater global interdependence. Pensions in the developed countries may come to depend on the productivity in developing countries. Such interdependence will further blur the intergenerational differences and therefore make computations on intergenerational equity virtually unfeasible.

Jackson (2002) touches the subject of global interdependence and notes that savers in the developed countries look for higher returns and turn to developing countries with higher growth rates. In another scenario, developed countries become dependent on developing countries with higher rates of saving to finance their public pension deficits and uphold private investment. Turner (2004) also has a global outlook in his analysis of the changing age composition. He argues that pensions will have to be reformed in several ways regardless of pension system, although temporary solutions can be used: "In any pension system the retirees, who consume but do not produce, are dependent on a transfer of resources from the workers, who produce but sacrifice or defer some consumption via either taxes or savings. [..] There are, however, transitional approaches – such as foreign investment and immigration – which exploit differences in demographic structure among countries. Investing pension savings overseas allows future retirees in developed countries to receive resource transfers from future workers in countries with still growing populations. Immigration can rebuild the base of American and European demographic pyramids by importing workers from poorer countries where birth rates have not yet collapsed."(Turner 2004).

However, although such responses are possible for the coming decades, at least for rich countries, these are not long run solutions on a global scale: all countries cannot be capital exporters at the same time. Turner presents a similar argument for the time-limit of immigration as a solution: an increase in dependency ratios can be offset by large-scale immigration, given rapidly growing populations in poorer countries, but not only will it be politically impossible and environmentally undesirable, in the long run it will also become impossible as population stabilization spreads.

Vincent (2003b) uses the term 'Pension Fund Capitalism' which "refers to the fact that global capital in the last two decades of the twentieth century came to be dominated by enormous accumulations of funds amassed in institutions designed to provide a vehicle for the reserve to be used to fund retirement incomes for the mass of middle income earners in the Unites States, Britain and a number of other countries. [..] The dominance of pension fund capitalism is a manifestation of the class relationship between North and South." He also warns that the international dimension of age based redistribution from young to old, soon may lead to conflicts: "New developing economies with large expanding young populations may be a source of crisis for Western pensioners if the balance of returns between capital and labour alters." Vincent (2003b).

2.5 Reforms

Although there are contradicting standpoints regarding equity between generations, all sides agree a change is necessary. Population ageing will strain the welfare systems as fewer will have to provide for more. To avoid unmanageable costs for the younger and yet unborn generations as well as assure reliable welfare systems for the elderly, several suggestions can be made. Below I present the most common propositions.

Pension System Reforms

Most developed countries discuss pension system reforms. Many countries, e.g. Sweden, Germany and Italy, have already reformed their pension systems and more reforms are under way in several other countries. Most agree that changes are inevitable; "Some mix of poorer pensioners, higher worker contributions or retirement ages rising even more than proportionately with life expectancy is unavoidable. That is true whether pension systems are unfunded public pay-as-you-go (PAYG) schemes, or funded private schemes."(Turner 2004).

In the generational equity perspective, one of the most common suggestions is funded and privatised pensions (see above) and in some cases also health insurances (Auerbach, Kotlikoff and Leibfritz 1999, Kotlikoff 2001, Kotlikoff and Baker 2004, Legros 2003). Kotlikoff is a determined proponent of generational equity and finishes his paper on generational policy concluding that: "Finally, and most important, a variety of countries around the world are running generational policies that will dramatically reduce the economic well being of their future generations. Achieving generational balance in those countries requires immediate, major and highly painful policy responses" (2001:82).

Rise Age of Retirement

The other most common suggestion is to rise the age of retirement, a compulsory extension of working life. Retirement was set up in a time when life expectancy was considerably lower than today. In 1913 a law of general pension insurance at the age of 67 was passed in Sweden. At this time, life expectancy at birth was 55.6 years for men and 58.38 for women. Today, age of retirement in Sweden is still around the same age although the effective retirement age is much lower. However, in 2003 expected age at birth had risen to 77.91 for men and 82.43 for women. Further, life expectancy at age 65 has increased from12.84 for men and13.69 for women in1911-1920 to 17.01 for men and 20.32 for women in 2003 (SCB 2003).

That is, more people get old and those who get old get older. Retirement is a socially constructed institution, and therefore what is perceived as a "normal" age of retirement is shaped by institutionalized pensions programs and other laws and regulations. Many argue that due to increased life expectancy and better health, the age of retirement can and should be raised; 65 is no longer a reasonable threshold for old age (Teitelbaum 2001, Legros 2003, Marshall and Mueller 2002, Willamson and McNamara 2001, Pestieau 2001, Sneddon Little and Trieste 2001, Cremer and Pestieau 2000, Vincent 2003a, Turner 2004). Voluntary extensions of the working life through various tax incentives in order to make the elderly work after the age of eligibility for retirement are also discussed (see for example Gruber and Wise 2001, Fenge and Werding 2003a and b).

The suggestions for reforms focus heavily on the retirees. Only occasionally the possibilities for increased labour force participation among women, young adults and the young elderly are addressed. Immigration is another means of addressing the dependency ratio, but it is generally considered politically unfeasible due to the large numbers of people that would have to immigrate to make a difference in the demographic composition. (see e.g. Sneddon Little and Triest 2001:2). In short, most suggestions for reforms concern:

- changing the benefits for the elderly, especially pensions
- changing eligibility for benefits, rising the age of retirement
- increase immigration to slow soaring dependency rates
- increasing labour force participation among women and the young elderly
- making the young economically independent earlier

Thus, most reforms are intended to make more people work and to make people work more. What is rarely mentioned is making more people. It is striking how, although thoroughly examined elsewhere, fertility is a largely neglected aspect in the debate of generational equity. It is only mentioned as one explanation behind changing dependency ratios, only rarely as a behaviour which changes depending on incentives.

This fits in with the general picture, where there is a lack of consideration for and analysis of the private sphere, e.g. private transactions between generations, informal work performed mostly by women and built in costs for motherhood in pension programs. Different generations show different patterns of family formation, which could be discussed in terms of generational equity. Although the low levels of fertility are always mentioned, fertility is very rarely discussed per se and especially not as a potential area for reforms to slow increasing dependency rates.

Turner (2004) points out that increased longevity is actually less important than decreasing fertility: "If fertility rates had not fallen, an increase in retirement ages proportional to the increase in longevity would be a sufficient response to preserve the solvency of any pension system – leaving contribution and benefit levels unchanged." However, empirical studies generally find that fertility does respond to financial incentives, fertility tends to decrease with the potential wage of women and increase with other sources of income in the household. Fertility could thus be stimulated to ease the burden of ageing populations. Some researchers have addressed this theme, for recent contributions see e.g. Fenge and Meier 2004, Kolmar 2001, Cigno and Luporini 2003.

3. Age war

Generational equity is based on conflicting interests between generations. But do generations perceive an intergenerational conflict? Research does not give this notion much support. Public programs for the elderly are widely accepted among all age groups. Characteristics such as gender, class and race seem to shape interests more than age. The elderly are at times described as a political movement, exemplified by organisations and political parties for elderly or simply the size of the elderly cohorts. Although a powerful constituency due to the size, the elderly do not seem to push politics toward their interests.

3.1 Acceptance for Old Age Support

Many reject the hypothesis of a generational conflict. Attias-Donfut and Arber (2000) give examples of the many types of reciprocal private transfers of both time and money instead, referring to several empirical studies from Europe. Gulbrandsen and Langsether (2000) also reject conflict pointing at reciprocity in private transfers between generations in Norway.

Programs for the elderly has a solid support in most countries (or sub-unities) in a sample of 25[3]. Ex-socialist countries form the top third in favour of elderly programs while the US, Canada, New Zealand, Cyprus and Japan form the bottom third. Support for elderly benefits varies between the Western European countries, but all except Germany and France are in the mid third. Only health policies – which also benefit the elderly to a considerable extent – gain more support than programs for the elderly[4]. Most countries show relatively small but consistent gender differences where women are more supportive of programs for the elderly. However, it is worth noting that support differs by age group and tends to increase with age. In some countries, e.g. Great Britain, Norway, Sweden, Czech Republic, Slovenia, Poland and New Zealand, such generation gaps are relatively large. The US and Canada stick out though, with small differences in support between age groups. The youngest age group is even the most positive to more spending on retirement benefits. (Smith 2000).

Marshall and Mueller (2002) cite two studies from the mid-nineties showing that available public opinion data in the USA and Canada suggests a persistent and strong willingness on the part of the general population to provide for the needs of the elderly, the disabled, and other groups (Marshall

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[3] Australia, East Germany, West Germany, Great Britain, the United States, Hungary, Italy, Ireland, Norway, Sweden, the Czech Republic, Slovenia, Poland, Bulgaria, Russia, New Zealand, Canada, the Philippines, Israeli Arabs, Israeli Jews, Japan, Spain, Latvia, France, and Cyprus. Data is collected from the International Social Survey Program (ISSP) which has conducted nationally representative samples of adults in a large and growing number of countries annually since 1985.

[4] By percentage agreeing that government welfare programs should definitely provide for a decent standard of living for the old. This pattern is consistent with similar questions.

and Mueller 2002:30). These results are matched by more recent studies showing no particular conflicts between age groups in the US (Hamil-Luker 2001). In one study, age is not a strong differentiator of public opinion, results which are consistent with at least four similar studies (Hamil-Luker 2001:398). Notably, the distinction between intergenerational and intra-generational interests are crucial: intersecting cleavages such as gender, race, class etc. blur the distinction of the old as a specific group and thereby reduces the potential of generational conflicts.

According to Kohli (1999), it is plausible that the high acceptance of the public old-age pension system among adults, as demonstrated by survey data, can at least partly be attributed to the return of transfers in the family. "Middle and young adults know that the public pension system not only eases their burden of responsibility for the welfare of their parents but also allows them to expect material support in times of need and/or bequests at the time of their parents' death." (1999:11).

Hamil-Luker (2001) finds research suggesting that intergenerational conflict has less to do with a society's demographic composition than the mix of public policies (Hamil-Luker 2001:388). Comparisons between the UK, France, the Netherlands and the US, show that concern over intergenerational equity come most strongly from the US. While different forms of welfare states in Europe create a variety of citizenship interests in the welfare policies, the US has the weakest welfare state but the most politically effective organisations of older people; "hence it is possible, in the US context, to portraying older people's solidarity as generational conflict" (Vincent 2003a).

Data from the OECD indicate that western European countries have a relatively even spending between age groups, while other countries, such as the US and Japan as well as southern European countries show a strong orientation towards the elderly (Lynch 2002, Dang et al 2001). Research on social security expectations in the US shows that large parts of the population perceive no chance of eligibility, and the young are much less confident than the older that Social Security will even exist when they retire (Dominitz et al 2003).Further, while the generational equity perspective proposes that the young and working age parts of the population are disadvantaged, older groups also speak of injustice: "It should be manifestly clear that it is an injustice in a society like ours to expect older people who've paid taxes and all the rest to live on the pittance that is handed out." (UK citizen Bruce Kent, 70 years old, OPPOL interviewee quoted in Vincent 2003a).

While public decision-making on intergenerational redistribution usually is modelled as a conflict between young and old generations, the conflict could instead be between the living generations and the yet unborn: "By legislating a social security program, living generations lock all future generations on a growth path which is especially favourable for themselves but implies lower growth and reduced welfare for future generations." (Wigger 2002:56).

3.2 The Elderly as a Political Movement

Analysing the welfare systems, Lynch (2002) argues that "[the age-orientation of welfare] is a largely unintended consequence of the interaction between early decisions about the structure of social policies and the way that politicians use these programs to compete for votes." (2002:2). But though the age-orientation was unintended, its persistence is a sign of the political power of the elderly: "the persistence of generous benefits for the elderly despite welfare state cutbacks in other areas suggests that the elderly exert not just demographic but also political pressure." (Campbell and Lynch

2002:1). The organisations of older people are commonly held forward as efficient vehicles of the powerful elderly. A common example of a powerful lobby group is the AARP (the American Association of Retired Persons). Older people's organisations do have similar interests as most of them work for pensions and welfare rights although it should be noted that welfare issues are frequently seen as universal rights rather than old age specific.

Comparing data from the UK with similar studies from France, the Netherlands and the US, Vincent (2003a) concludes that the elderly do not seem to use their large share of the population to dominate politics; they do not tend to act collectively or vote together. Instead, a key finding is that older people is a diverse group with diverse interests, which adds to the discussion of intergenerational justice vs. intra-generational justice.

Pressure from the elderly should be distinguished as coming from two groups: elderly voters on one hand and lobby organisations of the elderly on the other. While elderly voters can be expected to have rational self-interested preferences on welfare state issues which they express through their political behaviour, the senior lobby is expected to take fiscal and political trade offs into consideration and therefore show a more diverse approach, e.g. supporting welfare policies favouring other groups etc. Although individuals often fail to act in their self-interest due to altruism or ignorance, elderly are expected to do so because of their reliance on public benefits.

In two case studies from US and Italy where national elections, elderly advocacy groups etc. are studied, Campbell and Lynch (2002) find that while the elderly organisations take other groups need of welfare into consideration, elderly voters do not and thus show a higher degree of self-interest. They also find that non-seniors support senior programs although seniors don't support non-senior programs. Campbell and Lynch stress that in the US as in Italy elderly voters both support spending on seniors and act on their preferences by voting for parties opposing pension reforms, letter writing to politicians etc. they conclude that "In neither country can politicians afford to ignore this very large constituency's preferences." (Campbell and Lynch 2002:30). In the same line of thought, Pestieau (2001) argues that reforms towards postponed retirement, which may seem reasonable given that increased longevity comes with better health, have been difficult to perform because of the political power of the retired or those who will soon retire. Another argument is that the reason the age of retirement is still so low may be because the political system is ill suited for such changes and majority voting favours the many old (Cremer and Pestieu 2000, Pestieau 2001).

On the other hand, despite that pension reforms have been said to be impossible to perform since voters fear losses and politicians seek to remain in power, pension reforms in Europe have indeed taken place. Almost all European countries show two general trends; benefits are now tied closer to contributions and the private sector has introduced a range of old-age income provisions. Ney (2003) sees the private pension alternatives as a response to lowered expectations about the level of future pensions (2003:101).

Some argue that the debate of age related spending is really about reducing public responsibility for the income and health of the older population. Instead, this responsibility is transferred to the private sector via funds. Policy issues tend to concern private and public resources "in a fashion that gives powerful private sector economic interests – far more powerful than old-age political organizations – a considerable stake in the future of old-age policies" (Binstock and Quadagno 2001:344).

4. Public Transfers

The debate of intergenerational equity has focused on the sharing of public resources between cohorts, directing research toward public transfers and fiscal incidence of public programmes. In the realm of public spending, it is commonly claimed that the elderly are favoured at the expense of the young. The main theme is pensions, although the cost of health care for the elderly may exceed that of pensions. Public transfers are upward; i.e. the net flow of resources goes from the younger to the older. Public spending on the elderly is projected to increase in the OECD although there are sizeable differences between countries depending on institutional setup, population characteristics etc. The effective age at retirement has generally decreased in the OECD. A common area of research is how pension systems shape incentives and several reforms to make people work longer are suggested. How the cost of public programmes falls on different cohorts is also explored. Such accounting models have been influential in the debate and in policy reforms. However, these models are riddled with difficulties.

4.1 Age Related Spending

Although redistribution of resources across classes, occupations, and gender has been thoroughly examined, relatively little is done on how welfare states treat different age groups. Industrial countries devoted 19% of GDP on average on age targeted transfers in 2000. These age targeted transfers are directed towards public pensions, early retirement, health care, long time care, child and family benefits and education. The elderly get the larger piece of the pie with on average double the expenditures on children in the OECD. On average, public pensions take up 7.4 per cent of age related spending. Over the next 50 years, age targeted spending is projected to increase by 7 percentage points. (Dang et al 2001:25 table 4).

Gruber and Wise (2001) examine 13 OECD countries using data from the OECD Social Expenditure Database. The share of social spending that is directed towards the elderly varies. Australia spends the smallest share on the elderly with 20 per cent of social spending while Italy is in the top spending 52 per cent on the elderly.

There is a wide variation in the size of spending on the elderly. On average, government spending on the elderly came up to 8.2 per cent of GDP[5]. However, in these estimates health care benefits and unsure division of social spending among elderly and non-elderly are not included. When those are included, the levels of spending on the elderly rise by 2.7 per cent on average.

Most developed countries do not provide the elderly population with special care under the health care system. Health care or health insurance is to a large extent universal with the exception of the US and Japan which have separate health care systems for the elderly. The US e.g. has private

[5] France and Italy spend more than twelve per cent of GDP on elderly. Germany more than ten, Belgium, Spain, Sweden and the UK more than eight. The Netherlands, Switzerland and the US spend more than 6 per cent, Canada and Japan above four and Austraila spends only around three per cent (Fig 2 Gruber and Wise 2001).

insurance for the non-elderly population and a public entitlement for the elderly through the Medicare program. In many countries, retirees do not fund health care as it is commonly financed through payroll taxation. (Gruber and Wise 2001).

Although most OECD countries fund long term care publicly, the provision is heterogeneous. Along with health programs, most OECD countries also have non-health in kind programs for the elderly for home help services etc. These programs show a consistent pattern of substantial transfers to the elderly across developed countries. Long term care for the elderly is a critical and growing component of health care spending. (Gruber and Wise 2001). Lee and Edwards (2001) also underline the importance of health benefits and in their projections of increased public spending in the US, health spending takes up the majority of the increase.

While the Gray Power hypothesis expects all countries to become more elderly-oriented as the population of elderly grows relatively larger than other age groups, research shows a different picture. Examining the social policies in 21 OECD countries using several measures based on direct expenditures, tax expenditures and housing policy, Lynch (2001) finds no evident pattern. Countries with older populations show a more youth-oriented direction in social policies than other countries and most of the youth-oriented countries in the OECD have become more rather than less youth-oriented despite ageing populations. The elderly bias of public resources differs greatly among countries. Examining Sweden, the UK, Canada, Japan, Belgium, France and Germany from 1956-86, only Germany has a spending biased towards older people (McDaniel 1997).

However, while the spending on pensions (including old age, invalidity, survivor and other pensions) as per cent of GDP has been relatively stable from 1993 to 1999, pensions still take up an increasing part of social benefits (European Union 2002). Projections show substantial increases of public spending on the elderly as the population ages although these increases vary widely across countries (see e.g. Gruber and Wise 2001, Lee and Edwards 2001).

Gruber and Wise (2001) use data on the distribution of spending on the elderly and OECD data on aging to run panel data regressions controlling for country specific dummies to capture time invariant tastes for spending on the elderly and year specific dummies to control for common trends in population and spending around the world for the period 1980-1995. They find a strong positive relationship between within-country changes in the share of the population that is elderly and within-country changes in the share of GDP that is devoted to public spending on the elderly. Again, these increases vary widely across countries due to different patterns of population aging. While Australia has the highest proportional increase of social spending on the elderly, more than doubling, from 3.1 per cent of GDP in 1995 to a projected 6.4 per cent in 2050, Sweden and the US only increase their spending on the elderly by 2 percentage points from 8.8 to 10.1 and 6.2 to 7.8 respectively.

The average incomes of the elderly also differ widely among OECD countries. Gruber and Wise (2001) examine the relationship between spending on the elderly and their relative incomes. They find a striking lack of correspondence between the measures of living standards and the measure of spending on the elderly. Although 13 per cent of GDP is transferred to the elderly in Italy, Italian retirees have lower incomes than retirees in Canada, which transfers 5 per cent.

Of course these results must be read in their context, e.g. may higher spending on the elderly depend on structurally lower income among the elderly. Wise and Gruber still find these results "suggestive of substantial "crowdout" of private mechanisms by public mechanisms; where the public sector transfers more to the elderly, they are no better off on average." (Gruber and Wise 2001:12). However, another finding is that those countries that spend more on the elderly have lower poverty rates among the elderly. Gruber and Wise (2001) draw two general conclusions from their research: There is no relationship between the relative incomes of the elderly in different countries and the share of GDP transferred to them. The elderly poverty rate is negatively related to transfers to the elderly.

4.2 Age of Retirement

While hunter-gatherers kept working until old age with no retirement, resulting in no or a short period of dependency in old age, settled farmers introduced retirement as a period of life. Empirical studies show that in both hunter-gatherer and agricultural societies the net direction of transfers between generations is strongly downward, from older to younger people (Lee 2003).

The period of retirement was enforced by industrialism. In industrial countries, research done on both household data and individual data for the US shows that today, the net direction of flows has shifted from downward to upward. The US pattern is consistent with household data from Great Britain and Japan. (Lee 2003, Ermisch 1989). This is a fundamental change which may continue as populations in industrialised countries age further. The direction of private transfers are downward, but since private transfers are smaller than public transfers, net intergenerational transfers are upward in industrial nations (Lee 2003).

Throughout the industrial world, retirement ages have been falling. In the economic life-cycle in contemporary US, children are dependent until the age of twenty-something when they become net producers. Productivity peaks around 40 and at 60, net production is negative and becomes increasingly negative in older ages. Lee argues this pattern holds for most or all industrial countries (Lee 2003:17).

The age of retirement is widely debated. Many argue that due to increased life expectancy and better health, the age of retirement should be raised; 65 is no longer a reasonable threshold for old age (Teitelbaum 2001, Legros 2003, Marshall and Mueller 2002, Willamson and McNamara 2001, Pestieau 2001, Sneddon Little and Trieste 2001, Cremer and Pestieau 2000, Vincent 2003a). Marshall and Mueller (2002) criticize that a great deal of public policy is based on a standardised life course which does not correspond to how people actually live their lives. This may lead to various inefficiencies. The aging experience is perceived differently for different birth cohorts; experiences of one cohort in a given age category cannot be generalized to other cohorts. One example of this is "cohort effects" or "Easterlin effects" (see above), which refer to differences between birth cohorts, where historical settings give different access to life opportunities.

In the standardised life course applied by policy makers (from education to work to retirement), the stage of retirement is thought to be clearly defined. Research suggests that this view is inaccurate; both "early exit and "blurred exit" from the labour market is common. Retirement behaviour seems to be related to the broader context of the career and is increasingly transitions over time. Marshall and Mueller (2002) also stress that there are cohort differences in expectations. While recent cohorts probably do not expect stable careers, earlier cohorts had such expectations.

4.3 Early Retirement

Early retirement is common in most European countries and puts pressure on health and pension expenditures. Not only has the age of retirement decreased, longevity has also grown which enforces the costs of retirement. Fifty years ago people would generally work 45-50 years and then retire for 5-10 years while now an expected working life is around 30-35 years followed by 15-20 years as retired. Despite rising life expectancy, the effective retirement age has decreased. (Pestieau 2001). Since increased longevity comes with better health, it seems logical to postpone retirement. Some argue that such reforms have been difficult to perform because of the political power of the retired or those who will soon retire. Another hinge is the variability in the work capacity of older people.

Few retirement studies concern labour market experience of workers during their seventies. Williamson and McNamara (2001) underline that compared to what is known about labour force participation among those in their early to mid sixties, we know relatively little about those who work beyond this age. Reviewing retirement studies, Williamson and McNamara conclude that although some analysts argue that there may be a coming trend toward delayed retirement among older workers, most analysts find it is most likely that the long-term trend toward early retirement will continue in the decades ahead.

Willamson and McNamara (2001) use data from the 1998 Health and Retirement Study (HRS) in the US and estimate binomial logistic regression models to study determinants of labour force participation. The effects on labour force participation by factors such as education and health differ by gender, race, and age.

This evidence of complex interactions among age, gender, and health suggest that policies aiming to influence labour force participation among older workers need to take subgroup differences in the propensity to work into consideration. One example is that being in poor health predicts an 84 percent decrease in the odds of working for 60 year old men, but only a 22 percent decrease for 80-year old men. Different groups need different kinds of incentives to stay in the work force. Williamson and McNamara give several examples, such as job training, flexible working hours etc.

The respondents in the study are divided into a younger group of those aged 60 to 67, and an older group aged 68-80. In the younger group, those with good health, very high non work income and high education are more likely to remain in the workforce. Conversely, respondents with poor health and low education are less able to remain in the labour force. Those with extremely low non work income are substantially more likely to remain in the labour force than those with medium or high non work income. Women and older respondents are less likely to remain in the labour force. These findings are consistent with previous studies of this age group.

In the older age group - which yet has received little attention in research - Williamson and McNamara find that education and gender appear to have similar effects as the younger group. For non work income the pattern is different though: at age 60, the effect of very low levels of non work income on labour force participation is large and positive. At age 80, the effect is small and negative. However, those with low non work income aged 68 to 80 are much more likely than the same group aged 60 to 67 to report functional disabilities. The negative effect on labour force participation of poor health is still significant for the older group, although the negative effect appears weaker than the effect for the younger age group.

In line with similar studies, Williamson and McNamara find that marital status has little effect on the labour force participation of men, but a strong negative effect for women. Further, men with low education show a 17 percent decrease in the odds of working while that number is doubled for women.

The combined effects of race and age are also investigated. The effect of being female is a stronger predictor for whites than it is for blacks. For blacks, being female is associated with a 20 percent decrease in the odds of working. For white women, the decrease is substantially larger. In addition, being black decreases the effect of poor health. Among blacks, health is a less powerful predictor of who works than it is among whites. One possible reason is that blacks are less likely to be able to find steady employment regardless of their health.

According to Gruber and Wise (1999), public pensions crowd out labour supply of the elderly. Although many countries use a specific age, generally 65, as their 'normal' age of retirement, they also have an 'early retirement'-option, the age when people first can claim retirement benefits. The modal age of entitlement is actually the early retirement age, thus the normal age of retirement is no longer normal. Evidence from eleven OECD[6] countries shows the age of retirement is decreasing in all countries. The response to retirement incentives can be rather dramatic. One example is Germany where the age of eligibility for pensions was lowered and to a large extent, there was no reduction of benefits. The response was a reduction in the retirement age by 5.5 years.

The decline in labour force participation by older persons has been striking in ten out of eleven countries[7]. The decline was substantial in all countries, but was more pronounced in some. In the early 1960s participation rates of men between the ages of 60-64 were above 70 per cent in all countries and above 80 per cent in some. By the mid1990s, the rate had plummeted to below 20% in Belgium, the Netherlands, Italy and France. The pattern for women is similar. Although the labour force participation of women has increased in total, it has decreased for older women.

There is substantial disparity of labour force participation among the elderly across countries. Around 90 per cent of the men aged 50 works in all countries. By the age of 69 virtually no men in Belgium work while 50 percent in Japan do. There are matching disparities in the incentives to keep working in older ages. Many social security systems provide substantial costs in the shape of implicit taxes on work at older ages since the elderly are made eligible for benefits which can replace the income from wages. (Gruber and Wise 1999).

In addition to pensions, other programs such as employer provided pensions, unemployment and disability programs, is likely to affect the retirement decision. Employer provided pensions often have defined benefits which have substantial retirement incentive effects. While employer provided pension plans cover about half of US workers, they are less common in Europe with Britain and the Netherlands as exceptions. However, in the work of Eklöf and Hallberg (2004a, b) it is clear that private pension alternatives need to be examined to provide a good understanding of early retirement in Sweden. Pestieau (2001) points out that retirement incentives are not only created by

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[6] Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, the United Kingdom and the United States.

[7] The exception is Japan.

governments but also unions and firms since they use such benefits to decrease the work force to the lowest possible cost for themselves.

4.4 Retirement Incentives and Implicit Tax

Pension systems lower the age of retirement to a level that is lower than the optimal level. Many study retirement incentives and pension programme design. When analysing the effects of public pension programmes, the contributions can be broken down into a tax component and a savings component.

To explore retirement incentives, many study 'implicit debt' and 'implicit taxes' (Gruber and Wise 1999, Fenge and Werding 2003, Fenge et al 2002a, b, Pestieu 2001). The 'implicit debt' of unfunded pension schemes consists of the claims of current retirees and future benefits claimed by the working population (see below). The implicit debt is described as an implicit tax when prognoses indicate that contributions made to unfunded pension systems will not earn actuarial returns.
In France, Germany, Italy, Japan, Sweden, the UK, and the US, implicit tax rates increase sharply for currently young generations when compared to their parents and grandparents. These results are based on simulations covering representative individuals in all age cohorts born from 1940 to 2000. However, there are striking differences across countries regarding both the level of implicit taxes and their time paths over successive age cohorts, which can be attributed to different ageing processes as well as different institutional features of national pension systems. The major effect of pension reform is lowered implicit tax for younger generations, at the expense of older generations who have to pay higher life-time taxes. (Fenge and Werding 2003b).

Public pension programmes can be divided into an 'actuarial' and a 'redistributive' component, the former similar to saving while the latter corresponds to a tax. Pestieau (2001) uses an OLG model to examine these components and finds that the higher the tax rate, the earlier the retirement. This is one source of tax distortion since part of the contribution the individual pays to the pension system is not perceived as coming back to the worker at retirement. Elderly workers that are eligible for benefits face both the payroll tax and the forgone public benefit should they choose to continue working; the implicit tax may be considerable.

The optimal retirement age is one that varies with personal conditions such as wealth, health and productivity as well as the setting. Pestieau (2001) acknowledges several factors behind early retirement such as economic growth or changing preferences. His main explanation however, is incentives provided by public benefits aimed at elderly workers. Pestieau advocates a system where pension and health benefits are closely linked as well as a flexible retirement age with actuarial adjustment of yearly benefits; if you retire early because of poor health you would get generous benefits while if you retire early despite good health you would get low pensions.

Along with implicit tax, Gruber and Wise (1999) also find the age when retirement benefits are first available to be crucial for labour force participation. They compute the implicit tax for eleven countries considering a man born in 1930 who earned the median level of wages throughout his life and has a wife who is three years younger and never worked. The results are drastic: the implicit taxes vary between -23 per cent in Spain and 141 per cent in the Netherlands for work after the age of 60. There appears to be a strong correlation between the retirement incentives from public policies and the actual retirement age. In France 60 per cent of those who work at the age of sixty, which is the youngest age of eligibility for pensions, retire. This should be put in contrast to the pattern 15 years earlier when the eligibility age was 65 and very few retired at the age of 60. There is a striking correspondence between implicit taxes and retiring. (Gruber and Wise 2001).

Disney (2004) also stresses the importance of the pension programme design for labour force participation. Contributions to pension programmes may be perceived as a form of (mandatory) saving, a clear difference between pension programme contribution and other taxes. Pension programme contributions can be broken down into a tax component and a savings component. Therefore, the contribution as a whole should not be seen as a tax wedge.

Disney constructs indicators of the tax and savings component of public pension programmes in 22 OECD countries in three time periods. One is an intra-generational measure of departure from actuarial fairness, i.e. the pension system returns the amount of your contributions. The other is a measure of intergenerational differences in rates of returns to contributions for successive cohorts. These indicators are used to re-estimate cross-country panel regressions examining the impact of payroll contributions on economic activity rates.

The results show that women's activity rates are highly adversely affected by the tax component. The saving component on the other hand[8], is positively related to economic activity. The results are less straightforward for men. Disney does not find this puzzling since literature on labour supply finds that male economic activity is relatively unresponsive to the tax regime. Following his results, Disney advocates pension programmes designed to resemble retirement saving programmes. This way it is possible to escape higher pension contributions' negative effect on labour force participation.

Implicit taxes differ between generations, but they also differ over an individual's lifetime. In line with a broader debate, Fenge et al (2002a, b) consider a pay-as-you-go system as largely efficient[9]. Instead of looking to enhance efficiency through funded pension schemes, Fenge et al thus explore options to reform existing pay-as-you-go pension schemes through looking at implicit tax over individuals' life cycles.

For a stylised pay-as-you-go scheme, implicit tax rates are constantly declining over the period of labour force participation. The reason is that contributions made early in the life cycle are subject to low internal rates of return over a longer period of time. The compounded "interest" of payments made to the (mandatory) pension programme early in life fall short of a market yield at a higher rate than for payments made later on. The inter-temporal structure of implicit taxes across individual life cycles is highly dependent on institutional features, specific for each country. Fenge et al (2002a) also study the role of the "second-earner" (married) women in many existing pension schemes, and find a "gender tax-gap": the implicit tax rates for second earner women are constantly higher than those for a typical male.

Simulations on German micro data from the GSOEP (German Socio-economic Panel) survey give the two effects - declining life-cycle profiles of implicit tax rates and the higher taxes imposed on married women – support. When analysing the gender tax-gap it is crucial to control whether the

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[8] measured as greater actuarial fairness or higher rates of return to contributions

[9] See e.g. Sinn (2000) for a research survey of pay-as-you-go mechanisms of financing public pensions as largely efficient.

pension scheme under study applies joint taxation of spouses. Empirical tests of the optimality of intertemporal and cross-gender tax profiles give the conclusion that the inter-temporal structure of implicit tax rates is largely efficient, since wage elasticities of labour supply tend to increase over a typical life cycle for both men and women. Taxes are low when elasticity is high and vice versa. However, Fene et al (2002a, b) find three potential sources of inefficiencies in many public pension schemes.

First, taxes imposed on young workers may be too high. Second, for those near retirement, the low taxes could still be too high. These effects are more pronounced in the case of males than for females. Third, the "gender tax-gap" where married women face higher implicit tax rates works against the principles of optimum taxation. Married women should thus receive individual treatment instead of household level benefit rules to escape the potential inefficiency of the excessive taxation. Individuals should also be taxed conditional on their age, for instance by applying lower annual contribution rates or higher accrual rates to those at both ends of the age distribution.

These results thus contradict the standard proposal to smooth the profile of implicit tax rates across the individual life cycle. "At the same time, the results illustrate a typical outcome of pension reform: reducing the tax burden that is placed on young and future generations next to inevitably implies that tax rates for older individuals are increasing. To a very large extent, reforming public pensions is about burden-shifting and inter-generational redistribution, rather than about efficiency gains and Pareto-improvements." (Fenge et al 2002a:4).

Cremer and Pestieau (2000) also propose reforming existent programmes. They use an OLG model to demonstrate that neither a growing number of elderly nor the pay-as-you-go system are responsible for the "old-age crisis" since it could be avoided through reforming replacement rates, payroll taxes and the retirement age.

4.5 Measuring Generational Imbalances

The notion that the intergenerational fiscal burdens weigh unequally on different generations, has gained considerable attention by researchers. The pension systems have gained considerable attention since pay-as-you-go pension schemes that did balance in the outset, don't anymore. As populations age, current contributions from working people can no longer meet the required pensions for the retirees. In this scenario you can either leave pension levels and raise contribution levels for the working population or leave contribution levels and lower pension levels.

Fenge and Werding (2003b) review ways to measure the impact of an ageing population on the intergenerational distribution of burdens of pay-as-you-go schemes and find two main distinctions between the different measures:

- between concepts which measure the consequences of ageing for pension funds and public finances in general on an aggregate level vs. concepts which highlight effects that show up on an individual level, i.e. for representative agents belonging to both current and future age cohorts.

- Between concepts which concentrate on pension systems alone and concepts which expand the view to general government expenditure, where old-age protection is just one budget item which can be affected by population ageing.

During the 90s, at least four measures were introduced to measure the effects on different generations of population ageing. For a review of these, see Fenge and Werding (2003b).

The OECD started to calculate **"Net pension liabilities"** based on long-term projections for revenues and expenditures of public pension systems. See van den Noord and Herd (1993, 1994). As an extension of this measure, the OECD has also developed the concept of **"General government fiscal balances",** extending the idea of measuring implicit public liabilities to a larger set of fiscal activities. See Leibfritz et al (1995). **"Generational accounting",** measures the effects of public finance on intergenerational distribution taking virtually all public budget items and the way they affect different generations into account. See Auerbach et al (1991, 1999). European economists have introduced another measure for the **"Implicit tax"** entailed in public pension schemes to analyse the intergenerational effects of old age security systems. See Sinn (1997) and Thum and Weizäcker (2000) described in Fenge and Werding (2003).

Generational accounting may be the most well known measure of intergenerational imbalance and it may also be the most criticised. It was developed by three distinguished economists, Auerbach, Gokhale and Kotlikoff in the early 1990s to demonstrate generational unfairness and has since been used by themselves as well as several other researchers (see e.g. Legros 2003, Pestieu 2001, Kotlikoff 2001, Kotlikoff and Burns 2004).

This measure uses the government's intertemporal budget constraint to compute how much future generations will pay in net taxes. The present value of all future government spending must equal the present value of future net tax payments plus the present value of net government wealth. The net payments that are not covered by taxes paid by current generations must be covered by future generations. Although Gokhale and Kotlikoff (1999), two of the main names behind this measure, acknowledge several weaknesses of generational accounting, they argue that "Generational accounting may be the best long-term fiscal planning tool that policymakers would actually use" (1999:83) and "The application of generational accounting to the United States indicates that U.S. fiscal policy is inequitable and unsustainable and that recent budget initiatives fall short of what is needed to prevent placing enormous fiscal burdens on today's and tomorrow's children." (1999:84).

Generational accounting has severe limitations. Some of these are static choices of growth rate, discount rates and policies which make the results highly sensitive to any changes; there is no distinction between public consumption and investments; the projections are made over very long periods of time which make them highly uncertain, other burdens such as risk of death at war is not included.

Lynch (2001) finds generational accounting useful for assessing the impact of present tax and transfer programmes on different cohorts but has also substantial critique of this measure: interpretation is hard due to the highly aggregate composition; the use of discount rates makes accounts for any given age group highly sensitive to the value of the most proximate tax or benefit programme; it assumes constant tax and transfer policies. Since taxes and benefits do change over a lifetime, generational accounts can not be used for comparing generations that have already experienced such changes.

Attias-Donfut and Wolff (2000) add to the critique and argue that the measurements of economic growth can be questioned and the static view of policy changes is a considerable weakness. In addition, the unpaid work of women brings a double contribution to the welfare state, it increases the availability of men for paid work and it relieves the state of part of its obligation to children, the sick and the elderly; thus generational accounting ignores the contributions women make and the wealth they produce. Ginn and Arber (2000) question why generational accounting has been used to help legitimate cuts in public pensions, despite the fact that generational accounting "ignores the non-financial inputs made by women, as part of the normative gender contract, on which the viability of pension systems, and society as a whole depend." (2000:133).

Becker (2000) underlines that generational accounting only includes net taxes paid to the government, i.e. taxes minus public transfers received. Therefore generational accounts do not capture the full net benefit or burden of a particular generation since they do not impute the value of government purchases of goods and services to provide for infrastructure, education etc.

Baker and Weisbrot (1999) attack generational accounting sharply. Some generational accounts of net lifetime taxes for future generations show around 80-90 per cent of their income. By adjusting the assumptions of e.g. growth rate and computing their own generational accounts following a few different scenarios they get a net tax of around 20 per cent (1999:44). They also question the use of the same tax rate for all cohorts as a criterion for generational equity. Their argument is that a tax rate alone does not describe well being; instead the focus should be on the overall standard of living.

In addition, other burdens such as the military draft are not included and there is no distinction between government consumption and investment; apart from debt governments pass on infrastructure and other assets to the future generations. According to projections made by Baker (Baker 1998 cited in Baker and Weisbrot 1999), real wages will on average increase moderately throughout the next century and the growth rate in wages will be far faster than the growth rate in taxes attributable to population ageing; after tax income should thus be higher for future generations than they are today. Here an objection can be made: increasing wage shares will in general imply decreasing capital returns.

5. Private Transfers

While the public transfers are generally upward, from the younger generations to the older, private transfers flow in the opposite direction. For private transfers, there is a net flow of resources from the older to the younger generations, both by inter vivos transfers and bequests. Private transfers also tend to be redistributive and are commonly directed to more needy family members. Up until recently, time transfers have largely been neglected, despite the fact that these seem to be substantial. Research indicates that there are gender differences in the character of private transfers. There is no consensus on the motives behind private intergenerational transfers. The total amount of private support is hard to measure due to the informal and sporadic character of transfers. Further, not all families give transfers.

5.1 Financial Transfers

Despite the considerable and obvious transfers that take place within the family, private transfers tend to be neglected in discussions on how generational equity should be measured. Furthermore, governments often count on families to provide additional care for long term frail elderly persons. If such private solutions can be sustained in the future is questionable since families are shrinking. In the future, it will be much more common for the elderly to never have been married or to be divorced and they will have few or no children. In addition, rising life expectancy will raise the number of family generations alive at the same time. An adult child with no or one sibling may thus come to have the sole responsibility for private care for several elderly persons, parents as well as surviving grandparents apart from caring for their own children.

The importance of private intergenerational transfers has led to a broad field of research on the topic, and transfers between adult family generations are usually seen as an important part of the intergenerational link in modern societies. Private transfers take many shapes, e.g. between living family members in inter vivos transfers or as bequests. Bequests are more important in size than inter vivos transfers. Comprehensive data on family transfers are scarce and there are only a small number of countries where the requisite data are available on a nationally representative scale. The most extensive information so far exists for the United States. France has the only large-scale study based on information obtained from three generations of the same families and for Germany there is also detailed data available (Kohli 1999).

In Germany, transfers between generations are sizeable and mainly made within the family lineage. Studying private monetary transfers, Kohli (1999) analyses the German Aging Survey of a representative sample of Germans aged 40-85 collected in 1996. The pattern of transfers is not simply a flow from the first to the second generation; there are also substantial transfers to non-adjacent generations like grandchildren. These transfers are overwhelmingly downward, from the older to the younger generations.

The pattern of transfers on the aggregate level shows that part of the public transfers from the working population to the elderly is handed back by them to their family descendants. However, there are at least three limitations to this notion; compared to pension levels inter vivos transfers are rather modest; almost 70 percent of parents or grandparents have not participated in this form of back-financing in the twelve months before the survey; those who pay in a pay-as-you-go system are not the primary recipients of family transfers since Kohli find that inter vivos transfers go disproportionately to those members of the descending generations that are unemployed or still in education (Kohli 1999:9).

The total of inter vivos transfers from the population above 60, approximately the mean age of retiring, came up to a total of 9 percent of the pension sum. On the individual level, there is an even clearer result; public transfers is the major source of income for the 60-85 year olds, corrected for received private transfers and around one sixth of public pensions are returned to younger generations through inter vivos transfers. Although the rate of transfer giving rises significantly with income, respondents who give transfers give similar proportions of their household income (Kohli 1999:9). Thus, giving is not restricted to the upper income levels. There are substantial transfers given also in the lower income quintiles where dependency on pension income is highest. Among the respondents or their partners, 47 percent had received an inheritance and 19 percent expect one in the future. 26 percent of those who own their home have inherited it or received it as gift. Most of the bequests are of small or medium size.

Kohli acknowledges that transfers have proven to be highly sensitive to measurement issues such as question wording and time frame, and this is likely to be even more the case in international comparisons. Results for Germany correspond to those for the US, while differences between German and French studies probably reflect a stronger generational bond in France than in Germany. Differences are probably related to differences in family regimes as well as public welfare regimes (Kohli 1999:7). Such "family regimes" include the usual dimensions of family policy, but also go beyond them to other policy fields, e.g. taxation of wealth and inheritance as well as to dimensions of the demography and culture of the family.

Kohli underlines that "Material transfers are not only an important part of the intergenerational linkages in the family; they are also the most appropriate field for studying how the family and the welfare state interact." (Kohli 1999:104). Kohli describes the classical sociology of the family, along the ideas of Durkheim, as a shift to the nuclear or conjugal family in the modernisation process. In this line of thought, it was for a long time generally thought that an intergenerational horizon of the family would disappear. With an increasing individualization of social relations, and material objects losing their hold over people, inheritance would also lose its importance.

Kohli demonstrates that although co-residence among adult family generations in all Western societies has decreased massively, there is a significant circulation of capital among adult family generations which goes "much beyond what the concept of the nuclear family would allow" (Kohli 1999:4). In Germany a large part of the elderly population (45 per cent) lives in the same neighbourhood as an adult child and nine-tenths have a child living not farther away than two hours.

Another feature of parents' transfers is that while parents target inter vivos transfers predominantly to their more needy children, bequests go to all children equally. There is no obvious economic explanation for this since both altruistic as well as strategic motives for bequest would predict unequal amounts. Kohli (2003) argues that there is no obvious institutional explanation either, since equal division is the empirical rule even in the US where, in contrast to France and Germany, there is almost complete testamentary freedom. His only explanation seems to be a value change which would mean that "individualisation of modern societies has made the principle of equal worth of every person one of their overriding concerns." (Kohli 2003:5).

Attias-Donfut and Wolff (2000a) use a French three-generational study where family generation, i.e. role as grandparent, parent or child and birth cohort are combined. Three family generations within the same family were picked, where each generation was of a specific birth cohort. The three cohorts have experienced different trajectories: The older generation had little unemployment and the mean income of this cohort is relatively low due to the high number of widows who generally have very low pensions. This cohort did not benefit from expansion of education, but from the extended social protection programs and are better off than their parents in the same stage of life.

The middle generation had a period of full employment from the 1950s t to the 1970s and the mean income of this generation is almost double that of their parents. They have also benefited from the educational expansion and other welfare benefits. Those in the youngest generation who have left the educational system, have a higher level of education than their parents, higher unemployment and lower mean income than their parents although higher than their grandparents.

As Kohli (2003), Attias-Donfut and Wolff (2000b) study inter vivos transfers and point out the redistributive character of private transfers. Family transfers are mainly directed to family members with the greatest needs. Economic transfers go to poorer generations, i.e. both to parents and children. Inter vivos transfers thus reduce inequalities between generations. The full impact of such compensatory effects is underestimated in this study since caring activities and co-residence are not included. They also underline the importance of gender roles in these patterns: "Generational exchange is firmly articulated upon gender roles." (2000b:44). While men more often give financial help, women tend to give time-related support such as childcare for grandchildren and care for disabled elderly parents.

Attias-Donfut and Wolff acknowledge the problems in measuring private transfers as the survey only looks at retrospective data based on economic transfers either in nature or in kind which has been received regularly or occasionally. Among the elderly, 33 per cent have given money to their adult children and 30 per cent have also given money to their grandchildren in the last five years. 49 per cent give money either to their adult children or their grandchildren. Among the middle generation, 64 per cent give monetary support to their children and 9 per cent give to their parents.

While money transfers are mostly downward, time transfers go in each direction; 89 per cent of the middle generation provide at least one domestic service for their elderly parents and 49 per cent of the elderly help their children in the middle generation (Attias-Donfut 1995 cited in Attias-Donfut and Wolff 2000a). The redistribution of income from the elderly to the middle generation ensures the transmission of wealth between generations. These flows are more pronounced later in life as the donor's age has a positive effect on giving.

Among recipients, the higher the wealth and income, the larger the amount of money they receive in transfers from their elderly parents, but they receive transfers less often. Among the donors, the richer they are, the more often they give but the amount given is not directly related to the income and wealth of the donors. Further, the amount of money given represents a higher percentage of total donor's revenue for the poorer donors than it does for the richer.

Financial support from the middle generation to their elderly parents is mostly provided by the richer adult children. Time transfers are not affected by differences in the donor's economic resources. There is a gender gap in intergenerational transfers as women more often give time transfers while men give financial transfers. Half of the middle generation are also grandparents and provide important time transfers to their adult children through child care; 82 per cent of grandparents give care in some form, either on a regular basis, occasionally or on vacations. In case of divorce or separation, young parents receive more help from their parents. Grandmothers devote more time to their grandchildren than grandfathers.

Another way to redistribute resources is through co-residence. For young adults co-residence mainly involves students or economically disadvantaged children. The pattern of intergenerational giving is passed on to younger generations; 66 per cent of the parents who hade received economic transfers from their own parents also support their children. In contrast, only 44 per cent of those who had not received transfers from their parents give their children transfers. (Attias-Donfut and Wolff 2000a).

Schoeni (2003) examines monetary transfers from parents and parents in law to their adult children using the US 1988 Panel Study of Income Dynamics (PSID). The study shows that transfers are most likely to be received from parents; life-course changes such as marriage or a birth of a child are significant determinants of private transfer behaviour; recipients of private parental transfers are younger, more likely to be white, and more likely to be a daughter than a son; recipients' parents are more educated, wealthier, healthier, and more likely to be married; recipients have a greater number of "parent-households," and fewer siblings.

Gulbrandsen and Langsether (2000) reject generational conflict and add to the studies which find private transfers to be smoothing wealth inequalities. They analyse their own surveys to examine downward intergenerational transfers in the shape of both inter vivos transfers and bequests in Norway. Norway follows the common pattern where the middle-age and the elderly are the wealthiest, since their life span saw rising employment, growth and housing development and the elderly, those aged 67-79 receive the highest volume of public transfers while the lion's share of private transfers is downward, from parents to adult children. It is usually young adults in their establishment phase who receive transfers although the value of the transfers to young adults is smaller than those received later in life. The largest transfers are received by people in their 40s and 50s when they receive both advancement of inheritance and inheritance from their elderly parents. Only 12 per cent of those over the age of 67 have received any form of transfers the last five years. Those above 50 are the ones most likely to give money transfers, 40 per cent of those between 50 and 66 do.

In a survey parents with at least one child more than 20 years old and young adults aged 20-29 were interviewed on transfers from parents to adult children. According to the parents, eight of ten parents give their child some form of establishment support, 49 per cent had allowed adult children to live at home either cheaply or free. 43 per cent have given one or more children direct financial support for education and 19 per cent for home establishment. Of those children interviewed, fewer report having received transfers than the group of parents indicated. 37 per cent of the children report having received direct monetary support so far in the establishment phase. This number increases when cheap or free living is included. And as the parents report, support of education or home establishment is dominant purposes. In short, the intergenerational transfers seem to be sizeable, especially for young adults during their establishment phase.

Kohli (1999) points out four functions of private transfers; they may improve the position of the elderly in the family; the elderly are empowered with resources so that they can exert some control over the young; the welfare of the young may be increased via parental altruism.

Parents' transfers are strongly related to the needs of children. To the extent that this need is constituted by e.g. unemployment or education, parents' transfers can be seen as complements to public transfers. Kohli considers that "families may be a more effective system of gauging needs and mobilizing resources." (1999:113). Altruistic parents may be good observers of needs and of how to best cope with them. Further, altruism may incorporate social control, since parents may be able to exclude moral hazard.

Family transfers can thus be seen as an insurance system for the risks of the market economy incurred by the young. Arguments along the line that a mix of several systems or institutions of welfare production is superior to one source only and against the primacy or even monopoly of the welfare state could also be applied. Kohli argues that to the extent that family transactions are regulated by altruism and affection, it follows that material transfers are accompanied and complemented by such other dimensions of exchange, thereby increasing their value for the recipients. In this perspective the family thus presents a better cost-benefit relation, higher productivity, than other institutions such as the welfare state. Flows of money or goods constitute social relations and transfers reinforce the link between different family generations and at the same time reinforce social inclusion and cohesion.

5.2 Time Transfers

In contrast to transfers of goods, time transfers have received little or no attention in the literature. There is a gender aspect to this neglect, as women tend to be more prone to time transfers than men. Transfers of time between generations are both directed upward in e.g. care services to elderly parents, and downward mainly in baby sitting grandchildren. These transfers are found to be substantial.

Cardia and Ng (2003) study intergenerational time transfers and childcare as childcare takes up a substantial part of time of the working generation. Data from the US, the Health and Retirement Survey (HRS), shows that time transfers in the form of grandparenting are significant, with an average of eight hours a week. In fact, in this sample, intergenerational time transfers are as substantial as monetary inter vivos transfers. Such time transfers are made irrespective of households' income and wealth which is a major difference from financial inter vivos transfers. Other US surveys as well as Canadian data show a similar pattern. Further, while inter vivos financial transfers are made by only a small fraction of households, a relatively large fraction made more time than money transfers, except households with extremely high incomes.

Cardia and Ng analyse these time transfers using a two-period OLG model with downward altruistic agents. Individuals consume a market good and a home produced good which is interpreted as child care for the younger generation and old age care for the older generation. Both parents and grandparents put their time to child care. They find that time transfers can be compensatory in altruistic families that are prevented from making monetary transfers. Cardia and Ng also note that in countries where the family is closer than in the US, time transfers may be even higher than found in this study and hope for more studies of the relative importance of "the three currencies of transfers (money, time and space) across countries with different economic and social infrastructure.." (Cardia and Ng 2003:453). Grandparenting has two effects, it relaxes the time constraint so the parent can work more on the labour market and it relaxes the budget constraint since the parent does not have to buy childcare.

Both time and money transfers affect capital accumulation positively, but they affect labour supply differently. Monetary transfers increase savings and capital accumulation but may discourage labour supply due to increased income, an effect which may offset and even outweigh the intertemporal substitution effect from capital accumulation. Time transfers increase labour supply unambiguously since increased work hours is the only way for the young to increase their purchasing power. (Cardia and Ng 2003).

Policies that subsidise grandparenting and child care can raise the level of childcare without negative effects on labour supply and capital accumulation (Cardia and Ng 2003). However, in e.g. the US many grandparents are not yet retired. Phillips Reynolds (2003) quotes several studies showing that most grand parents are not part of the elderly population. In this case the OLG would not be a good description of reality, grandparents may still be in the working force to a relatively large extent. This would be even more accentuated if only grandparents with grandchildren in need of child care, i.e. the youngest, were considered. In this setting, subsidising grandparenting could harm labour supply. Subsidising the time spent on child care by the younger – working age – generation would reduce the labour supply and therefore capital accumulation.

Cardia and Michel (2004) examine time and money transfers theoretically and demonstrate that both bequests and time transfers have positive effects on capital accumulation, but the labour supply decisions are different depending on whether bequests or time transfers are received. Bequests increase savings and a capital accumulation that does not require the young to work more on the labour market. Time transfers increase capital accumulation by relaxing the time constraint of the young generation which makes the young work more. Further, Cardia and Michel show that time transfers can take place when intergenerational altruism is not sufficient to generate bequests. Bequests depend on the capital intensity of the economy, therefore; the lower the capital intensity of the economy, the higher is the critical value for positive bequests. Time transfers on the other hand do not depend on capital intensity.

Sloan, Zhang and Wang (2002) examine the substitution between money transfers and time transfers of an altruistic working child giving transfers to an elderly parent using data from the Health and Retirement study (HRS), a national panel survey of US households. The study concerns several different kinds of transfers, such as co-residence, time transfers, money transfers etc. Their results show that holding child wealth constant, parents who are less wealthy relative to their children get more financial help although this help is rather limited and can not be considered a safety net. They also find that high wage children give more money than time to their parents due to increased opportunity costs. Parents living in old age homes receive less time from their children, which Sloan et al take as a suggestion that public care programs crowd out some private transfers. Many of the results are consistent with the predictions of the model although the analysis of money transfers gives more support to the model than the analysis of time transfers.

5.3 Motives

One of the central questions in the private transfer literature has been the motivation for giving, such as the altruism, exchange or reciprocity hypotheses. Whether transfers to children are motivated by altruism or by exchange considerations, makes a difference for predicting the likely consequences of, e.g. changes in tax incentives or public pensions and other benefits. These models give different predictions about the effect of the transfers and can be tested to see which model is consistent with data.

The motive for giving is important to understand the impact of public policies. "If transfers are sent due to altruistic motives, then public transfer programs must take into account crowding out effects on private transfer arrangements. On the other hand, if transfers are motivated solely through self-interest, then not only may crowding out effects be absent, but public transfers may act to amplify the income redistribution effects of private transfer arrangements." (Feinerman and Seiler 2002:716).

One problem in empirical studies is an assumption of full information. Although this may be true for many private transfers, information in these situations may well be asymmetric. Some examples of imperfect information are adverse selection where the receiving children know more than their giving parents, limited information, limited enforceability etc. Feinerman and Seiler (2002) find that in a symmetrical information regime the exchange motive is predominant. But if information is asymmetric, altruism as well as exchange is important motives. Feinerman and Seiler argue that studies show no consensus on whether altruism or exchange dominates the motives behind private transfers; intergenerational transfers may be dominated by either.

Kohli and Künemund (2001) also hold forward that it is probable that apart from shaping size and incidence of transfers, motives - such as self-interest, love, generosity etc. - are also important for the perceived quality by recipients. Conditional transfers, with expectations of exchange, reciprocity, control or status may have a highly different perceived quality compared to unconditional transfers.

In their empirical study of intergenerational transmissions of wealth in France, Arrondel and Laferrere (2001) test common economic models of intergenerational transfers taking taxation into account. While most empirical studies are made on data from the US where there are both freedom of devolution and an estate tax, France has restricted freedom of devolution and there is an inheritance tax. Arrondel and Laferrere study inter-vivos transfers and bequests in France and their relation to the French inheritance law and taxation using administrative records and a national household survey. Because of different taxation, giving gifts and leaving an inheritance should be distinguished as different acts. Arrondel and Laferrere use the changes in the gift tax law made in 1981–1996 as a natural experiment and find strong reactions to tax incentives. Transmission behaviour is highly responsive to changes in the fiscal system, e.g. inter-vivos gifts increased after they were made partly tax-free.

Arrondel and Laferrere find their results to be compatible with a model where parents make transfers to the best endowed child and thus the results give no direct support for altruism, or for exchange, as a gift motive. In contrast to a common model of altruism, transfers do not seem compensatory since their results show that the probability for a child of receiving a gift over the life cycle increases with their permanent income, and the amount received increases with current income, while the amount increases or bears no relation to permanent income, depending on the specification.

However, the empirical tests do not support one single model of intergenerational transfers and Arrondel and Laferrere argue that the study of the motives strongly suggests that different motives are present along the life-cycle or among different groups of households. While altruism seems to be a strong motive when children are young adults, with transfers of relatively small amounts, altruism is not supported when studying total inter-vivos gifts. Arrundel and Laferrere also stress that many other forms of transfers, such as human capital investment, help and services like co-residence or babysitting provided by parents are not taken into account in this study. These transfers may support the altruistic or exchange motive. They also underline the need for a model for the rich since wealth is highly concentrated and the practice of formal gifts is one of top wealth holders.

There seem to be gender differences in altruism and research has found that men and women prefer different forms of giving. Andreoni and Vesterlund (2001) mention at least seven studies that discuss gender differences in giving and indicate that gender differences may be substantial which would have significant implications: "Such systematic differences could affect economists' models, data analyses, and research methodologies whenever altruism may be a factor in decisions." (Andreoni and Vesterlund 2001:293).

When surveying economic experiments that have found great variation in altruism among individuals, Andreoni and Vesterlund (2001) find no consensus on gender as an explanatory variable. In their study, they use controlled laboratory experiments. The subjects in these experiments were volunteers from intermediate and upper level economics courses with a total of 142 subjects. In order to focus on altruism apart from strategic concerns, they use a dictator game, and observe individual giving decisions on different budgets with different "prices of altruism." Their results show that the male and female "demand curves for altruism" cross, and that men are more responsive to price changes. These results can be interpreted as women being more altruistic than men when altruism is expensive, but when altruism is less expensive it is the opposite. They also find a pattern of greater variation among men; men are thus more likely to be either perfectly selfish or perfectly selfless, whereas women tend to prefer to share evenly. If there are such gender differences in altruism, it may lead to tax incidence differences as well.

Jellal and Wolff (2002) apply a model of endogenous altruism where private transfers aim at shaping preferences within the family. Jellal and Wolff do not rely on the demonstration effect theory, where you care for you parents to demonstrate to your own children how you want to be cared for later in life, but present a model of cultural transmission of altruistic values between generations. Such cultural transmission between generations can explain the correlation in behaviour of different generations. The model is used to study the motives behind upstream intergenerational transfers. The probability of a child being altruistic increases with the amount of care shown by his parents to the grandparents.

The cultural transmission hypothesis generates predictions that are tested using a French trigenerational survey conducted by the national age insurance office (Caisse National d'Assurance Viellesse) in 1992. Their findings reject both the exchange hypothesis and the exogenous altruism hypothesis, but prove to be consistent with the cultural transmission model. Jellal and Wolff argue that the policy implications of this model are that public transfers that affect transfers within the family also influence private transfers in the future.

Therefore, a decrease in public pensions along with high costs of health care will result in a rise in informal care giving between generations and also increased transmission of filial altruism within the family. Lowered public transfers may thus lead to an increased cost for children of elderly parents. In giving to their parents they transmit altruism to their children and may expect the same help in their old age. What Jellal and Wolff do not mention is how informal care will be affected by the small families of low fertility rates. A couple with no siblings will then split their informal care among both parents and parents in law. Neither do they discuss gender implications of their findings.

Villanueva (2001) tests if the family altruism model can be modified to reconcile it with empirical findings. He adds two modifications to the basic altruism model by making the effort of children endogenous and relaxing the assumption that the parent has perfect information about the labour-market opportunities of the child. Parents thus observe the income of their children, but neither the labour market opportunities nor the effort of their children. Therefore parents face a trade-off when deciding about the optimal amount of transfers to their children since they want to help their children, but this help may distort the effort decisions of their children when looking for new jobs.

His simulations give three general conclusions: first, imperfect information reduces substantially the sensitivity of the amount transfers from the parents which help reconciling the standard altruism model of the family with the data. Second, the amount of parental transfers is more responsive to the income of the primary earner than the secondary earner in a household of a married child. Third, the probability of receiving a transfer is also more responsive to the income of the primary earner.

The model is tested empirically using data from the Panel Study of Income Dynamics (PSID). The prediction that, in households receiving transfers a decrease in the income of the primary earner would raise transfers more than a decrease in the earnings of the secondary earner does not hold. But a household of a married child is more likely to receive a transfer in case of a decrease in the income of a primary earner than if the secondary earner does. Villanueva points out that one implication of his findings is that a program that taxes a dollar of the income of the child to give it to the parent would lie out of the control of the child, and would be observable to the parent. In Villanueva's model transfers from the parents would not neutralise the program, although their transfers would rise in response. With this in mind, the effectiveness of public programs that redistribute income between generations remains an open question.

Kohli and Künemund (2001) study the motives behind transfers empirically between adult family generations using data from the German Aging Survey. The purpose is to "examine the empirical structure of motives in order to arrive at empirically grounded typologies of combinations of motives .. as a prerequisite for assessing the impact of motives on transfer behavior." (2001:12). According to Kohli and Künemund, the main problem regarding transfers is that the assumption of each individual having a single well-defined motive is unrealistic, they argue that competition and overlap of sometimes contradicting motives is common. Therefore they fail the methodology of imputing motives from behavior and instead try to study motives directly through "appropriate questioning". To assess transfer motives directly, instead of imputing them from behavior, Kohli and Künemund have constructed a series of statements referring to different motives. By motives they mean values and attitudes.

Kohli and Künemund (2001) draw several conclusions. The motives behind transfers to kin show a complex pattern with overlap and interaction between different motives. They also argue that instead of looking for one single or dominant motive, common combinations of motives should be examined. A dichotomy of unconditional vs. conditional transfers with the third, less prominent, dimension of independence and separation between the generations is found instead of the commonly assumed altruism-exchange dichotomy or the trichotomy where reciprocity is included.

Unconditional and conditional transfers are seen as "motivational types", where unconditional transfers comprise several specific motives, e.g. altruism, reciprocity and normative obligation, while conditional transfers refer to direct exchange. The motives are socially stratified and vary along gender lines, with women being more prone to unconditional and less towards conditional giving than men.

Kohli and Künemund (2001) also get results showing that motives contribute to the explanation of transfer behaviour. Although they cannot control whether motives make a difference for the perceived quality of intergenerational transfers in the family, they can show that motives have a strong impact on the incidence of transfer giving. Thus, it is not only needs and resources that determine intergenerational support in the family but also the motivation of the givers as assessed by direct questioning.

5.4 Do Public Transfers Crowd Out Private Transfers?

Existing evidence on the extent and magnitude of the crowding-out effect of public transfers on private solutions are mixed (See e.g. Jimenez et al 2002:3). While some studies find little effect of public transfers on private transfers, others suggest that crowding out effects may be common.

Jimenez, Kang and Sawada (2002) study the crowding out effect of public transfers on private transfers during the financial crisis in Korea using balanced household panel data during 1995-1998 from Korea. During the crisis the Korean government and households protected their standard of living through policies such as dissavings, sales of assets and private transfers. Since a strong crowding-out relation between private and public transfers was found before, but not during the crisis, Jimenez interpret this as a plausible collapse of private transfers due to the financial crisis.

Their general conclusion is that: "…there had been a strong crowding-out relation between private and public transfers observed, suggesting that the government should have careful targeting schemes to prevent such crowding-out effect of its social safety net programs." (Jimenez et al 2002:14). Wise and Gruber (1999, 2001) argue that private solutions are crowded out by public arrangements. They find that where the public sector transfers more to the elderly, they are no better off on average suggest such a crowd out, as does the correspondence of low labour force participation among the elderly and pension schemes

Attias-Donfut and Arber (2000b) propose complementarity between private and public resources and reject that public transfers crowd out private transfers, instead they detect a complementarity between the two. In their study they use a theoretical model of complementarity versus substitution hypothesis. Young adults are the prime recipients of private transfers. 32 per cent of non co-resident children can rely on financial payments from their parents. This is only transfers from parents; grandparents as well as a spouse's parents and grandparents are not included, why this figure is underestimating total private transfers. In addition, 50 per cent of young adults also receive some form of public benefit.

These benefits are mainly education grants, housing allowances for students, unemployment benefits and family allowances for those who have children. 15.6 per cent of young adults receive support from both parents and the state confirming the coexistence of the transfer systems. However, among the unemployed this figure rises to 23.2 per cent and 41.7 per cent among students while employed young adults receive 11.8. Among those households with the lowest income, 36.6 per cent receive both types of support, a figure which drops to 20 per cent in the next income bracket. Both public and private transfers are thus in a way 'means tested'. Private transfers are essentially directed towards those who need them the most and who also has higher levels of education. Public assistance mainly goes to those who are economically inactive, such as students, unemployed etc.

Attias-Donfut and Wolff (2000b) estimate the effect of rising income and find it to decrease the probability of receiving private help from the parents, which gives support to complementarity rather than crowding out between public and private transfers. They use a French three-generational survey. Simulating the effects of changing public support, they find that public support increases the probability of private support and vice versa. If an allowance given to young people would be withdrawn, private support would fall from 28.7 per cent to 25 per cent. Thus, public support to young adults encourages private support through money transfers from their parents.

According to their results, the total amount of family transfers is largely independent of any public allowances received by young adults. Descriptive statistics also indicate that private and public support complements each other irrespective of the level of the parental income. While income from employment decreases the recipient's probability of receiving economic transfers from parents, public support increases the probability of economic support from parents. Several studies also show that elderly who receive professional care also get private care, which increases if public care increases. This is consistent with Attias-Donfut and Wolff's results; the amount of private help is comparatively of more significance when it complements public help.

As upward financial support is mainly directed to the poorer elderly, a decrease in pensions is likely be accompanied by an increase in economic transfers from their children. The provision of private transfers is mostly determined by the level of economic resources of the two generations. However, it is harder to measure transfers to the elderly than to the young since transfers to the elderly more often is in the shape of service and care. Gifts from the elderly to their middle aged children are more common among the wealthier of the elderly. Similarly, of those middle aged children who give to their elderly parent, most are among the wealthier. Such existence of compensatory financial transfers would also be magnified if time transfers and co-residence were included.

In his paper on the effects of intergenerational transfers, Kohli (1999) concentrates on the welfare mix between family and state. His main argument is that public old age security has not crowded out all forms of family transfers; it has rather made new forms of links between adult family generations possible. The analysis is based on the German Aging Survey of a representative sample of Germans aged 40-85 collected in 1996. Kohli only studies monetary transfers and focuses on inter vivos transfers "[inter vivos transfers are] more interesting, in terms of social policy (they reach their beneficiaries earlier in life when their needs are larger) as well as in theoretical terms (they are part of an ongoing interaction process and open up a broader range of motives and negotiations)." (Kohli 1999:5). However, bequests are a quantitatively more important component of wealth acquisition, the relation to inter vivos transfers is about 3:1. Bequests are also under more institutional regulation and political discourse (Kohli 2003).

Many of those who are retired and receive public pensions also give both inter vivos transfers and leave bequests. It may be argued that this proves that pensions are too generous and should be cut. Since these transfers benefit younger generations, it may seem more efficient to let the public social security system transfer such benefits to the needy directly instead of first transferring resources to the retirees who then pass it on to their children. Kohli (2003) argues that instead of concluding that pensions are too generous, we should focus on other implications of this private/public link: "Enabling elderly pensioners to support their descendants may not only create more support among the young for the public generational contract, it also institutes the family as an efficient insurance system against non-normative life course risks and as an effective agent of social cohesion." (Kohli 2003:5).

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