

Abigail McKnight and [Frank Cowell](#)
**Social impacts: health, housing and
intergenerational mobility**

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Chapter 7: Social Impacts: Health, Housing, Inter-generational Mobility

Abigail McKnight and Frank Cowell

8.1 Introduction

The potential scope for inequalities in income, wealth and education to reflect in to a wider set of inequalities was outlined in the Introduction and Chapter 6 of this book. As has been noted there is considerable debate about whether any such reflection is due to a causal relationship, joint determination or purely spurious. In this chapter we examine the research evidence on the relationship between income, education or wealth inequality and outcomes in health, housing and intergenerational mobility. In addition to looking at overall outcomes, where appropriate and where information is available, we report on social gradients and other measures of inequality. Much of the research in this area has focused on comparing inequality at a point in time with a set of potential outcomes. In this chapter we draw on the new research evidence arising from the GINI project's examination of trends in inequality and wider societal impacts across 30 countries over the last 30 years and a series of research papers also carried out as part of that project. These new findings are put in the wider context of the existing research literature in these areas but we do not attempt to conduct a comprehensive review.

If we were to provide an informal sketch of the things that principally characterise people's well-being in the long term we might identify (1) health, (2) wealth and (3) prospects for the children. Given that the major proportion of household wealth for those of modest means is represented by housing, these three things can be summarised by health, housing, and inter-generational mobility, as in the chapter title. Some researchers are content to draw strong inferences from simple associations in the data (see for example the discussions based on Wilkinson and Pickett 2009a, in particular Chapter 6 of this volume, page 4). However we wish to focus, where possible, on evidence-based discussion of the possible ways in which the impact of inequality is transmitted. As was emphasised in Chapter 1 (page 2) the connections between income inequality and social outcomes are complex; there may be several causal mechanisms and in some instances the causal link is in the reverse direction: what we might think of as outcomes are in fact social phenomena that drive inequality. We will see instances of links in both directions in the subject matter of this Chapter. The channels through which the impacts of inequality occur may be principally economic, or they may involve social and psychological effects. The economic channels include the differential effects that resources may have on the behaviour of people located in different parts of the income distribution, and the differential effects of the market on people in different economic circumstances.

8.2 Inequality and Health

~~For the first of our three long-term social outcomes there~~ There is an extensive literature [on the connections with inequality. Several covering the relationship between income, income inequality and health which has expanded from the work of epidemiologist across the social](#)

sciences. There are many existing studies that demonstrate a relationship between absolute income and health outcomes (see for example Subramanian and Kawachi, 2006). This has been defined in the literature as: this the “absolute income hypothesis”. This may not be a smooth may be a non-linear relationship, but a non-linear one, steepest among low-income groups (see for example Backlund et al., 1996). In developed economies, enjoying high average levels of income and minimum incomes supported through mature welfare states, some argue that it is relative incomes that matter in terms of health (Wilkinson and Pickett, 2009; Marmot, 2002). Two further hypotheses have been put forward: the relative-income hypothesis, where an individual’s position in the income distribution has a direct effect on that individual’s health, and the income-inequality hypothesis, where overall inequality affects average levels of health (Wilkinson and Pickett, 2006). Wilkinson (1996) argues that beyond a certain level of GDP per capita the association between absolute income, health and mortality weakens, and the distribution of income across society becomes more important as a determinant of outcomes. A number of hypotheses have emerged in the literature to support this theory –social capital, status anxiety and neo-materialist – (Layte, 2012) but there is by no means anything approaching a consensus that any observed empirical correlation reflects a causal relationship.

Marmot (2002) outlines ways in which income can really matter for health or simply appear to matter (causal relationship versus simply a statistical correlation). He also explains why poverty may be more important than income differences above an income threshold if a certain level of income is required to secure adequate material conditions. The relationship between income and health may be through an indirect effect on social participation and the opportunity to exercise control over one’s life. He argues that the problem for rich countries today is inequality rather than absolute poverty and demonstrates this by showing that a gradient is clear across the income distribution. However he also argues that social factors, particularly social position and social environment are likely to have an important determining role in health outcomes. The Whitehall Study, which followed a group of male civil servants in England, was originally conceived to investigate the causes of heart disease and other chronic illnesses (Marmot et al., 1978) with an expectation that among this group of relatively well-paid employees those employed in the highest status jobs would experience the highest level of work-related stress and as a result experience the highest risk of heart disease. However it was found that civil servants working in the lowest grades had the highest death rates and this sparked a fruitful line of research investigating the relationship between status, working conditions and health outcomes. While identifying causal relationships is inherently difficult the evidence as a whole does seem to suggest that hierarchies have a negative effect on health for those lower down the spectrum. This suggests that higher income inequality (where income communicates status) may well may give rise to poorer health outcomes where steeper gradients are associated with a greater negative effect on health for those lower down the spectrum.

In this section we review the findings from recent original contributions to this debate that are innovative either in terms of their approach to the topic or the perspective they take. The three areas we look at are: (1) evidence of socioeconomic gradients in health when alternative

measures of socioeconomic status are considered; (2) cross national evidence of a relationship between poverty and mortality across rich countries and regime types; (3) health inequalities in relation to variations in working conditions.

Material deprivation and health

~~It is clear that m~~Many socioeconomic variables ~~express-exhibit~~ exhibit a gradient in health ~~such as income, education, material deprivation, status, social capital and social class and there are a number of sociological and several~~ studies that have sought to understand the extent to which different factors are simply mapping a latent dimension or directly shaping health inequalities. Layte and Whelan (2009) ~~have shown~~ show that class inequalities in smoking (take-up and quit rates), a contributory factor to inequalities in health, are partly shaped by education but more so by enduring economic and social difficulties among the manual working class to the extent that they dominate any direct income effect. Torrsander and Erikson (2010) analyse the relationship between stratification and mortality in Sweden and show that while class, income and status are all associated with gradients in mortality they all seem to have slightly different effects. They find net associations between education and mortality for both men and women but class and income only have independent effects on mortality for men and status is only found to have an independent effect for women. Trying to unpack the overall associations between socioeconomic variables and health to identify those that have a direct impact on health is a lively area of research not least because of the policy implications.

Blazquez, Cottini and Herrate (2013) make an important contribution to this debate examining alternative measures of socioeconomic status). Their study is motivated, in part, by the work of Sen (1985) in understanding the multi-dimensional aspects of social disadvantage in terms of the failure to attain adequate levels of various functionings that are deemed valuable in society and to examine if comparison effects with societal peers are related to health outcomes. Goldthorpe (2010) outlines how sociologists view social inequality in attributional (ranking individuals in terms of their valued attributes) or relational terms (social class and status) and this study explores both of these views in the empirical analysis. The authors use the Spanish Living Conditions Survey (2005-2008) and a measure of self-assessed health. The measure of material deprivation used comprises 14 indicators grouped according to four domains of quality of life (financial difficulties, basic necessities, housing conditions and durables). In addition to estimating the direct effect of indicators of material deprivation, they assess the extent to which material deprivation affects self-assessed health depending on individuals' relative position; ie relative to that of their societal peers. Measures of absolute and relative income (distance between own income and others' income) are also included in their models.

They find that many of the material deprivation items have a significant and negative effect on health over and above the positive relationship between income and health (income is not significant in the model for women). However, when they include relative income and relative material deprivation, they find that the level of individuals' own income is not

significant but relative income and relative material deprivation have negative and significant effects on self-assessed health. In a saturated model which includes both absolute and relative terms for income and material deprivation, the results are less clear. Income continues to only operate through comparison information with respect to societal peers. In terms of material deprivation the relative position of women in terms of financial difficulties has a significant and negative estimated effect on self-assessed health but it is the direct effects of material deprivation in basic necessities, financial difficulties and housing conditions that have a significant and negative effect on self-reported health.

The findings from this research provide an interesting perspective on the relationship between inequality and health. It would appear from this research that while individuals' own income is positively related to self-assessed health, when relative income effects are taken into account, the size of the difference between individuals' own income and income of others, only relative income has a statistically significant and negative effect on health. This suggests that income inequality is bad for health and supports the relative income hypothesis. On the other hand the results suggest that it is actual material deprivation that has a negative effect on health rather than own deprivation relative to others' deprivation. These findings for Spain suggest a fruitful area for further research both in terms of comparing countries with different levels of inequality and material deprivation but also within countries where inequality and deprivation have changed over time.

Cross national variation in poverty and mortality

Fritzell et al. (2012) focus specifically on the relationship between poverty and mortality. While Wilkinson and Pickett (2006) state that income inequality is a major threat to population health in modern societies they summarise that the relation between relative poverty rates and population health indicators is less self-evident. While much of the debate has centred [around on](#) the relationship between income inequality and health Fritzell et al. argue that if inequality matters then this should be evident in terms of a relationship between relative poverty (lack of resources and relative deprivation) and health. In rich countries a study of the effect of relative poverty can be informative about the relationship between inequality and poverty. The curvilinear relationship between income and health outcomes, the so called Rodgers curve, describing diminishing health returns to income as income rises has been used to motivate the argument that reducing inequality through redistribution could lead to improvements in population health because lower-income individuals have a greater health gain than the loss to higher income individuals. Fritzell et al. hypothesise that a curvilinear relationship between income and health should be observable in poorer health outcomes being associated with higher rates of relative poverty at an aggregate level. They set out to explore the relationship between cross-national variations in relative poverty rates and cross-national variations in mortality rates within relatively rich countries.

As evidenced in the GINI project country case studies (Nolan et al., 2013), mortality rates have been falling across rich countries over recent decades (Hungary and Russia are exceptions), the question addressed by this study is whether the incidence of relative poverty has delayed or hindered a fall in mortality. Using data from the Luxembourg Income Study

for 26 countries covering the period 1980 to 2005 to provide measures of relative poverty (taking 40% of the median as a poverty indicator) supplemented by data from the Human Mortality Database they undertake a comparative analysis to estimate the effect of relative poverty on mortality rates among three age groups, namely infants, children and working aged adults.

In their analysis they separately estimate the relationship between child poverty rates and infant mortality (< 1 year) and child mortality rates (aged 0-17), and between adult poverty rates and working adult mortality rates (aged 25-64) for males and females. They estimate pooled cross-sectional time-series models with corrections for autocorrelation and controls for GDP per capita, social expenditure as a % of GDP and welfare regime type.

For infants they find a statistically significant association between relative poverty and infant mortality rates: a one percentage point increase in child poverty is associated with a two percent increase in infant mortality. The inclusion of social spending attenuates the estimated poverty influence by around one-third, reflecting the strong association between social spending and poverty rates. Welfare regime types were found to have significant variation with higher mortality rates in Central-European, liberal and especially Post-socialist regime types relative to Nordic regimes. For children (0-17) they find similar estimated child poverty marginal effects as for infants. In neither case is GDP per capita significant but social expenditure as a percentage of GDP is associated with lower mortality. Regime estimates are similar to those found for infants but differences between regimes relative to Nordic regimes is reduced suggesting that the relative advantage of Nordic countries is lower in older age children. In the working age population the association between poverty and mortality is weaker (particularly for men). There is also a change in the ranking of regime types relative to that observed for children. For women, Central and especially Southern European regime types have statistically significant lower mortality rates than Nordic regimes and for men, Southern European, Liberal and “other” regimes have significantly lower mortality rates than Nordic regimes.

Sensitivity analysis found that the statistically significant adult poverty estimates appear to be driven by the higher poverty and high mortality rates experienced in Russia over the period of the study. However, while the results for infants and children are attenuated when Russia was excluded from the analysis they remain statistically significant.

It is not clear why the Nordic regimes appear to do so much better at achieving lower infant and child mortality but do less well in terms of adult mortality relative to a number of other regime types. It could be that other factors become more important during adult life such as diet, lifestyle and climate. More research is needed to understand these patterns. The clear findings in relation to infant and child mortality rates lead the authors to conclude that these send out a clear message that national governments should invest to reduce child poverty to limit avoidable infant and child mortality.

The relationship between working and employment conditions and health

Although the causal relationship between income inequality and health continues to be hotly debated, the relationship between employment, job quality and individual health status remains surprisingly under-researched. Evidence of a social gradient in the risk of experiencing unemployment (Elias and McKnight, 2003) and epidemiological studies that find elevated health risks among unemployed, particularly long-term unemployed, as compared to permanently employed people show that inequalities in the labour market that include the risk of unemployment impact on individuals' health (Morris et al., 1994; Martikainen and Valkonen, 1996; Gallo et al., 2004). The quality of jobs varies considerably, such as in terms of physical working conditions, attributes of workplaces, risks of injury, degrees of autonomy, complexity of tasks performed and intensity of work. Job quality and working conditions have been researched by social scientists from a number of different perspectives. Rosen formalised a theory of compensating differentials which explains how wages vary in such a way to compensate workers for adverse working conditions (Rosen, 1986). Occupational variation in employment relations and conditions has been used by sociologists as a way of operationalizing the conceptual basis for social classifications (Erikson and Goldthorpe, 1992; Goldthorpe, 2000; Rose and Pevalin, 2003), where occupations form the building blocks for these classifications and are used to allocate people to social positions, signalling their importance in influencing social gradients.

Although relations and conditions of employment ~~tend to~~ implicitly underlie social gradients in health, much of the research on health inequalities by social scientists has focused on the relationship between income or social class and health. However there is a growing body of evidence on the relationship between employment relations and conditions and health. A whole task group under the Marmot Strategic review of health inequalities post 2010 was set up to examine the evidence on the relationship between employment arrangements, working conditions and health inequalities and to make policy recommendations in the light of their findings. They found that work and employment make a significant contribution to the development of social inequalities, are of critical importance for population health and health inequalities in at least four interrelated ways. *First*, participation in, or exclusion from the labour market. As the prevalence of unemployment is unequally distributed, those in lower socioeconomic positions are at higher risk, this fact contributes to the manifestation of a social gradient in health (Kasl and Jones 2000). *Second*, wages and salaries provide the major component of the income of most people in employment and contribute to income inequalities and associated health inequalities (Kawachi 2000). *Third*, exposure to physical, ergonomic, and chemical hazards at the work place, physically demanding or dangerous work, long or irregular work hours, shift work, health-adverse posture, repetitive injury and extended sedentary work can all adversely affect the health of working people. These conditions are more prevalent among employed people with lower educational attainment and among those working in lower, less privileged occupational positions (Karasek and Theorell 1990). *Fourth*, as the nature of employment and work has changed, psychological and socio-emotional demands and threats evolving from an adverse psychosocial work environment have become more widespread in all advanced societies. Their highest prevalence is found among the most deprived workers, specifically those in 'precarious jobs' defined by a lack of safety at work, by exposure to multiple stressors including strenuous tasks with low control,

low wage and high job instability (Benach et al 2000; Benach and Muntaner 2007). Overall, a social gradient of health-adverse employment and working conditions has been documented in advanced societies leaving those in lower socio-economic positions at higher risk.

A report to the WHO on employment conditions and health inequalities by the Commission on Social Determinants of Health noted that although there is abundant literature on specific employment and working conditions and health, the literature rarely focuses directly on the important role played by employment relations and conditions as a key social determinant in shaping health inequalities (Benach et al., 2009).

Monden (2005) ~~extended~~ extends some of the previous research that has assessed the extent to which the relationship between education and health is partly mediated by working conditions. He examines the extent to which both current and lifetime exposure to working conditions differ between education groups in the Netherlands. He finds that lower educated men have greater lifetime exposure to adverse working conditions than higher educated men and that this lifetime exposure explains around one-third of the health differences he observes between the highest and lowest educated men and has greater explanatory power than current differences in working conditions. The results for women are less clear due to differences in working lives between higher and lower educated woman and therefore differential rates of exposure to adverse working conditions.

One of the few contributions to the economics literature on this topic, Cottini and Lucifora (2013), provides cross-country evidence for EU15 countries, on the links between working conditions, workplace attributes, low pay and health (both physical and mental) among full-time employees using the 2005 and 2010 waves of the European Working Conditions Survey (EWCS). To capture working conditions they construct indicators to cover psychosocial aspects of work: intensity of work, complexity of tasks, low job autonomy in performing tasks and working long hours. Exposure to physical hazards is captured by a set of indicators that record if the worker was exposed to half or all of working time: vibrations from hand tools; noise so loud that he/she has to raise his/her voice to talk; high temperature or coldness; repetitive arm movements. These job quality indicators were summarised into a single job quality index. Low pay is defined as earnings below two-thirds of the level of median earnings and is used as an indicator of income inequality.

To construct variables indicating poor work-related health they use responses to a question that asks workers to indicate if they suffer from a series of health problems as a result of their work. The health problems identified were: skin problems; respiratory difficulties; stomach-ache; heart disease; depression, anxiety and sleeping problems. These were divided into mental and physical health problems to construct two indicator variables.

In the raw data they find considerable cross-country variation in job quality and work related health problems. The results from their statistical modelling show that after controlling for a wide range of personal and job attributes, adverse working conditions are associated with lower health status (physical and mental). In particular they find higher marginal effects of

adverse working conditions on the mental health of workers. They also find that low paid work has a significant effect on the physical health of individuals, most likely capturing the relationship between low income and poor health. Although in their analysis they do not control for sorting of workers into occupations and low pay status (endogeneity), recent papers (Cottini, 2012; Cottini and Lucifora, 2010) found evidence of a causal effect of working conditions on mental and physical health of workers.

8.3 Inequality and Housing

From a theoretical perspective widening inequality could affect housing – [the second of our long-term outcomes](#) – in a number of ways, but ~~any~~ the impact is not straightforward nor is the direction of causality clear cut. It is clear that income inequality can affect housing quality and affordability through the same channels that affect the acquisition of other forms of wealth. There is a potential resource effect: those with higher incomes may have a greater propensity to save (they find it easier to “afford” the investment in home ownership). There is also an inequality effect operating through the market: richer people are less likely to be artificially credit-constrained if they want to buy a house. [The housing market here may play both a mediating role, transmitting income disparities through to housing outcomes, and also a moderating role, through the effects of housing tenure on people’s credit worthiness \(see Chapter 6 page 6\)](#). In the GINI project country case studies we [.....](#) The importance of the role of housing not just in people’s lives but also in terms of the financial prosperity and stability of nations has been brought into stark relief by the current economic and financial crisis which began in 2007 arguably sparked by excessive and irresponsible lending in the subprime market in the US but also across a number of other rich countries.

Widening income inequality could affect access to certain tenures if rising inequality increases house prices effectively pricing lower-income households out of the owner occupied housing sector. This would be determined to some extent by the shape and size of the housing stock, the extent to which it is segmented and the availability of other housing tenures. Inequality is also likely to be related to differences in housing quality. This may be considered to be more problematic where the lower bound housing quality is very poor. Inequality could lead to status competition with households making riskier investment decisions with associated greater risk of indebtedness for lower-income households. All of these factors will be influenced by differences in housing regimes, the availability and policy in relation to social housing, financial regulation, housing subsidies and more generally the emphasis for support for particular tenure types. The literature on income inequality and housing usually focuses on the issues of access, affordability, risk and quality within the context of housing regime types.

In this section we begin by looking at how housing regimes relate to inequality and how housing regimes can directly influence inequality trends in terms of, for example, the direct provision of housing and the redistributive effects of different housing policies. We then look at how inequality and absolute levels of income can affect housing affordability, housing quality and quantity. We then focus on home-ownership examining how ownership has been

seen to counterbalance income inequality across a number of countries but as homeownership rates have tended to converge the counterbalancing role of ownership has diminished.

Dewilde (2011) examines whether changes in housing regimes, and more specifically the increase in owner-occupation and concomitant changes, have contributed to the upswing in economic inequality – or vice versa - outlining the links between housing inequality and economic inequality. As housing costs (mortgage repayment or rental payments) are typically the single largest item in households' budgets, the cost of housing is intimately linked to the economic well-being of households. For homeowners, housing wealth is typically the largest (and sometimes only sizeable) investment they will ever hold. The welfare state also plays an important role through direct provision of housing (social housing) and the redistributive effects of different housing policies (taxes, benefits, intervention in credit markets) on the economic well-being of households (Fahey and Norris, 2010). It is also clear that patterns of homeownership can impact on wider economic inequalities. Housing wealth, as with other forms of wealth, acts as a financial buffer during hard times, can be used as security to access credit markets and once mortgage loans have been paid off housing costs are reduced, particularly in old age.

In many countries homeownership rates increased in the post-war decades. At the same time as many governments cut back on social housing provision, they invested more in encouraging homeownership (including among low-income households). The timing and pace of growth in home-ownership has not been uniform across countries and has been shaped by policies designed to assist homeownership particularly among low-income households, such as the right-to-buy scheme in the UK (where social rental tenants could buy their council houses at discounted values) which took off after 1980 and mass privatisation of the housing stock in the former Communist countries during the 1990s (see for example Chapter 23 for Romania in Nolan et al., 2013). However homeownership is not a positive experience for all. Over-indebtedness, mortgage arrears and in the extreme housing repossession can leave households who overreached (possibly encouraged to borrow beyond safe affordability limits through cheap credit and a poorly regulated financial sector) or fell on hard times particularly during recessions with deep scars. Policies encouraging low-income households into homeownership alongside further deregulation of the mortgage market, making it easier for low-income households to attain credit eventually led to the US subprime crisis in mid-2007 (Bratt, 2008).

Dewilde (2011) also reviews the literature that has sought to explain the rise in homeownership rates, which is now the majority tenure in all EU member states (except in Germany). Fisher and Jaffe (2003) suggest that several factors (legal, economic, political and cultural) in societies affect not only the costs and benefits of owning versus renting, but also public attitudes and social norms which in turn affect individual preferences. Government policy aimed at encouraging homeownership and a wide range of other factors have been put forward as determining facts (including: property value development, demographic change, mortgage market deregulation, construction costs and building activities). Some of these factors can be self-reinforcing such as increases in house prices which encourage households

to invest more in housing subsequently leading to further increases in house prices. She also considers the political and ideological dimension including the suggestion that neo-liberal policies encouraging owner-occupation accompanied a shifting emphasis for responsibility for welfare to be borne by individuals and their families and away from the state. Increasing house prices shifted the meaning of homeownership from owning a home to owning an investment and therefore progressive commodification of housing from a home to an asset (Ronald, 2008; Smith et al., 2008). She explains how homeownership could exacerbate existing inequalities where it is more common in higher income groups and the amassed wealth is subsequently passed on to future generations, but also because it is associated with a wide range of other beneficial characteristics such as favourable geographical location and amenities, the size and quality of the accommodation itself and that the net benefits (tax subsidies, capital gains) are greater for higher socio-economic groups compared to lower socio-economic groups restricted to what, if anything, they can afford to buy. Lower socio-economic groups ~~also tend to be~~ more vulnerable during periods of declining house prices, suffering equity losses.

Rising inequality may affect house prices: indeed an increase in inequality can even increase the cost of housing for everyone. Increasing demand for homeownership can lead to higher house prices (where demand exceed supply) as higher income households can afford to pay relatively more. While increasing house prices usually benefit existing homeowners, for low-income households stretching their incomes to enter the housing market this increase in housing costs can lead to a fall in other consumption or a fall in the quality of the houses they can afford to buy (smaller houses or less favourable location). The empirical evidence from the US suggests that in the context of a tight housing market an increase in income inequality results in 'the poor' experiencing more overcrowding and some (although weaker) evidence that increasing income inequality pushes up house prices (Matlack and Vigdor, 2008). These relationships are likely to be shaped by how segmented the housing market is in relation to income; spill-over effects are likely to be low where different income groups demand for housing is very segmented.

Dewilde also develops the idea that the increase in homeownership can in turn affect voters' preferences for the level of public spending and the level and nature of taxation, and their preferences for a specific economic climate. Homeowners have a preference for high inflation and low interest rates in conflict with non-homeowners' preferences. Consequently as homeowners become the dominant group they can in turn influence public policy in their favour and have an impact on the level and trends in inequalities by tenure type.

Norris and Winston (2012) review the debate in the comparative housing literature on convergence and divergence of housing systems across Western Europe and consider what these two strands of the literature predict in terms of trends in homeownership, the relationship between income and access to tenure types, housing quality, neighbourhood satisfaction and the unequal distribution of risk (burdensome housing costs and mortgage arrears). They then undertake a comparative empirical assessment to examine to what extent the predictions are borne out by the evidence. The first school of thought (the 'convergence'

school) is that housing systems are converging to a state where homeownership is the overwhelmingly dominant tenure type driven by the dynamics of capitalism (Harloe, 1985, 1996; Ball, Harloe and Martens, 1988) or a psychological preference for homeownership (Saunders, 1990). The second school (the 'divergence' school) emphasises differences between housing systems with cultural, ideological or political dominance shaping different typologies. Kemeny and colleagues (1981, 1995, 2006; Kemeny, Kersloot and Thalmann, 2005) identify two contrasting housing regime types under which public policies have modified the balance of costs and benefits attached to different tenure types. The 'dual' housing system (English-speaking countries, Belgium, Finland, Iceland, Italy and Norway) where governments support home-ownership via subsidies and favourable legal treatment, unregulated and unsubsidised private rental sector, small non-profit social rental sector restricted to disadvantaged groups. Kemeny argues that these arrangements 'push' households into home-ownership, which consequently dominates. The 'unitary' housing system (Germany, Sweden, The Netherlands, Switzerland, Austria, Denmark and France) where housing policy is 'tenure neutral' and social housing is delivered by the third sector and not allocated strictly on the basis of means. Under the 'unitary' system social and private rental sectors compete, are widely used and home-ownership rates are lower than the norm in the dual system. The two systems reflect ideological and cultural orientations towards individualist or collectivist solutions to social problems. From an inequality perspective, three different types of home-ownership inequalities are identified – access to home ownership, housing risk and standards associated with this tenure (quality of the dwelling and neighbourhood). The predictions are that under the dual system only the poorest households will be excluded from home-ownership and will live in social housing and as ownership expands governments will limit and target support on low income households and those low to middle income households who do not qualify for support will experience poor housing standards, high levels of mortgage arrears and default. Under unitary regimes a more equal distribution of access to homeownership across the income distribution (although lower rates overall), less concentration of rental by income level, high housing standards and low levels of risk in the home-ownership sector.

Norris and Winston contribute to this literature through the empirical examination of the patterns of housing inequality in the various housing regimes as well as home-ownership rates, mortgages and public subsidisation of this tenure in EU15 countries and contrast the findings against the predictions arising from the 'convergent' and 'divergent' schools of thought and Kemeny's housing regime types. Their research reveals a number of significant shortcomings in the comparative literature on housing regimes. At the macro-level there is evidence of convergence in home-ownership rates in EU15 countries; with the exception of Germany, by 2007 home-ownership was the majority tenure. However, more detailed analysis reveals that in the majority of Western European countries the growth of home-ownership has stalled or reversed since 2000 (even before the current economic and credit crisis). In relation to income inequalities and home-ownership access, risks and quality they find marked inter-country differences in many cases in conflict with the suggested typologies. They conclude that Kemeny's typology failed to capture the most significant inter-country cleavages which they find are between Northern and Southern Europe rather than among the

Northern countries of the EU15. They show that in Southern Europe (Spain, Greece, Italy and Portugal) home-ownership rates are high and evenly distributed across income groups with residential debt per capita and mortgage holding rates below the EU average with evidence that a decommodified home-ownership regime has emerged. However, they also find that low-income households in these countries also have relatively burdensome housing costs and poor housing standards. Northern EU15 countries are less uniform and although ownership rates are higher in the dual regimes the patterns of inequality generally did not conform to predictions. Home-ownership was only sometimes found to be evenly distributed across income groups in unitary countries, burdensome housing debt was not always common in dual countries and low income home-owners were sometimes found to enjoy good housing and neighbourhood standards under both regimes. Despite these differences Northern EU15 countries typically enjoyed less government support for home-ownership, and mortgage debt and mortgage holding rates were generally higher. With a strongly commodified home-ownership system low income households were less likely to live in this tenure than in Southern Europe. Norris and Winston argue that it is necessary to look beyond housing regime typologies based purely on housing policies to broader social security policies and more emphasis needs to be put on understanding the different meanings of home-ownership across countries and regime types to assess the extent to which it is a commodified tenure.

Dewilde and Lancee (2012) focus specifically on the relation between income inequality and access to housing for low-income households. They estimate multi-level models for 28 countries using EU-SILC data to test the relationships between inequality and affordability, inequality and crowding (size of accommodation relative to household size and composition) and inequality and housing quality. They identify three potential causal mechanisms relating income inequality to access to decent housing for low-income households and private renters:

1) Absolute incomes

In more unequal countries, the absolute level of resources held by low income households is lower than in more equal countries. This could translate directly into restricted access to affordable housing of decent quality and quantity for low income households. Where a negative influence of income inequality is caused by the absolute level of resources, rather than the relative distribution of income, then the effect of inequality should disappear when controlling for the level of resources;

2) Rising aspirations

Following the arguments put forward by Wilkinson and Pickett (2009) that in more unequal societies, comparing one's own situation to other people's results in anxiety, and lower levels of security and self-esteem. Inequalities trigger status competition and rising aspirations. Housing has become a status symbol and the increasing affluence of the rich in more unequal societies might have encouraged the middle and lower-income groups to overinvest and increase their levels of indebtedness. The impact on lower-income households may be mixed with both affordability problems (larger mortgage costs) but higher quantity and quality;

3) Pressures on the housing market

If more households aspire to homeownership and the richer part of the income distribution can afford higher prices then house prices would ~~tend to~~ increase for all. Falling income could also put pressure on house prices at the lower end of the market. As noted earlier this will depend on how segmented the housing market is and it is possible that rising inequality could reduce demand for 'inferior' housing. There are clearly important interactions with the private rented sector (specifically investment decisions of landlords) that need to be taken into account.

In the empirical analysis, access to housing is measured by looking at (a) affordability, 'problematic housing costs', consuming more than 40% of disposable household income (b) total housing costs (c) the costs of utilities associated with the use of the property (water, gas, electricity, heating). Housing quality is measured in terms of crowding (space relative to household size and composition). For quality, 'housing deprivation' is defined as a dwelling that suffers from two or more of the following: a leaking roof, no bath or toilet, too dark, too noisy and no hot running water. They find that the effect of income inequality in countries of similar level of economic affluence runs through the absolute level of resources, while in countries at different stages of economic development, differences in affluence determine access to housing. In terms of affordability they find that relative income differences do not affect the experience of high housing costs but the interpretation is ambiguous as higher income households spending more than 40% of disposable household income are also classified as 'problematic' according to this definition even though clearly this may be affordable. They also find that higher inequality is positively related to the likelihood of experiencing crowding for low-income owners rather than an improvement in quality as the status-competition mechanism could give rise to¹. One possible explanation put forward for this finding that is consistent with the status-competition theory is that because low income households feel under pressure to become a homeowner they are willing to accept a smaller home. Finally, although they do find evidence that income inequality is positively related to greater housing market pressures the fact that inequality remains significant when controlling for a number of housing market variables leads them to reject this hypothesis. There are clearly measurement and methodological improvements that could be made if the quality of the data was higher but this paper makes an important step in the direction of defining and testing hypotheses in relation to housing. **A key finding from this paper is that for low-income European households, relative income differences have an 'independent' influence on housing quality.**

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8.4 Inequality and intergenerational mobility

Our third outcome, intergenerational mobility, is usually seen as a cause rather than a consequence of developments in income distribution. Clearly ~~intergenerational~~ mobility

¹ Increasing housing affluence of the rich might press middle and lower income groups to upgrade their perceptions about the type of housing that is required (which may be funded through overinvestment and debt) with an upgrading in the size of houses at all income levels (Beer et al., 2011; Dwyer, 2009).

patterns have an important effect on long-run inequality. But, once again there are important economic connections from present inequality to future intergenerational mobility. As with housing wealth we would expect a differential resource effect on behaviour with the well-off willing to invest relatively more in education with knock-on effects on mobility. Again, like housing and other forms of wealth, credit constraints imposed by the market will normally have different degrees of impact on rich and poor.

Cross-sectional inequality highlights divisions between individuals and families in terms of their current standard of living and other dimensions of their lives. Some of these divisions have ~~long term~~long-term consequences such as health and the accumulation of wealth or debt. Studies of mobility provide an assessment of the extent to which inequality at a point in time represents permanent differences between people as well as the extent of fluidity that exists in economic and social positions. The growth in cross-sectional inequality that has taken place across many countries over the last 30 years and the variation in inequality across countries at a point in time have led us to question whether higher inequality is associated with lower rates of mobility. In the UK there is evidence that as cross-sectional earnings inequality increased earnings mobility fell (McKnight, 2000; Dickens and McKnight, 2008). It is the relationship between inequality and intergenerational mobility that we focus on here. At the heart of the concept of intergenerational mobility is the relationship between the social and economic position of parents and that of their children. A society is said to be immobile where children's social and economic position is purely determined by that of their parents and the degree of mobility is determined by the weakness of this link. ~~Socio-economic position has been measured in a number of ways.~~ Economists ~~have favoured~~ quantitative outcomes such as earnings, income and educational attainment to measure socioeconomic position:- Sociologists consider individuals' position ~~in society~~ in terms of status or class. These two approaches have not always resulted in consistent findings (particularly in relation to changes in mobility over time), partly because they are measuring different concepts and partly because of issues related to measurement.

Children both inherit characteristics from their parents which influence their social and economic position and parents invest in their children – human, social and cultural capital – or they might use their own status to influence the position of their children. In addition to parental transfers there is a stochastic element due to the random nature of hereditary features and children's own tastes and aspirations. The State also plays a role: motivated by efficiency considerations as well as equality of opportunity, it has sought to intervene in improving the outcomes of children with less advantaged family backgrounds, effectively trying to even out differences between children so that everyone has the possibility to realise their potential. The demand for individuals' skills and characteristics plays a large part in determining occupational outcomes and earnings. The formation of households brings all of these factors together in a measure of household income. What this highlights is that it is clearly the case that cross-sectional inequality will affect the size of the gaps within a set of parents and within a set of children. However, not all inequality measures are sensitive to the size of the gaps but may instead focus on rankings within the distribution. Changes in the occupational structure of employment can also affect absolute rates of mobility.

In terms of the relationship between income inequality and intergenerational mobility some of the literature has concentrated on trying to establish comparable estimates across countries and comparable estimates across time within countries to test whether higher cross-sectional inequality is associated with lower intergenerational mobility. Despite the development of innovative methodologies and developments in data collection and extraction it remains the case that the study of intergenerational mobility is limited by data availability. Reliable information is required for two generations (parents and children) and to establish change over time within a country two generational pairs need to be available spanning a period in which cross-sectional inequality changed.

~~As this literature has developed~~ The emphasis [in the literature](#) has shifted from the estimation of point estimates summarising mobility (correlation coefficients and elasticities) across the complete distribution to studies that have focused on mobility for different groups, for example, stickiness at the two tails of the distribution, models of intergenerational transmission that consider different life stages and the role of different welfare regimes and education policies. While most of the literature focuses on examining associations there have been some attempts at estimating the causal effects of different components of parental endowments such as income and other factors such as [educational attainment](#) ([reference](#)). This is often achieved through the use of sibling data and data on adoptees.

Commented [W2]: Does this stand for the genetics part in the siblings studies ?

The relationship between cross-sectional inequality and intergenerational mobility from a theoretical perspective is not predictable. Inequalities between parents in the absence of credit markets and welfare states are likely to be replicated in their children but perturbed by random elements of genetic transmission, children's tastes and preferences, discrimination, changes in demand for endowments. However, the presence of credit markets, taxation regimes and the extent to which children from less advantaged backgrounds benefit from welfare state and public service programmes will all influence the strength of any relationship (Corak, 2013; Andrews and Leigh, 2009; Solon, 2004; Burtless and Jencks, 2003).

Here we mainly take an economist's perspective. ~~partly due to lack of space and our own expertise but also because the contributions from the GINI project are in this field.~~ It is also the case that while sociologists have conducted empirical studies measuring cross country variation in social mobility and changes in social mobility over time (see for example, Erikson and Goldthorpe, 1992; Breen and Luijkx, 2004) they have been less interested in relating any observed differences or trends to inequality variations as they are conceptualised in the GINI project.

Measuring intergenerational mobility

~~A thorough discussion of the measurement of intergenerational mobility will not be covered here as it is covered extensively in the literature. See Blanden (2013) [for](#) provides~~ a detailed description of standard methodologies used by economists to measure intergenerational mobility and how this contrasts with methodologies adopted by sociologists.

$$\ln Y_i^{child} = \alpha + \beta \ln Y_i^{parents} + \varepsilon_i$$

where Y could be income, earnings or education and ε is a stochastic error term. The coefficient of interest is β (intergenerational elasticity) which reflects the strength of the association between children's and parents' status positions. Attention needs to be paid to measurement error in both the dependent variable (classical measurement error should not bias the estimate of β , although there is a loss of precision and larger standard errors but bias may be introduced depending on the age at which the dependent variable is observed (Haider and Solon, 2006 – more on this below) and the independent variable (which is likely to lead to a downward bias and inconsistent estimates of β (Solon, 1992)). An alternative measure is the intergenerational correlation which adjusts for differences in variance between the two generations but is more data demanding to estimate as it requires information on permanent inequality differences in both generations.

Ideally Y_i would be a permanent outcome measure but data limitations mean that point estimates and sometimes average values of a number of point estimates are typically used. This is more problematic when looking at income and earnings ~~than education which tends to be largely stable after around age 30.~~ Using estimates of earnings early in adults' lives can lead to poor results as lifetime earnings trajectories ~~tend to vary differ~~ between education and occupational groups; with profiles starting very close in early 20s but climbing faster and peaking later for the higher qualified and those employed in higher status occupations (see for example Goldthorpe and McKnight, 2006). This would mean if children's earnings/income was measured during their 20s but parents' earnings/income was measured during their 30s/40s it would appear that mobility was higher than if children's outcomes were measured at a later age. There are clearly lifecycle effects that shape age-income profiles associated with family formation and earnings trajectories that make the age at which income is measured an important factor in terms of assessing the extent of mobility between generations.

In terms of measuring the effect of changes in inequality on intergenerational mobility two types of studies approach this issue. Cross country estimates that compare countries on the basis of differences in cross-sectional inequality can be used to assess whether or not higher levels of inequality are associated with lower rates of mobility. Within country studies that assess the extent to which intergenerational mobility changed over a period that cross-sectional inequality changed provides a second way of assessing this relationship. Both approaches pose methodological challenges with comparability the key challenge to meet.

The evidence on cross-country variation in intergenerational mobility suggests a negative correlation between income inequality and intergenerational mobility (Corak, 2013). Blanden (2013) shows that nations with relatively high inequality ~~tend to~~ have relatively high persistence (low intergenerational mobility) in income and education; using a number of different measures of inequality and comparing the results from different data sources. She selects a set of preferred country estimates of intergenerational income/education mobility

(elasticities) from the literature and computes the correlation between these estimates and cross-nationally comparative cross-sectional inequality estimates, using a number of different data sources and inequality measures.

~~Blanden selects a set of preferred estimates from the literature based on a number of different studies while others have sought to estimate comparable cross-country estimates of mobility within a common framework.~~ By contrast Andrews and Leigh (2009) use a comparative international data series but are forced to predict fathers' earnings based on retrospective occupational data as their data does not contain information on fathers' earnings when their children were young. This clearly introduces an element of measurement error in the independent variable and as the variance of children's earnings will be higher than fathers' predicted occupational earnings estimates of mobility will be downward biased. Also as fathers' predicted occupational earnings are estimated using earnings data from the year that sons' earnings are observed no allowance is made for changes in occupational wage differentials over a period of considerable occupational and sectoral change. Overall, they find that intergenerational mobility is lower in countries where the sons grew up in more unequal countries in the 1970s.

Björklund and Jäntti (2009) also select a set of preferred intergenerational income elasticities from ~~a number of several~~ country studies and plot these against cross-sectional disposable Gini coefficient estimates (measured ~~as close as possible~~ to the prime age of the parental generation) for 11 developed countries. They conclude that there is a weak tendency for high inequality of disposable income to be related to high intergenerational income elasticity but confidence intervals ~~tend to be~~ wide for ~~countries where~~ estimates ~~were~~ based on survey data making the exact ranking of countries ~~by mobility estimates~~ imprecise.

The findings from cross-country studies suggest that an increase in inequality within a country ~~might well~~ may be associated with a fall in mobility. As only a limited amount of research has been conducted on trying to explain this association it could be that country specific factors explain the observed correlations. In addition, changes in the progressive nature of public policy and returns to skill will also have an impact on intergenerational mobility trends. However, the fact that the attitudinal data is fairly conclusive in this area that people appear to be more prepared to tolerate higher rates of inequality as long as they are accompanied by equal opportunity to succeed (Andersen and Yaish, 2012), it is important to seek to establish the relationship between changes in inequality and changes in intergenerational mobility. Due to the even greater data requirements for a study of changes in intergenerational mobility there are only a few studies on this topic. In this section we look at the evidence on trends for the US and the UK, both of which have experienced large increases in inequality over the past 30 years.

Lee and Solon (2009) review a number of studies for the US that ~~have attempted to~~ estimate intergenerational mobility. ~~They find that:~~ some studies estimate large increases in mobility, some estimate large decreases, ~~and most of the~~ but most estimated changes are seek to establish a more reliable set of mobility estimates using the Panel Study of Income

Dynamics (PSID) and a sample of sons and daughters born between 1952 and 1975 using as of the available data as possible to provide multi-year estimates for parents' and sons'/daughters' family income to proxy for long-run income. Their results suggest that in the US for cohorts born between 1952 and 1975 intergenerational income mobility did not dramatically change over time. However, they acknowledge that their estimates, particularly at the start of the period where sample sizes are small, are too imprecise to rule out a modest trend in either direction. Hertz (2007) ~~who uses the same data and examines the same age~~ also reaches the same conclusion that there does not appear to be a long-run linear trend in intergenerational income mobility in the US over this period.

For the UK two birth cohorts, ~~one born in~~ 1958 and ~~one born in~~ 1970, have been follow-up periodically since birth, provide the main source of data that has been used to analyse intergenerational mobility in the UK and how it has changed over time². Economists and sociologists who have estimated intergenerational mobility using these two birth cohort studies disagree, with economists finding declining income mobility (Blanden et al., 2004) and sociologists finding no such decline in class mobility (Goldthorpe and Mills, 2004). Both 'sides' have sought to reconcile these differences but, not surprisingly, they both reach the separate conclusions that their own findings are superior (Blanden, 2013; Erikson and Goldthorpe, 2010). There clearly are issues around data quality and measurement error that are likely to play a contributory role but also there are simply different conceptual frameworks which makes a straight comparison between these approaches difficult.

Much of the literature ~~on intergenerational mobility~~ provides estimates of intergenerational correlations in, ~~say,~~ income or earnings without regard for how correlations may vary according to the parents' relative position in the origin distribution. Björklund et al (2008) present new evidence on intergenerational mobility in the top of the income and earnings distributions. ~~U~~ using a ~~large~~ dataset of matched father-son pairs in Sweden ~~using registry data, they find that:~~ intergenerational transmission is very strong in the top of the distributions, more so for income than for earnings. In the extreme top (top 0.1 per cent) income transmission is remarkable with an intergenerational elasticity above 0.9. They also study potential transmission mechanisms and find that sons' IQ, non-cognitive skills and education are all unlikely channels in explaining this strong transmission. Within the top percentile, increases in fathers' income are, ~~if anything,~~ negatively associated with these variables, ~~but w~~ Wealth, ~~on the other hand,~~ has a significantly positive association. Their results suggest that Sweden, known for having relatively high intergenerational mobility in general, is a society where transmission remains strong in the very top of the distribution and that wealth is the most likely channel. Their findings are important particularly as a number of countries have experienced increases in concentration of income, earnings or wealth at the very top over recent years.

² In addition some research on this topic has been conducted using the British Household Panel Survey; see for example Nicoletti and Ermisch (2007).

~~Analysis of mobility at the very top of the income distribution is only possible where there is distributions, (Smeeding 2013) (ie there is greater ‘stickiness’) only one study (Jantti et al., nations (Jantti et al., (2006) US, UK, Denmark, Finland, Norway and Sweden). Jantti et al. variation across countries with the US exhibiting the greatest stickiness at the bottom (relative to UK, Denmark, Finland, Norway and Sweden the other five countries), while both stickier at the top.~~

Smeeding (2013) outlines an alternate approach which examines in detail how parents contribute to child development and ‘success’ using a lifecycle approach. The Brookings “Social Genome” Project is developing a dynamic microsimulation model of the process of moving from birth to adulthood, effectively a model of social mobility, which can be used to assess whether individuals reach defined lifecycle stage markers consistent with achieving a “middle class” life. This can be used to assess how children from different backgrounds vary in the extent to which they achieve these markers and the cumulative positive effects of being born to a more advantaged family. They show how children from less advantaged backgrounds ~~tend to~~ fall behind at every life stage and highlight the need for positive intervention over the lifecycle - “it is never too late” (Sawhill et al., 2012). Sawhill et al. also conclude that there are not just large gaps in socioeconomic status (family formation patterns, test scores, higher educational attainment, adult earnings) but these gaps are widening suggesting that social mobility may be falling for more recent generations in the USA.

Financial transfers from parents to children are an important channel of inter-generational transmission of wealth and socio-economic advantage; it is a mechanism through which the effect of inequality on mobility and vice-versa may be self-reinforcing (Champowne and Cowell 1998, Chapter 10). Olivera Angulo (2013) explores the patterns of the division of inter-vivos financial transfers from parents to adult children in a sample of 12 European countries, exploiting two waves of SHARE for those aged 50+. Contrary to previous studies, he finds a higher frequency of parents dividing these transfers equally. It is argued that altruistic parents are also concerned with norms of equal division, and hence do not fully seek to offset income differences between their children, but start to give larger transfers to poorer children when the income inequality between the children becomes unbearable from the parent’s view. Econometric evidence is presented suggesting this behaviour under different specifications and strategies. The lower frequency of equal division found in studies with American data may respond to the higher inequality and relatively lower pension expenditures in US. Alessie et al. (2011) using the same data but a different modelling strategy examine inter-vivos transfers in money and time between parents and children motivated by altruism and exchange. They outline a model that predicts that an altruistic parent will make compensatory transfers, giving less money to a rich child than to a poor one, but these transfers may be affected by an exchange motive in relation to care given by adult children to elderly parents. They find that parents do not give more to children who have less; rejecting pure altruism in favour of exchange.

~~Another way in which pParents can positively also influence children’s outcomes is through the wealth effect. While the effects of parental income and parental education on children’s~~

~~outcomes are most commonly explored.~~ Karagiannaki (2012) examines the effects of parental in early adulthood. ~~Using longitudinal data to explore this under-researched area,~~ with a range of outcomes at age 25. She explores four outcomes: higher educational attainment, labour force participation, earnings and homeownership. For all outcomes she finds positive associations with parental wealth, which operate over and above the influence of parental education and income. The strength of estimated associations varies across outcomes with education exhibiting the strongest association. For earnings the association is mainly driven by the indirect effect of parental wealth on children's educational attainment while for homeownership this is through the direct effect of parental wealth transfers. Further analysis that examines the importance of financial wealth and housing wealth separately shows that housing wealth is more strongly associated with higher educational attainment than with financial wealth. However, important effects are also estimated for financial wealth (especially at low wealth levels) pointing to the importance of financial constraints for low wealth/financial indebted households.

As noted earlier there are a number of external influences that affect intergenerational mobility rates across countries. Nolan et al. (2012) set out to exploit the information contained in the EU-SILC Intergenerational Module to conduct a comparative analysis of the relationship between current poverty and social exclusion outcomes and parental characteristics and childhood economic circumstances. Unfortunately they uncovered serious problems relating to the scale of missing values and comparability of key variables which led them to issue a note of caution regarding the findings to this study. However, this paper makes an interesting contribution as it is one of only a few papers that has attempted to assess the manner in which welfare regimes mediate the impact of parental social class and childhood economic circumstances on poverty and economic vulnerability. They find that intergenerational factors ~~tend to~~ have their weakest influence on income poverty in social democratic countries and their greatest consequences in liberal southern European welfare regimes. When the analysis is extended to consider the joint impact of parents' social class and childhood economic circumstances on income poverty and economic vulnerability they find that the impact of parental social class on income poverty was weak in the social democratic and corporatist countries and strongest for the liberal and Southern European countries. For economic vulnerability the net impact of social class is generally higher. This was also found to be true in relation to economic circumstances. Despite data difficulties they are able to uncover fairly systematic variation across welfare regimes in the strength of intergenerational influences (particularly in relation to economic vulnerability) and this research plays a useful role in motivating future research in this area while also flagging up real issues in the quality of comparative data available, even within dedicated surveys.

~~The existence of e~~Cross-country ~~variability differences~~ in the relationship between inequality and intergenerational mobility, ~~assuming that this is not just random variation,~~ can be used to highlight differences in the ~~types and effectiveness~~ of public and private investments. Smeeding (2013) highlights how some countries vary in terms of the degree of mobility relative to that which would be predicted in terms of the level of inequality according to the figures presented in Björklund and Jäntti (2009). For example, ~~he shows that~~ Sweden and

Finland have slightly less mobility than their levels of inequality would predict while Denmark has much higher rates of mobility than expected. Italy, the US and France all have high levels of inequality but with lower levels of mobility than one would predict. He highlights the need to respect parental autonomy and the principle of merit in designing policies to help reduce barriers to intergenerational mobility but suggests that this is possible through tackling child poverty, early child development programmes and through the education system.

8.6 Conclusions

In this chapter we have examined the evidence under the ‘social impacts’ theme that have been connected with inequality are health, housing and intergenerational mobility. These three areas to differing degrees reflect long term differences between individuals.

In terms of the relationship between income and health three hypotheses have been put forward in the literature focusing on absolute income, relative income and income inequality. Three new contributions to this debate have revealed some interesting findings. This new evidence suggests that in rich countries it is relative income (gap between own income and others’ income) that is important in predicting levels of self-assessed health not absolute income. However, it is absolute, not relative, material deprivation that has a negative association with health. There is a significant relationship between mortality and poverty for infants and children and an interesting divergence between regime types in relation to infant/child mortality and adult mortality with Nordic regimes most effective at reducing infant mortality and to a lesser extent child mortality, but Southern European regimes associated with lower adult mortality rates. This may reflect factors such as climate, diet and lifestyle that are not sufficiently compensated for in the Nordic regimes. The relationship between working conditions and employment relations and health has received far less attention but evidence is accumulating identifying the importance of this dimension. There is evidence that lower job quality is related to lower health but no direct evidence that low pay has a negative effect after job quality is controlled for.

Poor housing conditions are detrimental to health but the overall relationship between inequality and housing is complex and can run in both directions. Homeownership rates have risen across Europe over the last few decades which appears to some extent to have been encouraged by governments as a means of shifting a greater share of the burden of welfare away from the State. Increases in income inequality can drive up house prices and lead to over-crowding among low income households and there is some evidence that this has occurred. As housing is typically the largest asset that most households will ever hold it plays an important role in determining the relationship between parental wealth and children’s outcomes both in terms of their education and their adult outcomes. Positive associations have been found between parental wealth and children’s higher educational attainment, early adult labour force participation and earnings. There is also evidence that parental wealth is related to children’s homeownership rates when they are young adults.

These associations are examples of how inequalities in one generation can be perpetuated into the next generation.

On the relationship between inequality and intergenerational mobility the evidence is split between cross-country studies which show a clear relationship between higher cross-sectional inequality being associated with lower intergenerational mobility and the limited evidence available from across time studies within countries where the findings are less conclusive. Recent increases in concentration at the top of the income distribution in a number of countries may influence future trends as 'stickiness' at the top of the income distribution, even in countries such as Sweden with relatively high levels of intergenerational mobility, appear to be leading to rich dynasties.

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