

## 7 Material and social deprivation in the macroeconomic context

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- ▶ Both the average level of national income and its distribution are strongly related to the indices of social and material deprivation among older people
  - ▶ Income-defined poverty rates reflect variation in material deprivation but are not informative of its social dimension
  - ▶ Higher public expenditure on social protection and healthcare is associated with lower material and social deprivation
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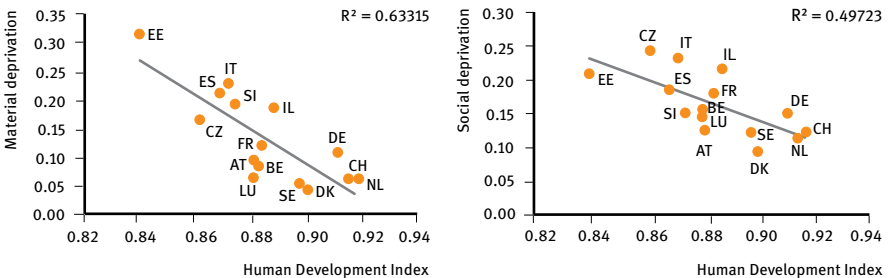
### 7.1 Deprivation – a structural issue?

In chapters 5 and 6 in this volume, material and social deprivation among the 50+ have been examined from the perspective of individual respondents and households. This chapter takes a broader perspective and sets the derived indices against the background of the macroeconomic and institutional environment. Institutional arrangements and the overall level of a country's economic development can play a fundamental role in influencing respondents' material and non-material standard of living and understanding their role seems instrumental in designing policies to address the problems of deprivation and social exclusion.

Below we set the average values of the social and material deprivation indices developed in chapters 5 and 6 against various external data sources including Eurostat, United Nations and the World Bank. We analyse the relation between deprivation and the overall level of economic development and explore the relationship between public social expenditure and deprivation to examine the extent of the relationship between deprivation and government spending on welfare and pensions. Finally we also compare the degree of deprivation to the level of public health care expenditures. Although the pattern of correlation of material and social deprivation with the examined macro indicators is often similar, interesting conclusions follow from the observed differences, concerning the role of each of the dimensions of deprivation as potential guides for the design of public policy.

## 7.2 Deprivation in relation to the standard of living and inequality

People who enjoy a higher material standard of living are less probable to be deprived of basic material needs. Whether this is true not only at individual but also at the aggregate level, it will depend on the one hand on the average level of development, and on the other, on the distribution of resources within countries. Below we begin by analysing deprivation against the Human Development Index (HDI) designed by the United Nations Development Programme (UNDP). The HDI has been developed to overcome some of the shortfalls of simple economic measures of development, such as the GDP per capita. The HDI combines the Gross National Income (GNI) per capita, life expectancy and education capabilities (UNDP 2014). Figures 7.1a and 7.1b present the relation of material and social deprivation to HDI measured in 2013. These figures show that social and material deprivation are both negatively and strongly correlated with the HDI. For example Estonia with the highest average level of material deprivation at 0.316 has also the lowest values of the HDI at 0.84. On the other hand, when we look at Switzerland with the highest HDI among SHARE Wave 5 countries (0.92), it also has the lowest levels of material deprivation (0.063). Average levels of social deprivation show a similar pattern in relation to HDI as material deprivation.



(a) Material deprivation

(b) Social deprivation

**Figure 7.1:** Material and social deprivation in relation to HDI (2013)

Notes: Weighted with individual weights (for material deprivation index N=56,792 and for social deprivation index N=56,635)

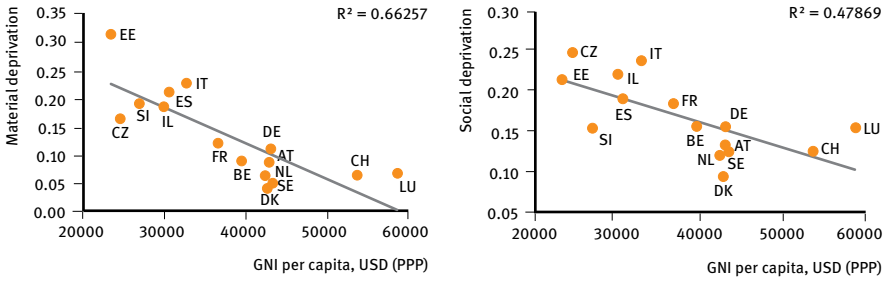
Source: SHARE Wave 5 release 0, UNDP 2014

We go further with our analysis by focusing on two of the main parts of the HDI, namely GNI per capita and life expectancy. The relationship between GNI per capita (corrected by PPP) and material deprivation (Figure 7.2a) reflects a strong association between the two and shows that people in countries with lower gross output per capita are more materially deprived than those with higher incomes. Interestingly, the same holds also for social deprivation (Figure 7.2b), although as we can see the level of social deprivation among countries with very similar levels of income (Austria, Belgium, Germany, Denmark, the Netherlands and Sweden) may vary between 0.10 and 0.16. The general pattern of the relationship between average income and deprivation is quite clear and confirms earlier findings reported by Whelan et al. (2012: 489–503).

When we look at the relation between life expectancy at the age of 50 and deprivation, the pattern is much less clear, which could be expected given the complex nature of factors which determine life expectancy and the relatively low variation in life expectancy for countries in the SHARE sample. Figure 7.2c shows only a small correlation between material deprivation and life expectancy. Regional characteristics, historical differences and wealth may play a greater role in explaining life expectancy than deprivation.

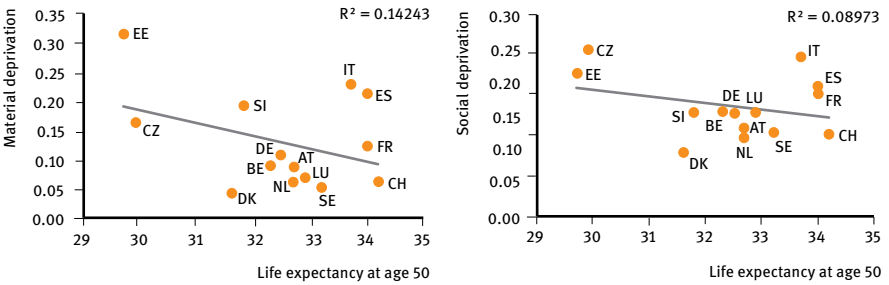
As mentioned earlier, while the overall level of income may strongly affect the standard of living and the degree of deprivation, the second factor which is likely to be important is how resources are distributed in the society. It has been widely recognised that inequality can be related to diverse aspects of well-being at the macro level including health, life expectancy and the level of violence (Wilkinson & Pickett 2010). In Figures 7.3a and 7.3b we present the relation of material and social deprivation derived from SHARE data to income inequality expressed by the Gini coefficient. Although the relationship is weaker than the one found for the level of income, we can still confirm a positive correlation between rising income inequality and both material and social deprivation. The reported patterns suggest that not only the level of income but also the degree of inequality in its distribution may play a role in influencing deprivation of older people.

In the next section we examine the possible policy channels which may affect the differences in the levels of deprivation by looking at a number of indicators related to the degree of government's influence on the distribution of resources through transfers and government spending.



(a) Material deprivation

(b) Social deprivation



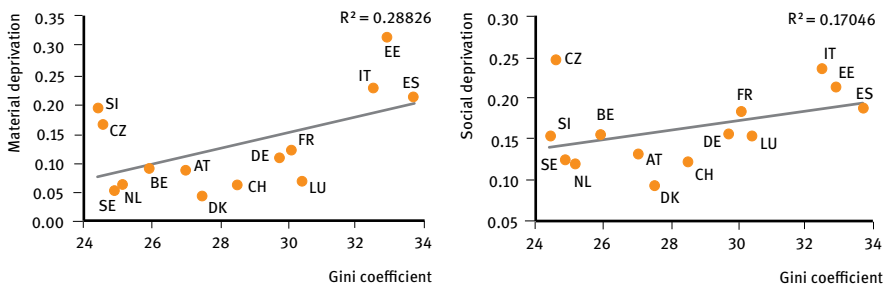
(c) Material deprivation

(d) Social deprivation

**Figure 7.2:** Material and social deprivation in relation to Gross National Income per capita (in PPP adjusted 2012 USD) and to life expectancy at age of 50 (2012)

Notes: Weighted with individual weights (for material deprivation index  $N=56,792$  and for social deprivation index  $N=56,635$ )

Source: SHARE Wave 5 release 0, UNESCO Institute for Statistics (2013), Life expectancy by age, Eurostat



(a) Material deprivation

(b) Social deprivation

**Figure 7.3:** Material and social deprivation in relation to income inequality (Gini coefficient, 2013)

Notes: Weighted with individual weights (for material deprivation index  $N=56,792$  and for social deprivation index  $N=56,635$ )

Source: SHARE Wave 5 release 0, Gini coefficient of equivalised disposable income, Eurostat

### 7.3 Social protection and the levels of deprivation

Social protection consists of policies and programs designed to reduce the exposure or mitigate the negative effects of economic and social risks affecting people, such as unemployment, poor health, disability or old age. The policies include labour market support, social insurance schemes and various forms of social assistance.

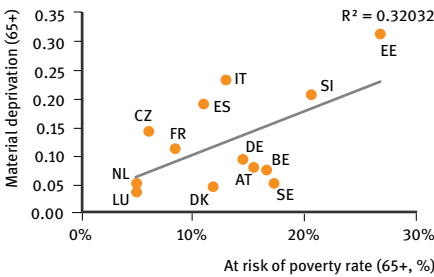
European countries differ in the extent and form of welfare support exercised by their governments. The model adopted by Northern European countries (e.g. Sweden, Denmark and the Netherlands) has been inspired by the principle of universalism, with broad access to benefits and services and limited degree of means-testing financed via a strongly progressive tax system. Many Central and Southern European countries (e.g. Austria, Belgium, France, Germany, Spain and Italy) follow the model based on the principle of subsidiarity with a more prominent role played by social insurance schemes and informal support through family ties. Finally, the liberal model, adopted by Anglo-Saxon countries and Switzerland, confines the role of the state to the provision of basic needs, typically on a means-tested basis, with greater role given to the private provision of benefits and services.

In this section we provide some descriptive data on the relationship between different extent of social welfare support and social exclusion among older people in SHARE Wave 5. In particular, we compare the material and social deprivation indices with macro indicators measuring poverty and government expenditure on pensions and social protection.

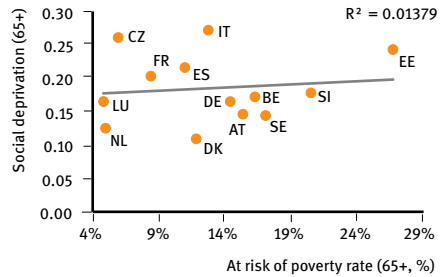
Figure 7.4a shows the relationship between material deprivation and the at-risk-of-poverty rate for persons aged 65+ as measured by Eurostat (European Commission 2003). There is a positive correlation between these two measures, but the relationship is weaker than one could expect, and there is virtually no correlation between the poverty rate and the degree of social deprivation (Figure 7.4b). Given the findings reported above, these results may reflect the concerns raised earlier in the literature (e.g. Atkinson et al. 2004) that income based relative poverty measures may be poor indicators of material conditions – in particular with respect to the living standards of older people.

Whether public pensions, as the main source of replacement income in most European countries, are effective in guaranteeing adequate standards of living to retired people is clearly an important policy question. The possible conclusion we can draw from Figure 7.4c is that in general a higher proportional expenditure on public pensions leads to a reduction in material deprivation. Some countries, like Italy for example, seem to deviate from this general pattern with a very high ratio of public pension expenditures to GDP (11.1 %) combined with high levels of

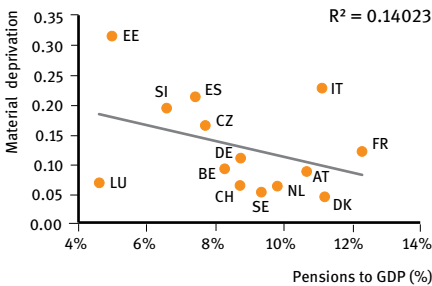
material deprivation among older people (0.23). In addition to having the third highest median age in the world, Italy’s high income inequality, as measured by the Gini index (32.5), is most likely reflected also in pension benefits inequality. In the similar fashion to the relationship between poverty and deprivation, there seems to be very little correlation between social deprivation and pensions expenditure. This shows that even if the material conditions among the 50+ population could be improved with higher public spending on social security benefits, there will be aspects of well-being which will demand a more comprehensive and complex approach.



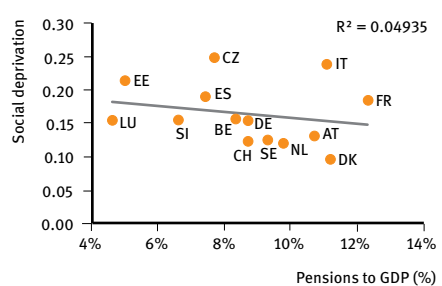
(a) Material deprivation



(b) Social deprivation



(c) Material deprivation



(d) Social deprivation

**Figure 7.4:** Material and social deprivation in relation to poverty rate for persons aged 65+ and to public pension expenditure as proportion of the GDP

Notes: Poverty line defined as 60 % of median equivalised disposable income; weighted with individual weights (Number of observations in: (a) 30,267; (b) 29,917; (c) 56,792; (d) 56,635)

Source: SHARE Wave 5 release 0, Public pensions expenditure, Eurostat

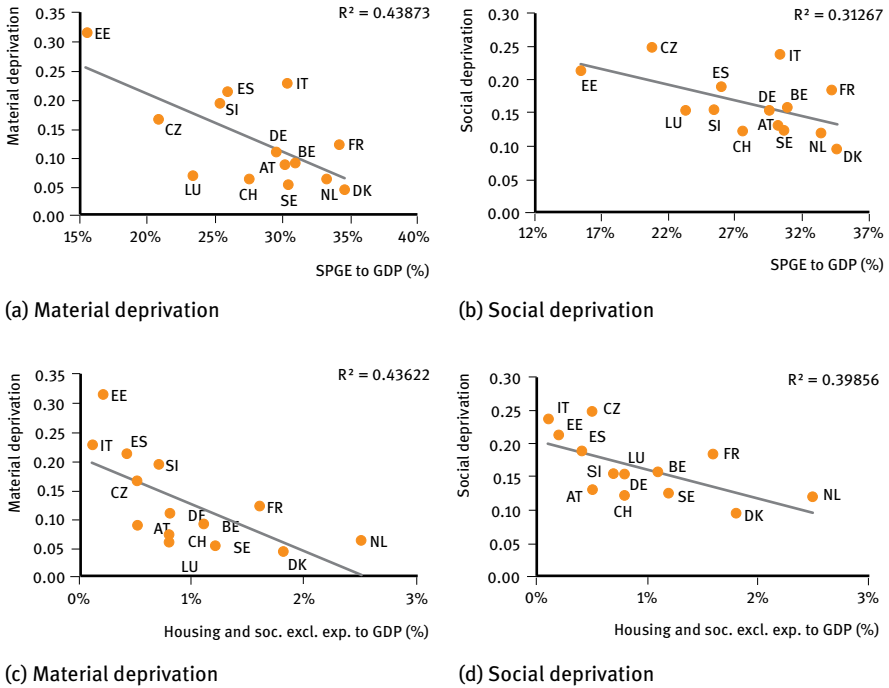
Figure 7.4c may also serve as a warning signal for the coming decades. Since public old age pensions are usually the most important source of income for retired people, discontinuous working careers and high levels of unemployment among current working age individuals may result in very low public pension

benefits for some individuals, particularly in funded contributory schemes. The relationship presented in Figure 7.4c suggests that such low levels of pensions in the future may lead to increasing problems of material deprivation among the future retirees.

Since in most countries social protection systems provide additional benefits targeted at people without adequate resources to cover economic, social and health related difficulties, we extend the analysis presented in Figure 7.4 to include these additional forms of support. Figure 7.5a plots material deprivation against government social protection expenditure as proportion of the GDP in 2012. The negative correlation pattern in this case seems stronger compared to that presented for social security benefit expenditures and it can also be detected in the case of social deprivation (Figure 7.5b). Countries in Northern (Sweden, Denmark and the Netherlands) and to a lesser extent Central Europe (Austria, Germany, Belgium and France) which spend more on social protection achieve lower levels of material deprivation. Conversely, Eastern European countries (e.g. Estonia and Czech Republic) spend less and score higher in material deprivation. Italy, once again, appears to be a country where high social protection expenditure does not go together with low levels of deprivation.

Figures 7.5c and 7.5d relate material and social deprivation to expenditure on housing and social exclusion protection in proportion to GDP. This measure should serve as a good proxy for the level of support targeted at the worse off households. The figures show that low public expenditure in this area is associated with high levels of both material and social deprivation (e.g. Italy, Spain, Estonia, Slovenia and Czech Republic) and may give support to the extension of such policies if governments aim at reducing exclusion. The example of Italy is worth noting in this context as it is a country with high overall social protection expenditures but at the same time the lowest expenditure on housing and social exclusion protection (0.1% of GDP). This may partially explain the higher levels of both material and social deprivation in Italy, as there essentially seems to be no specific material support targeted at the lowest income groups.

The welfare models adopted in Northern and Central European countries seem to be more effective in reducing material deprivation and mitigating social exclusion of older people. On the other hand, there seems to be scope in the Southern and Eastern European countries such as Italy, Spain, Estonia, Slovenia and Czech Republic for reduction in the extent of both material and social deprivation which could be achieved through targeting of additional resources through housing support and social assistance to the worst-off groups of the population.



**Figure 7.5:** Material and social deprivation in relation to social protection government expenditure (SPGE) and to expenditure on housing and social exclusion as proportion of the GDP (2012)

Notes: Weighted with individual weights (for material deprivation index N=56,792 and for social deprivation index N=56,635)

Source: SHARE Wave 5 release 0, Social protection government expenditure, Eurostat

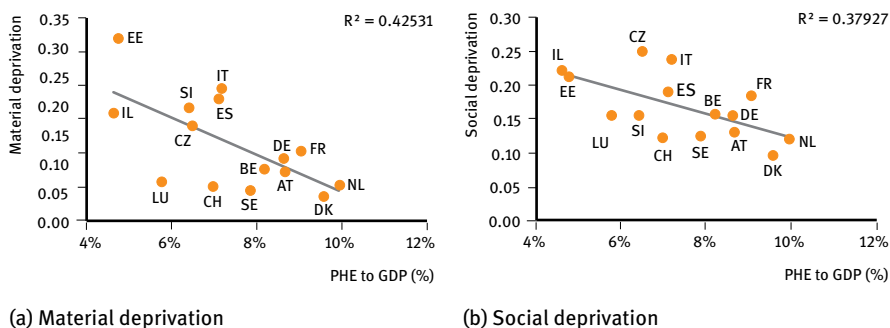
## 7.4 Relating health care expenditure and deprivation

Health has been named as one of the most important factors in the multidimensional process of social exclusion (Jehoel-Gijsbers & Vrooman 2007) and it has significant implications for a number of socio-economic outcomes determining well-being at individual and social level. The effect of health on deprivation and social exclusion is an example of such consequences as deteriorating health can lead to loss of income, poverty and social exclusion. At the same time social exclusion may further contribute to ill-health (Wagstaff 2002).

Public health care expenditure plays a significant role in explaining cross-country variation in health outcomes (Nixon & Ulmann 2006). This relationship,



however, is very complex as outcomes will be affected by affordability of care, adequacy of supply, equal availability and geographical access to health services (Gulliford et al. 2002). European healthcare systems differ in these respects and one has to have in mind that the level of spending is just a proxy for quality of care provision. In Figure 7.6 we can see however, that there is a strong relationship between the level of public healthcare expenditure (PHE) as proportion of the GDP and both material and social deprivation in the countries participating in SHARE Wave 5.



**Figure 7.6:** Material and social deprivation in relation to public health expenditure (% of GDP, 2012)  
Notes: Weighted with individual weights (for material deprivation index  $N=56,792$  and for social deprivation index  $N=56,635$ )

Source: SHARE Wave 5 release 0, World Development Indicators, World DataBank

As Figures 7.6a and 7.6b show, it seems that countries that spend less of public resources on health care face a larger scale of deprivation in both the material and social dimensions, and in effect, higher levels of social exclusion. For example Estonia and Israel both scoring high in terms of material and social deprivation (Estonia in material deprivation: 0.316 and social deprivation: 0.215, Israel: 0.227 and 0.237 respectively) also have the lowest PHE to GDP from among the analysed countries (4.7% and 4.6% respectively). On the other hand, Denmark and the Netherlands score very low in social deprivation (respectively 0.097 and 0.120) and material deprivation (0.044 and 0.061), and these are countries with almost double the level of public health expenditure in GDP (9.6% and 9.9%) in comparison to Estonia and Israel. The most likely mechanism behind this relationship is that higher levels of public health expenditure lead to improvements in health and these in turn have positive implications for material conditions of individuals and their social participation. Given the complicated nature of healthcare systems, the question of the specific aspects of particular systems which are most effective in bringing about health improvements which reduce deprivation

certainly deserves more attention. Efficiency of the systems may stem from high quality of care, unrestrained access to health care facilities or high effectiveness of spending.

## 7.5 A broader perspective on socioeconomic policy

In this chapter we have used the material and social deprivation indices derived in chapters 5 and 6 in the context of cross-country variation in macroeconomic indicators to demonstrate their potential as references for benchmarking of government policies. Both material and social deprivation fall as income per capita grows and are lower in countries where incomes are distributed more equally. We also find evidence that higher government expenditure, in particular in the area of public health and social safety net is related to deprivation in the two analysed dimensions. Interestingly, while poverty levels defined with respect to current income are associated with material deprivation, there is little evidence on their correlation with the social dimension. This last finding would suggest that if policymakers aim at reducing the levels of social exclusion and seriously consider various non-material aspects of deprivation, they have to focus on broader targets than poverty levels. Higher financial transfers, in particular targeted at those at the lower end of the income distribution, may be effective in improving the material position of households. However, as a complex phenomenon, social exclusion requires a comprehensive policy approach. It seems that such approach should combine targeted redistribution with improved health care and other forms of support to address issues such as social isolation, mobility and lack of social infrastructure. Further research should consider continued improvement in understanding different aspects of social exclusion and development of indicators to monitor its variation and development over time.

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