Housing

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5

Shelter matters

Housing matters because it provides shelter which can be associated with feelings of security and a stable (family) life. This impacts on citizens' health and participation in the labour market and in society. Historically, governments in Western countries have integrated housing policies in their welfare states. This chapter focuses on how well citizens are being 'served' in the field of housing in the European Union (EU) Member States. The concept of service, however, may differ from that offered in other policy domains. There are several reasons for these potential differences. First, the longevity of housing stock means that the present services of the housing system to the citizen are likely to be strongly influenced by the past performance of the housing system. Pushing this notion to the extreme, it could even be argued that present housing outcomes will be almost completely determined by the past. Similar historic effects may exist in other domains, such as education (average skill level of the population) and public administration (organisational structure).
Second, housing has been called the 'wobbly pillar' of the welfare state (Torgerson 1987). This is mainly because, in contrast to most other areas of public policy, by far the largest share of housing production and consumption takes place through the market and market contracts (see the 2012 edition of Countries compared on public performance in Haffner et al., 2012a; Bengtsson, 2001).
In addition to the market, the family helps in providing housing. The Southern European countries are characterised by the well-known strong role of the family in the provision of housing. An example is where the family provides funds when an owner-occupied dwelling is acquired (Juntto and Reijo, 2010). Inheritance of owner-occupied dwellings and other forms of help by the family in acquiring these dwellings also plays an important role in Eastern Europe (Doling and Elsinga, 2013).

Housing policy operates as state corrective to the market…

Government (most likely across various levels from local to central) also influences the outcomes on the housing market. Bengtsson (2001) argues that housing policies are best understood as state correctives to the market. These correctives come in different types (Barr, 1998; Haffner et al., 2012a; Kemp, 1997, 2007). Supply side subsidies make the dwelling itself cheaper, while demand side subsidies paid to households help to pay housing costs. In the latter case, they sometimes form part of the social security system. The subsidies may be paid directly to the housing supplier or consumer (tenant or owner-occupier), either in cash, as in the case of housing allowances, or indirectly via the tax system, as in the case of the

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favourable tax treatment of owner-occupiers, or where saving for the purchase of a dwelling is subsidised. A third type of subsidisation is more implicit if it follows from the regulation of rents or house prices, or from the reserving of certain dwellings for lower-income households only.

Not all government interventions that impact on the housing market are the result of (explicit) housing policy instruments. The tax or social security system may for example have side-effects on housing. Last but not least, some instruments that are not rooted in housing policy, e.g. planning regulations, may impact on the housing market; for example, supply inelasticity caused by planning restrictions will lead to higher house prices and rents.
It is impossible to separate out all these types of influences on the housing market in European countries within the framework of this study for different types of households. We will therefore show the outcomes for all households, as well as for lower-income households. We assume that intended government intervention is likely to be focused on lower-income households, and we judge housing problems to be more serious for lower-income households, because their resources to solve problems are limited.

… resulting in a tenure pattern
Current tenure patterns are mainly the result of the housing system in the past, stemming from interactions between market, family and government. In that sense, they are a delayed effect in the public sector part of the heuristic model used in this study. On the other hand, societal factors in the past also undoubtedly had an influence on the housing system. The need for housing construction (demography, social circumstances) and the budgetary options and choices (economy, state of public finance) shaped the housing stock and its tenure pattern. For example, Haffner et al. (2012a) show that affordability based on an expenditure-to-income ratio tends on average to be more of a problem among tenants than among owner-occupiers. Outcome tenure differences have also been found in problems of overcrowding and housing quality. Tenure patterns are discussed more fully in Section 5.1.

(Composite) indicators for inputs, output and outcomes
In line with the heuristic model described in Chapter 1, we use separate indicators for inputs, outputs and outcomes, which are specified in Table 5.1. Despite its limited role, the public sector does invest in and subsidise housing in various ways. For *inputs*, we refer to the best available (but indicative) data on public expenditure. For *outputs*, we use characteristics of dwellings relating to quality, space and affordability (in relation to income). For example, the presence of a toilet or a bath is considered as a housing output related to quality. It is not possible to show an output measure such as public or social housing, because no comparable data exist on the number of publicly financed or subsidised dwellings, or on the

extent to which these dwellings are rented out below their market rent level. *Outcome* is measured as a more specific combination of outputs to reflect the goals of housing policy. We select the outputs that are (implicitly) considered relevant by households, and the share of households without problems on all these selected outputs is used as an outcome measure.

Table 5.1 Housing outcome, input and output defined

Level	Indicators	Source
Outcome	Share of households with no housing problems, based on variables that matter for 'overall satisfaction with the dwelling'. The variables are clustered in three main outcomes: • good quality of dwellings • sufficient availability of dwellings (sufficient space) • good affordability of housing	EU-SILC
Input	Expenditure data on infrastructure investments and housing allowances	COFOG
Output	Measure of all available variables on what is delivered: • on quality (e.g. share of homes that are too dark or have inadequate electrical installations); • on sufficient space in dwellings (share of homes that are overcrowded and have a shortage of space); • on affordability (share of homes where households are in mortgage or rent arrears or are at risk of affordability problems)	EU-SILC

What is the goal of this chapter?

The general goal of this study, to compare countries on public performance, is not always easy to achieve. This is particularly true for housing: as mentioned earlier, the state often only functions as a corrective to the market, and housing outcomes should therefore not be interpreted as direct effects of housing policy. Nonetheless, it is worthwhile, and this will be our goal in this chapter, to investigate housing outcomes and try to relate them to the characteristics of the different countries. We will also relate outcomes to the results of past policy: the tenure structure. Furthermore, we will try to unravel the results of the (complex) composite housing indicator into the scores on the partial indicators for quality, space and affordability.

Structure of the chapter

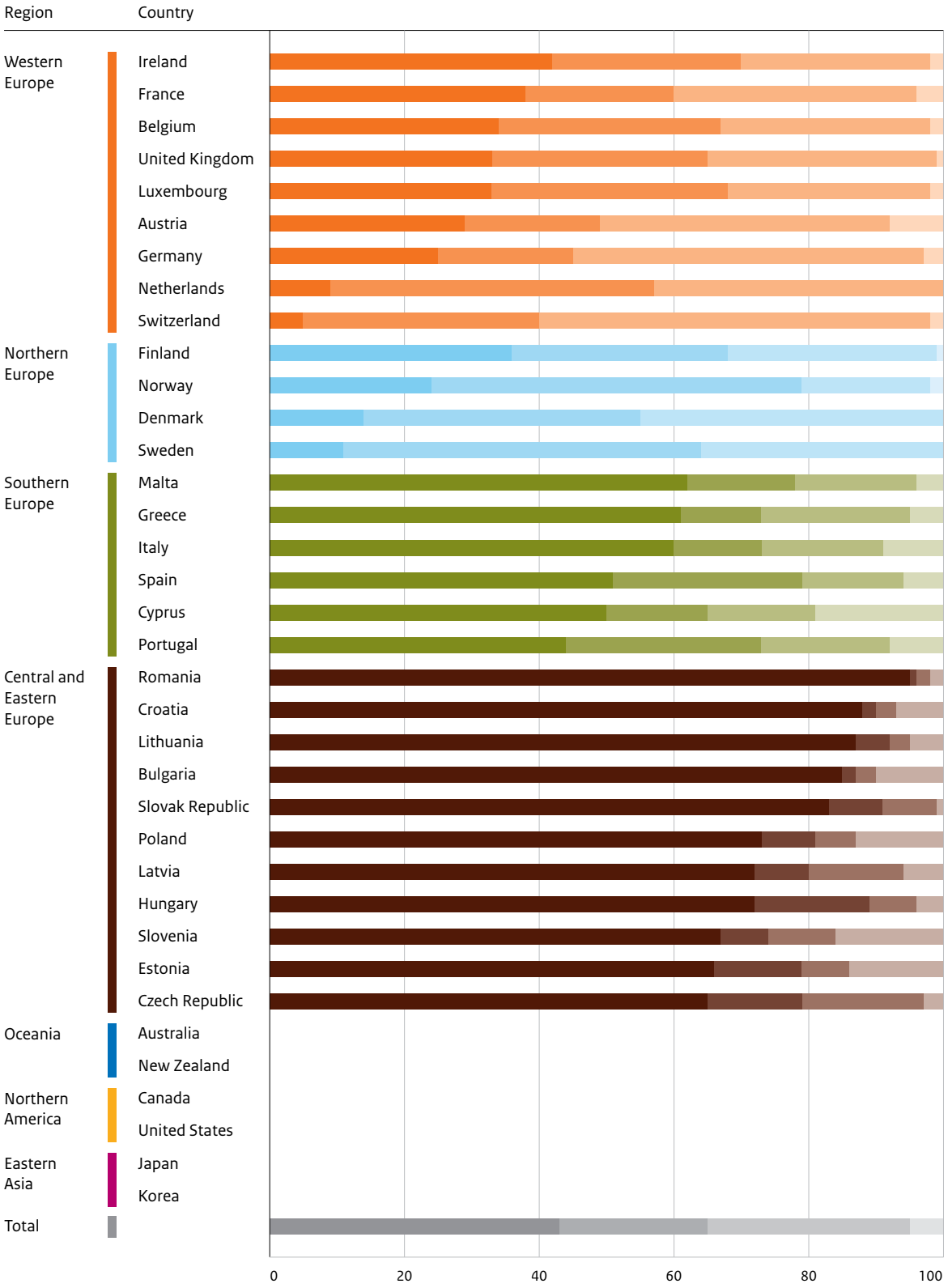
As indicated, performance measurement is broken down into a number of concepts for which the results are presented in the remainder of the chapter. Differences in tenure patterns are discussed in Section 5.1. Section 5.2 presents the outcomes of the housing system for 2007 and 2012 for the housing policy domain. The measurement of these outcomes is based on what can be regarded as basic goals of housing policy, but may not necessarily be on the list of all national governments. The three cornerstones used here are good quality of dwellings, sufficient availability (space) of

dwellings and good affordability of dwellings. Section 5.3 focuses on the inputs of housing policy in relation to the outcomes of the housing system. Section 5.4 presents the output indicators for the three cornerstones separately. Before conclusions and reflections are presented, Sections 5.5 and 5.6 respectively seek to explain differences in outcomes based on income and inputs, and to relate them to citizens' perceptions of the quality of the housing sector.

5.1 Tenure patterns

Figure 5.1 reflects the diversity of the tenure structure. The information on the housing situation of households stems from the database EU-Statistics on Income and Living Conditions (EU-SILC). Germany and Switzerland are the only countries where the rental sector dominates the housing market in 2012, with a share of more than 50% of stock; in the other countries, the owner-occupied sector is the largest. The Western and Northern European countries generally have below-average home-ownership rates. These differences can be ascribed to various developments.
Generalising, the lower rates of home ownership in Western and Northern Europe have been caused by housing policy, which has enabled the rental sector to operate as an acceptable alternative to home ownership. At the same time the rates of home ownership have been increasing steadily, most prominently in the second half of the twentieth century (Scanlon and Whitehead, 2004). One of the better-known policy measures that stimulated home ownership was the right-to-buy scheme, in Ireland and the UK, which allowed social tenants to buy their rental dwelling (Haffner et al., 2009). In these schemes, discounts were introduced at a certain point in time (in Ireland from 1936 on and in UK in 1980) so that tenants could afford to buy. In the UK, the scheme was introduced to reflect the changing norms on individualisation and enabling government (Van der Heijden et al., 2002). Both countries now have relatively high rates of home ownership. As stated above, Germany, by contrast, (still) has a large rental sector; apparently, German households did not perceive the need to become homeowners. Behring and Helbrecht (2002) conclude that the system of social welfare has adequately covered the risks for households in Germany. The fact that taxation (the depreciation deduction in income tax) made renting relatively more affordable than home ownership will also have contributed to the size of the rental sector (Braun and Pfeiffer, 2004).
Generally, Central and Eastern European countries have the highest rates of (outright) home ownership, mostly as a result of the 'privatisation' of housing stock after the fall of the Berlin Wall. Increases in home ownership of more than 40 and even up to over 60 percentage points within 20 years occurred (Dol and Haffner, 2010; see Appendix Tables A5.1 and A5.2, www.scp.nl). Lowe (2003: XVII) explains that the countries where 'rapid privatization' occurred (Hungary, Slovenia, Croatia and Romania), usually built upon high levels of traditional rural and self-built homeownership.

Figure 5.1 Tenure structure, households, 2012 (in percentages)



Note: Other forms of tenure are not shown for Norway 2012 (2%) and Sweden 2012 (1%). Within the rental sector, social and private renting cannot be distinguished in the EU-SILC database. The total is not weighted. See Appendix Table A5.3 for data, also for the EU-SILC'07-data. Source: EU-SILC'12, SCP/OTB treatment.

outright owner | owner paying mortgage | rent | provided free

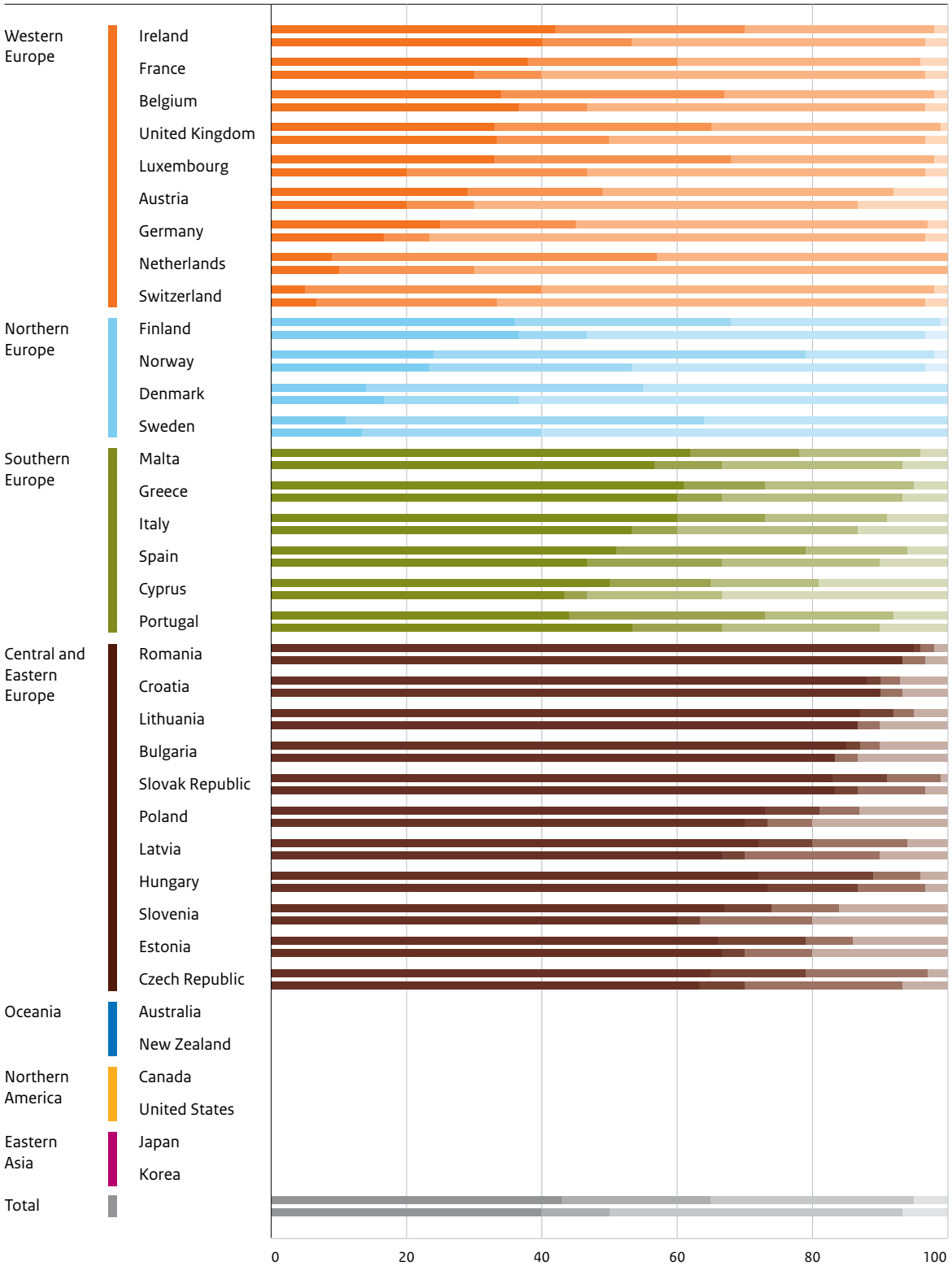
For Poland, cooperative homeowners have been included among 'home-owners' since 2010, also causing a high rate of home ownership in the statistics (Eurostat 2010).
The rates of home ownership in the Southern European countries are mostly somewhat above the mean. In this region, home ownership is generally achieved with the help of the family (Allen et al., 2004). Because of this family help, outright home ownership is generally higher here than in Western and Northern European countries, but lower than in the Central and Eastern European countries.

Housing provided free of charge may have different forms. Fessler et al. (2014) report that in Austria this group consists of parents who have passed on the home to the next generation but still live in it, but also of young adults who live in family-owned apartments. Another possibility is housing provided by employers. Generally, this type of housing is more likely to be provided in the Southern and Central and Eastern European countries, as can be observed in Figure 5.1. This category is excluded from the analyses from the next section on, as housing policy usually does not focus on housing provided rent-free.

Is the tenure structure different for lower-income households?
Figure 5.2 presents the tenure structure twice: for all households and for households with the 30%[3] lowest incomes.[4] The tenure structure does differ, but not in all countries.[5] As expected, households with lower incomes are overrepresented in the rental sector and in accommodation provided rent-free. They live relatively less often in the owner-occupied sector paying a mortgage. For outright owners the balance could tip either way. As they have no ongoing mortgage outlays, this type of home ownership does allow for relatively low incomes. This effect has been called property asset-based welfare: the previous accumulation of housing equity frees a (mostly older) household from having to pay rent as cash outflows which can be used for other purposes (Doling and Elsinga, 2013). On the other hand, it must be remembered that the acquisition and ownership of a dwelling is always an investment that comes with risks, for example in the form of capital gains or losses.

3
The 30% level is chosen as proxy for the group of lower-income households in a country.
4
In EU-SILC, 'income' usually refers to the previous calendar or tax year (in our research mostly 2006 and 2011, respectively). Other periods were used for the UK (current year) and Ireland (last twelve months).
5
An in-depth analysis of different results for different countries goes beyond the scope of this study.

Figure 5.2 Tenure structure[a] by all households and 30% of households with lowest income, respectively, households, 2012 (in percentages)



a The tenure structure is shown for all households (upper bars) and for the 30% households with the lowest incomes (lower bars). Source: EU-SILC'12, SCP/OTB treatment. The category 'other tenure' is excluded. Within the rental sector, social and private renting cannot be distinguished in the EU-SILC database. The total is not weighted. See Appendix Table A5.3 and A5.4 for data.

outright owner | owner paying mortgage | rent | provided free

5.2 Outcomes

Data source: EU-SILC

Comparative information on the housing situation of households in European countries is available in the EU-SILC, in particular information on households (composition, income and tenure status) and their dwellings. Questions concerning housing situation are included in all available EU-SILC years (2004-2012). The EU-SILC database provides data for the 28 EU Member States plus Norway and Switzerland. The starting point mostly is the 2012 edition (EU-SILC'12); where relevant these results are compared to those from the EU-SILC'07, which is a different cross-section. In these two years, the EU-SILC contains a number of additional items, e.g. citizen satisfaction and broad information on dwellings. This makes it possible to use information at the household level on many quality aspects of the dwelling, its neighbourhood, its size and financial aspects. As Croatia, Greece, Malta and Switzerland were not present in the 2007 database, they could not be included in the analysis, leaving 26 countries. The countries included in the analysis are Austria, Belgium, France, Germany, Ireland, Luxembourg, the Netherlands, the United Kingdom (Western); Denmark, Finland, Norway, Sweden (Northern); Cyprus, Italy, Portugal, Spain (Southern); and Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic and Slovenia (Central and Eastern Europe). Of course, limitations of the EU-SILC also apply to this research.[7] We also had to make some slight alterations in the data.[6] It should be noted that in this section we report on the outcomes only, as some explanations for the differences based on the underlying variables can be found in Section 5.5.

Selection of variables

In Figure 5.3 we present the variables as the share of households having problems, per item. The focus is on the actual housing situation, not plans (a wish to renovate or move) or barriers (waiting lists, costs of alternatives). Some questions reveal subjective information, such as the respondent's opinion/feeling about shortage of space in the dwelling. Information on overcrowding and financial aspects of the dwelling (cost) in relation to household income was constructed. The extent to which dwellings are overcrowded was calculated according to Eurostat's definitions (see Appendix). For affordability we created an own variable based on income-after-housing-costs (residual income); see Appendix. To select the variables that matter for households, we used the question on 'overall satisfaction with the dwelling'.[8] Only variables that appeared to be statistically relevant for housing satisfaction were included in the composite outcome indicator. The categories satisfied/very satisfied were used for a regression analysis on all separate indicators. Only variables significant at the 99% level were taken to be relevant and included in the construction of the outcome variable.[9] We do not use 'overall satisfaction with the dwelling' itself as a housing outcome indicator, because people may get used to

6
For some variables, imputations had to be made by Eurostat. International income data are generally difficult to harmonise, although a good deal of effort was invested in this. Some changes in the wording of questions may have led to differences in responses over time.

7
In the 2007 data, we imputed 'Dwelling comfortably cool during summer time' for unknown responses in Bulgaria and Romania, 'Dwelling comfortably warm during winter' for Ireland, 'Adequate plumbing/water installation' for four Central and Eastern European countries and Portugal. In the 2012 data, we imputed 'Adequate plumbing/water installation' for Norway, Latvia and Lithuania.

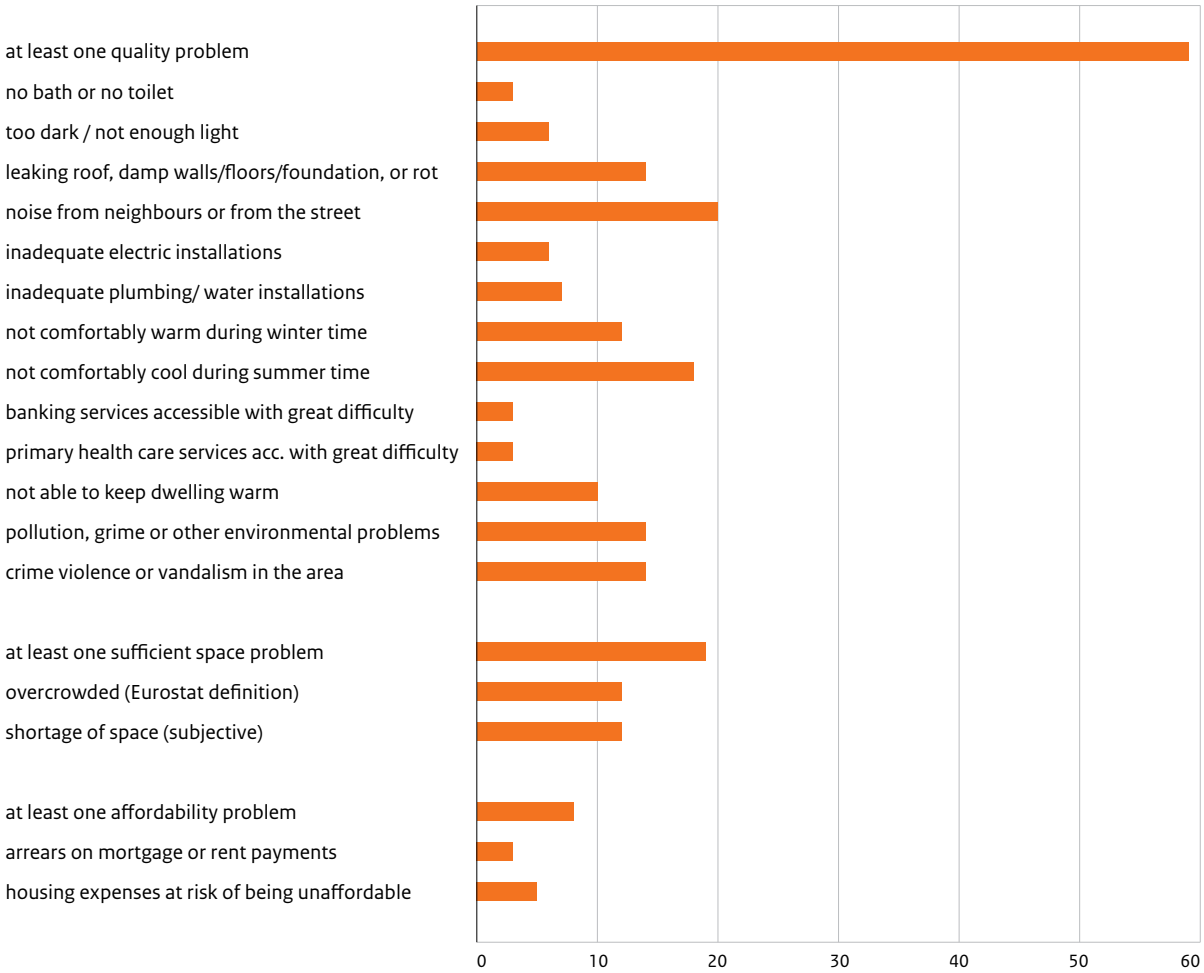
8
As this variable is available for the analyses, the methodology is adapted in comparison to the pilot study in Haffner et al. (2012a). The variable refers to the respondent's opinion/feeling about the degree of satisfaction with the dwelling in terms of meeting the household needs/opinion on the price, space, neighbourhood, distance to work, quality and other aspects (including the availability of a garage or parking space).

9
Using this selection mechanism, five variables were excluded: the absence of heating facilities, and difficult access to grocery services, postal services, public transport and compulsory schooling.

their dwelling and to the standards in their country, thus obscuring relevant differences between countries.

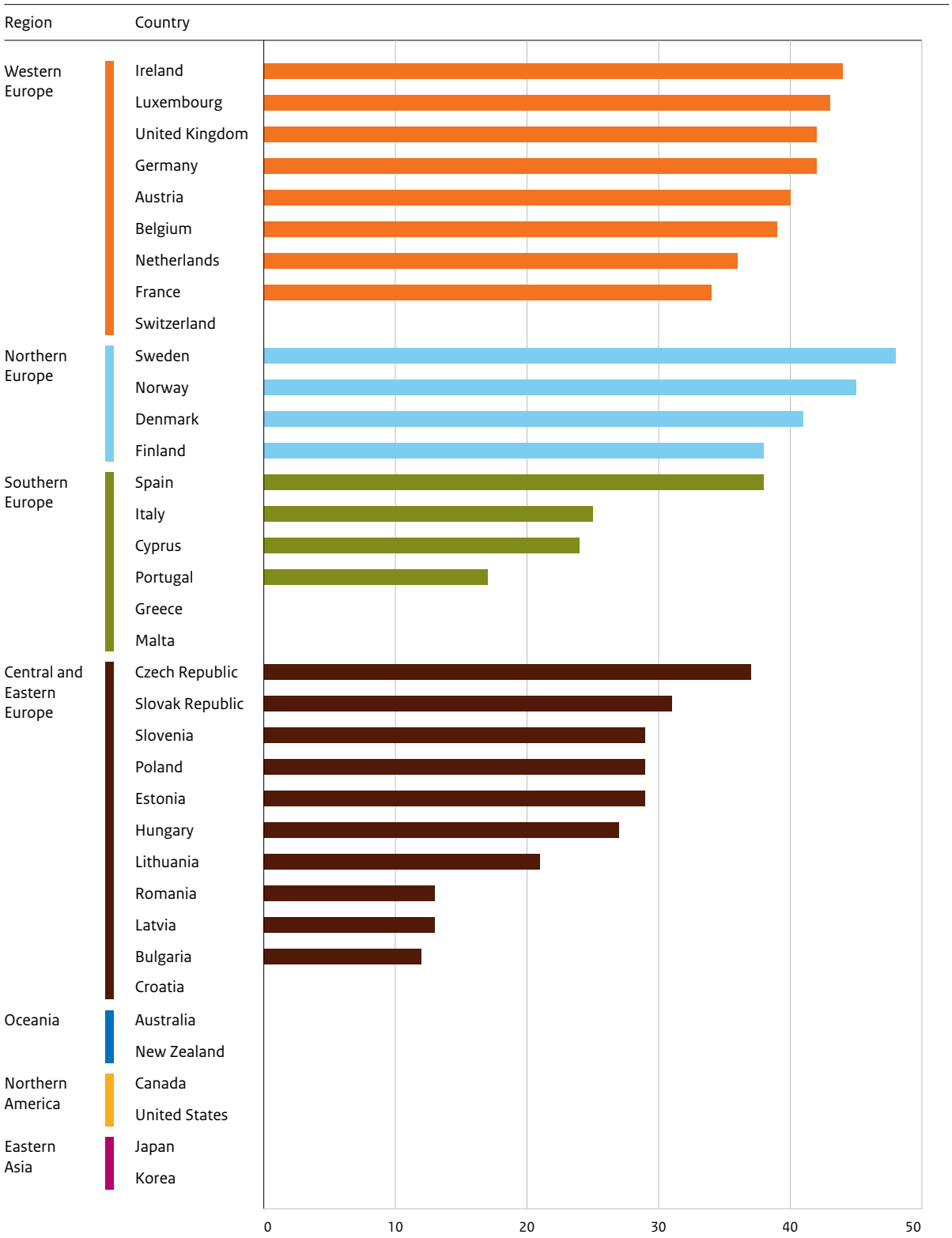
1 Figure 5.3 shows that 59% of households on average have at least one quality problem related to their dwelling in 2012. Most prominent are problems with noise (20%) and lack of comfort in summer (dwelling not comfortably cool; 18%). Leaking roof, damp or rot account for 14%.
2 Space problems seem less prevalent (19%), although part of this lower value may be explained by the fact that only two variables are available to construct the space indicator.
3 Affordability problems occur less frequently (8%) than space problems. This may seem surprising, but can be explained partly by the large share of outright owners.

Figure 5.3 Problem indicators that score on 'overall satisfaction with the dwelling', grouped by quality [a], sufficient space and affordability problems, households, 2012 (in percentages)



a Accessibility of services is in terms of physical and technical access, not in terms of quality, price and similar aspects. The technical form (phone-banking and pc-banking) is relevant for banking services, if it is actually used by the household. Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012. See Appendix Table A5.5 for the data.

Figure 5.4 Composite outcome indicator by country (share of households without any housing problems), households, 2012 (in percentages)



Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012. See Appendix Table A5.6 for the data.

5.2.1 Composite housing outcome indicator

We aggregated the variables to construct a composite outcome indicator, based on the absence of housing problems. A household is considered to have no housing problems if no problem is reported on all variables together. The indicator is computed at the household level and as such is not present in published statistics, where only overall scores on variables (e.g. 'too dark / not enough light') are available.
The variables are clustered around three main housing outcomes: quality of dwelling (e.g. no bath or toilet) and surroundings (e.g. noise from neighbours), sufficient space (overcrowding and shortage of space) and affordability (arrears and at-risk-of-unaffordability problem). In this way objective and subjective information is combined into a measure that gives an indication of whether the dwellings in a country meet the needs and financial capabilities of the population. All items are weighted equally. Of course, it is possible that some items are considered more important by most households than other items. Within the scope of this study, it was not feasible to assess and correct for possible differences in item weights. As indicated earlier, all outcomes must be considered as resulting from the present housing system, including present and past interventions by all housing actors.

1 In general, the shares of households without housing problems are largest in the Northern European countries, closely followed by the Western European countries. The Southern and Central and Eastern European countries have the smallest shares, with a good deal of variation between countries.
2 In 2012, the largest share of 'no housing problem' households was found in Sweden, as Figure 5.4 shows. Norway, Ireland, Luxembourg, Germany and the United Kingdom followed. Bulgaria, Latvia and Romania had the smallest shares, as was also the case in 2007 when Sweden and Norway were also the top two countries.
3 In 2012, the countries form a fairly continuous list when placed in ascending order. Distances of more than two percentage points appear only between Latvia (13%), Portugal (17%), Lithuania (21%) and Cyprus (24%), further on between Slovak Republic (31%) and France (34%), and between Norway (45%) and Sweden (48%).

In the remainder of this section, we use the normalised housing outcome indicator (composite housing outcome index). The average value and standard deviation of the 24 countries for which data are available for each policy field (chapter) in the publication are used as a reference for the index. Figure 5.5 shows the effect of this scaling.

Outcome indicator versus overall satisfaction
Figure 5.6 shows the relationship between the composite housing outcome indicator and the variable 'overall housing satisfaction'. It shows that the outcomes are relatively robust. More households are satisfied with their

Figure 5.5 Composite outcome indicator by country (share of households without any housing problems), households, 2012 (index)

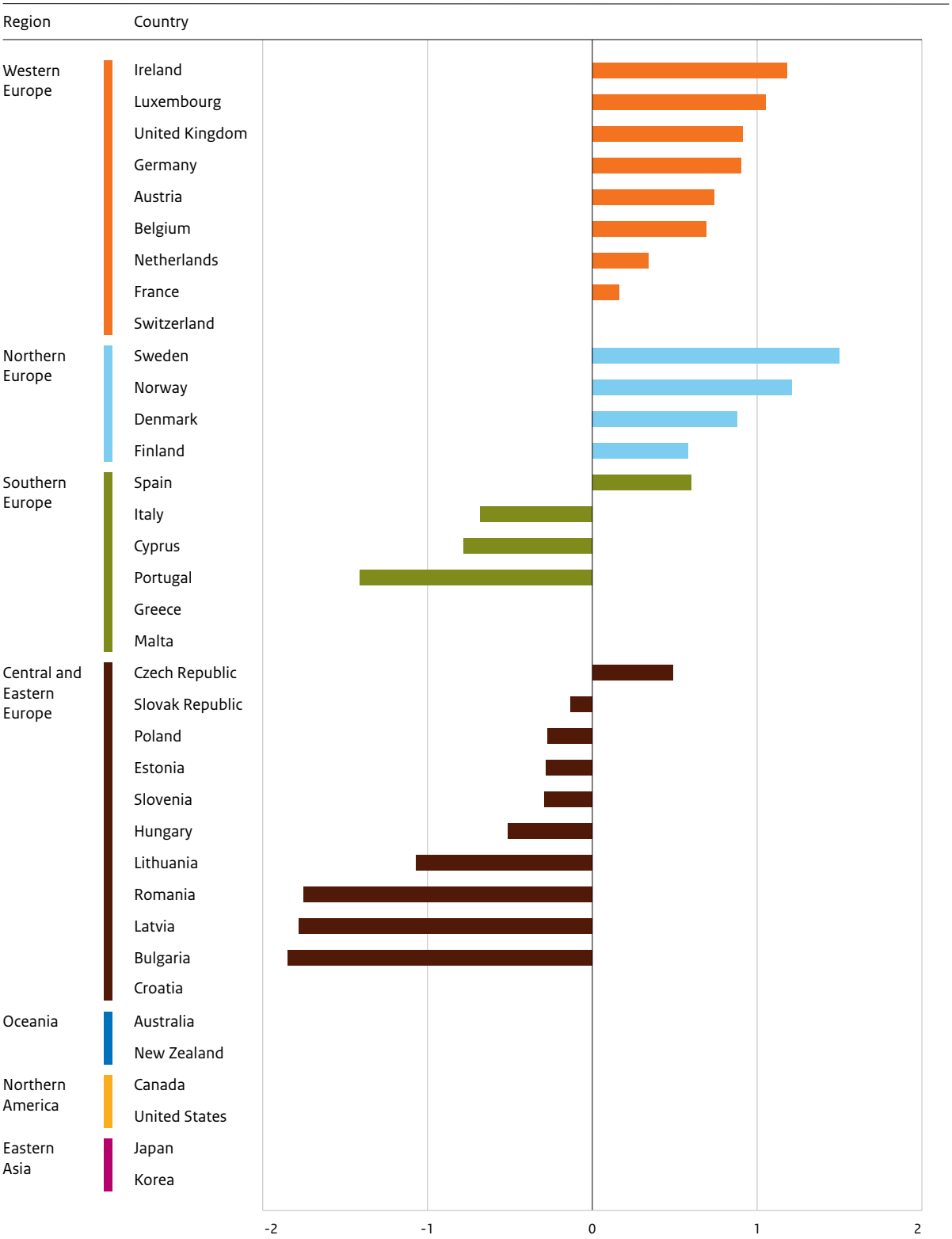
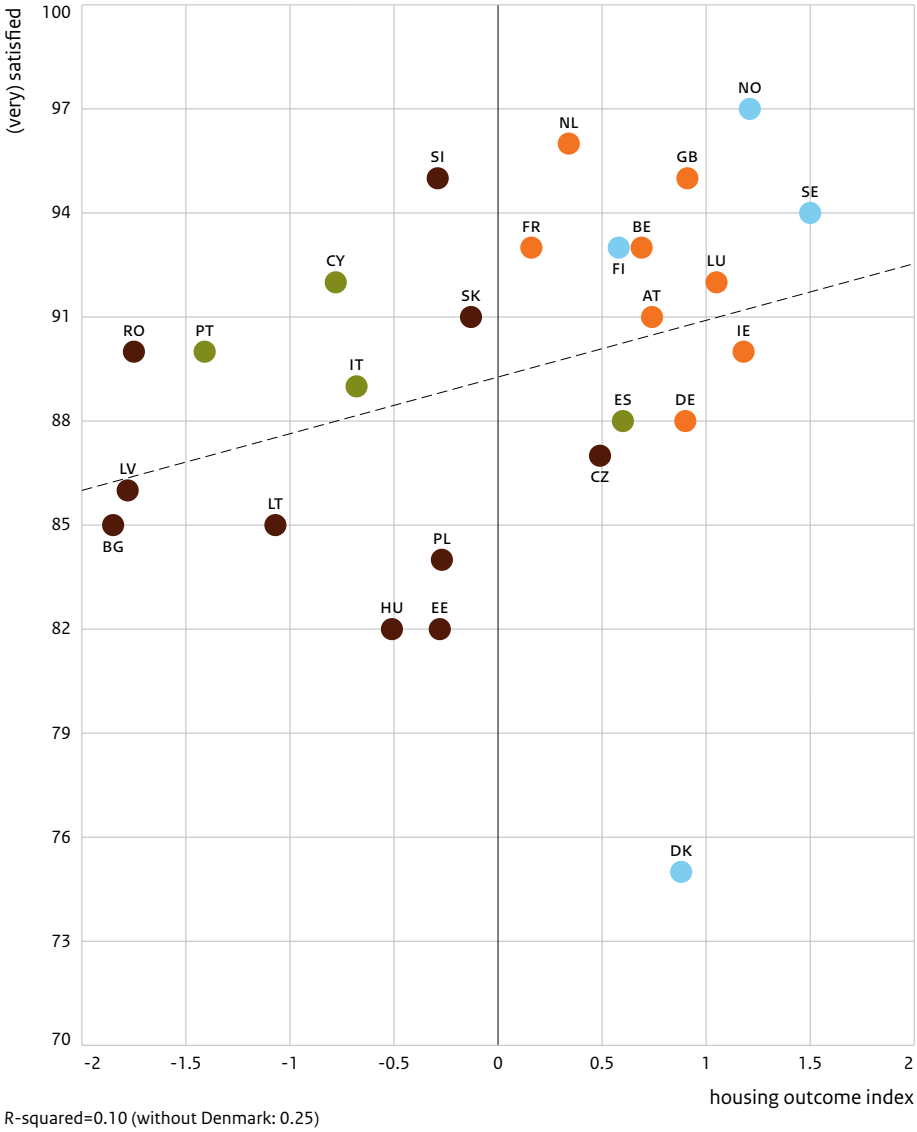


Figure 5.6 Overall satisfaction with the dwelling by composite outcome index, households, 2012 (in percentages and index)



R-squared=0.10 (without Denmark: 0.25)

Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012. See Appendix Table A5.7 for data.

dwelling when the composite outcome index score is higher, but it clearly is not a one-on-one relationship. Overall judgements of households may differ from simply adding together all the variables. Households will also aim as far as possible to choose dwellings that suit their needs best (self-selection). These mechanisms may contribute to explaining why satisfaction reaches much higher levels (75-97%) than the composite indicator (12-48%).

According to both measures, the shares of households with housing problems are lowest in two Northern European countries, followed by the Western European cluster and the two other Northern countries.[10] *None of the countries in the other two clusters reaches the 'composite indicator /satisfied' level combinations of the Northern and Western European countries. Southern European countries combine somewhat above-average satisfaction levels with strongly varying indicator shares. Central and Eastern European countries show a wide range of indicator and satisfaction shares.*

5.2.2 Outcomes for lower-income households

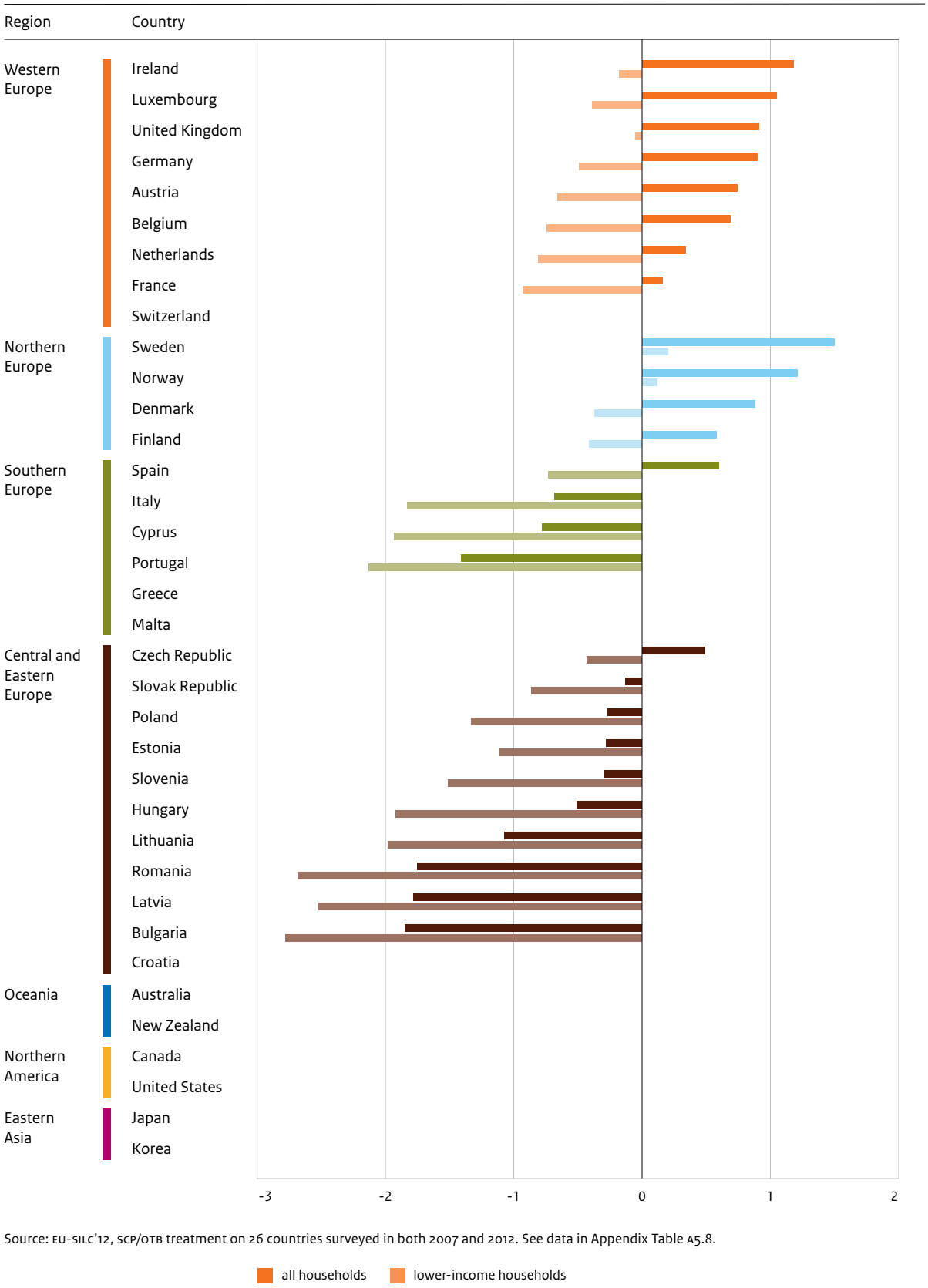
Housing policy will be (mainly) focused on lower-income households (see above). To assess this possible impact of housing policy, it will therefore be helpful to take a closer look at lower-income households. Figure 5.7 gives an insight into the housing problems of the 30% households with the lowest incomes per country in 2012. The indices are presented relative to the levels for all households.

1 The outcome scores for the 30%-group are lower (by 8 to 14 percentage points) than for all households. This indicates that lower-income households encounter more housing problems. Zooming in on the 30%-group, Norway and Sweden remain first and second on the list, with the smallest share of households that encounter housing problems, and the position of the last five countries is also unchanged compared with the figures based on all households.
2 However, some countries change their relative position when the focus is on lower-income households. Finland shows the largest relative 'improvement' (from 10th to 6th position), and Belgium the largest 'deterioration' (from 9th to 12th position). Fourteen countries maintain their relative positions.
3 The Western and Northern European countries score relatively high; only the Netherlands and France produce worse outcomes than Spain and the Czech Republic, both for all households and for lower-income households. A number of quality problems (notably damp/rot, noise, comfort in summer and crime) cause these differences. For lower-income households, the Netherlands and France show similar outcomes to those of the Slovak Republic.
4 Of the lower-income households in the three countries with the lowest scores (Bulgaria, Latvia and Romania), 3% to 5% have no housing problems in 2012. In 2007, that figure ranged from 1% to 3%.

The Czech Republic attains the same score as Germany for lower-income households. This suggests a good public sector performance, partly achieved through a large share of tenants among lower-income households (largest among the Central and Eastern European countries; see Figure 5.2). But the main reason might be more historical, as its housing subsidies are reported to be ineffective and inefficient (Lux, 2009): the Czech Republic

10 Denmark showed a remarkable drop in satisfaction between 2007 and 2012.

Figure 5.7 Average score of all, and lower-income households, respectively, on composite outcome indicator, households, 2012 (index)



Source: EU-SILC'12, SCP/OTB treatment on 26 countries surveyed in both 2007 and 2012. See data in Appendix Table A5.8.

had a large rental sector and better housing quality before the transition period.

5.2.3 The three dimensions of the composite outcome indicator

Concluding that the composite outcome scores are fairly robust for the total population and the lower 30% incomes, we turn to the three dimensions of the indicator which can be observed and compared to the indicator in Figure 5.8: affordability, space and quality.

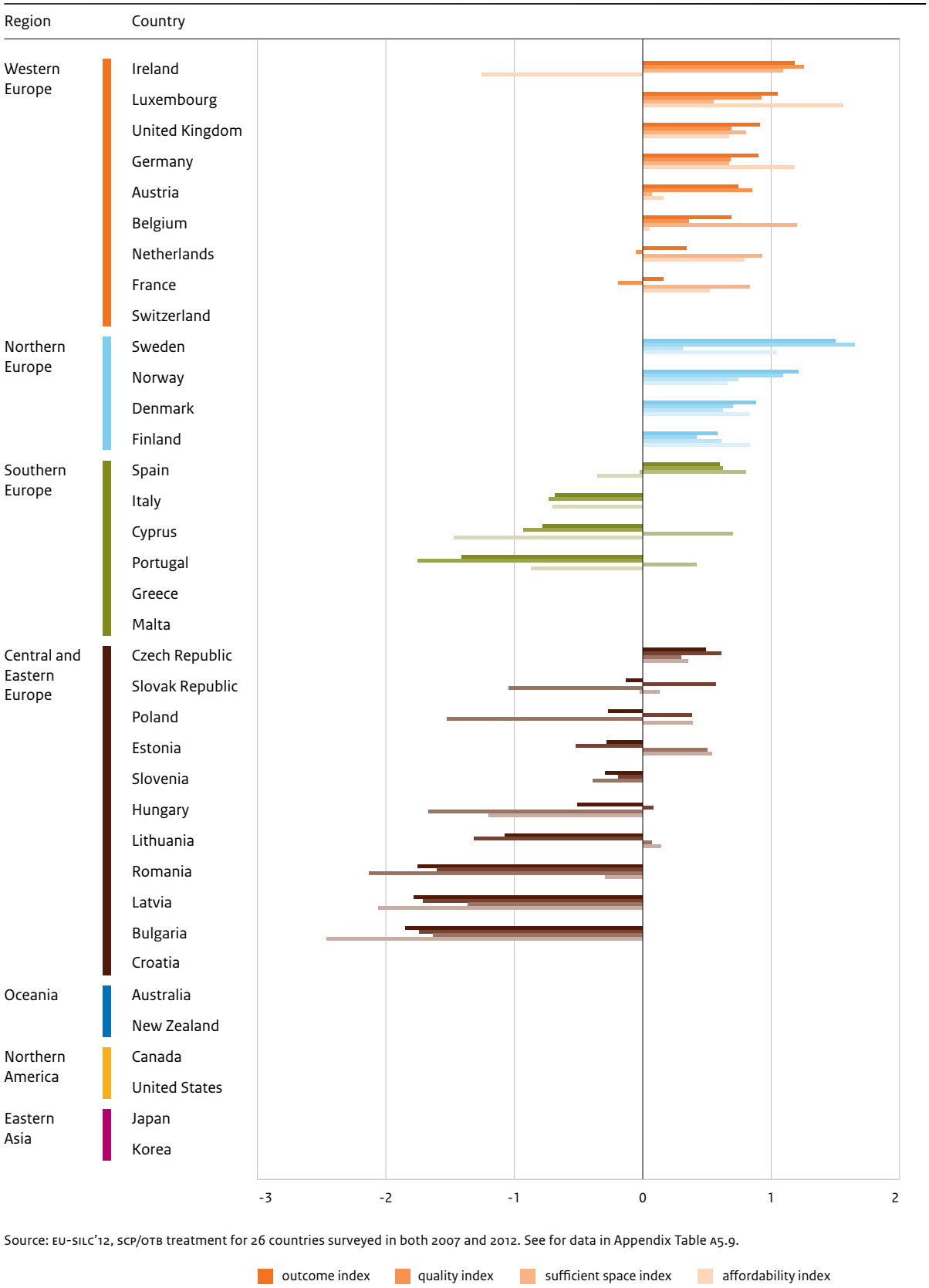
1 By geographical cluster, Northern and Western Europe score higher on the composite outcome indicator than Southern, and Central and Eastern Europe. This pattern is also found in all three indicator dimensions, as Figure 5.8 shows.
2 Northern Europe has better composite scores than Western Europe on average because of better quality indicators, and Central and Eastern Europe have lower composite scores than Southern Europe mainly because of the lower scores on the sufficient space (quantity) indicator.
3 The highest scores per country are mostly related to quality (Sweden, Norway and Ireland). Good sufficient space scores (Belgium, Ireland, Netherlands) are only partly related to a high overall score.
4 Luxembourg and Germany score highest on affordability, but take fourth and fifth position on the composite outcome indicator. The low scores of Bulgaria, Latvia and Romania are mainly related to quality.

5.2.4 Discussion of outcome measure

The composite outcome indicator can be designed differently (see e.g. Haffner et al., 2012a, 2012b; Palvarani and Pavolini, 2010). Alternatives mainly focus on the correlations between indicators (Appendix Table A5.6) and the definitions used for the variables that are included.[11] The weights to be given to the separate indicators is another item for discussion, especially whether one unfavourable variable should be a sufficient basis to categorise a household as having a housing problem. For instance, with affordability, having arrears without having a low income 'after housing costs' or vice versa might be considered too narrow a basis. The ranking of countries by composite outcome score, however, hardly changes when we only count households with more than one housing problem (see Appendix Figure A5.1).
Affordability is measured partly on the basis of the (objective) income-housing cost combination. For comparability reasons, housing cost was based on the common information for 2007 and 2012. In 2007, information is available for mortgage interest payments, but not for principal repayments. If we were looking at 2012 only, the inclusion of principal repayments would clearly be preferred in our expenditure measure.

11
Housing expenses (rent and mortgage interest payments) may be at risk of being unaffordable, given the relationship between income and cost. Several definitions of housing costs of home owners exist (see Appendix).

Figure 5.8 Composite outcome indicator and its dimensions, households, 2012 (index)



Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012. See for data in Appendix Table A5.9.

A comparison of 2012 results with and without mortgage repayments shows little change in the ranking of countries, however (see Appendix Figure A5.2).
Furthermore, in some tenures in some countries, income 'before housing costs' includes some income effects of housing policy, such as housing allowance. There, housing costs do not include these income effects, thus obscuring the true housing cost effects.

5.2.5 Housing problems over time

Moving on from 2012, in this section we focus on changes in the housing outcome index over time, between 2007 and 2012 (Table 5.2). We use the 2012 average and standard deviation for the scaling of the index. We cannot follow individual households, but we can compare national outcome scores.

1 Most of the composite outcome indicator changes are positive, implying that the share of households without housing problems increased; only Norway and Austria show a decrease. The largest increases are found in Poland, Estonia and the Czech Republic.
2 In 2007 almost all Northern and Western European countries have higher scores than all other countries in the analysis (except for France). In 2012 this partly changes: Spain and the Czech Republic are at higher levels than the Netherlands and France.
3 Regional clusters have moved closer to each other in 2012 compared to 2007: Southern European and Central and Eastern European countries move up by eight points on average, Western European countries by four points; Northern European countries do not change on average.

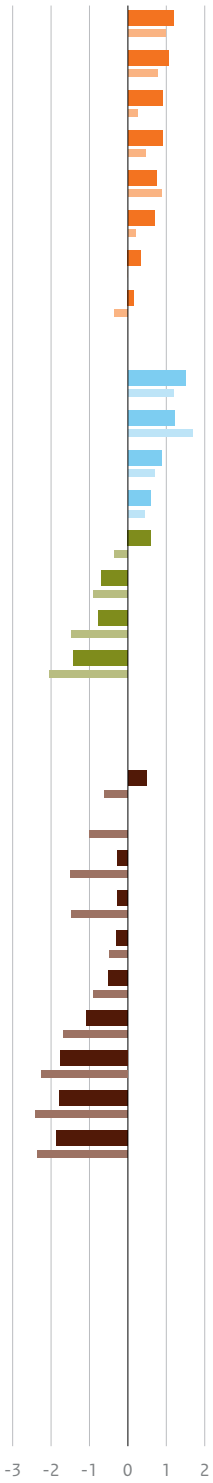
The higher scores in 2012 than in 2007 in the Central and Eastern European countries – the countries with lower outcome scores – can possibly be explained by the perception that improvements are more necessary than in countries where the scores are already relatively high. These are mainly countries with lower average incomes, but some have experienced a rise in average income recently. In fact there is some correlation (0.39) between their income increase and the trend in outcomes.
In times of economic crisis, it is remarkable that almost all countries experience an increase in the composite outcome indicator. The minimum composite indicator value of 6% in 2007 went up to 12% in 2012. The mean increase is five percentage points. Quality changes account for most of this change. Sufficient space improved by one percentage point, while affordability deteriorated by one percentage point, mainly due to changes in Southern Europe. The small changes in affordability may seem surprising during a period of economic crisis. We know for example that hundreds of thousands of families evicted in Spain underwent very serious financial and housing problems in the 2008-2012 period (Cano Fuentes et al., 2013).

Table 5.2 Composite outcome indicator over time, households, 2007, 2012 and change 2007-2012 (index)

For reading instructions see page 49

Region	Country	2007	2012	2012
Western Europe	Ireland	0.98	▲ +0.20	1.18
	Luxembourg	0.77	▲ +0.28	1.05
	United Kingdom	0.24	▲ +0.67	0.91
	Germany	0.46	▲ +0.44	0.90
	Austria	0.87	▼ −0.13	0.74
	Belgium	0.19	▲ +0.50	0.69
	Netherlands	0.00	▲ +0.34	0.34
	France	-0.36	▲ +0.52	0.16
	Switzerland	.	.	.
Northern Europe	Sweden	1.19	▲ +0.31	1.50
	Norway	1.68	▼ −0.47	1.21
	Denmark	0.70	▲ +0.18	0.88
	Finland	0.44	▲ +0.14	0.58
Southern Europe	Spain	-0.35	▲ +0.95	0.60
	Italy	-0.91	▲ +0.23	-0.68
	Cyprus	-1.47	▲ +0.69	-0.78
	Portugal	-2.05	▲ +0.64	-1.41
	Greece	.	.	.
	Malta	.	.	.
Central and Eastern Europe	Czech Republic	-0.62	▲ +1.11	0.49
	Slovak Republic	-1.00	▲ +0.87	-0.13
	Poland	-1.49	▲ +1.22	-0.27
	Estonia	-1.47	▲ +1.19	-0.28
	Slovenia	-0.49	▲ +0.20	-0.29
	Hungary	-0.89	▲ +0.38	-0.51
	Lithuania	-1.69	▲ +0.62	-1.07
	Romania	-2.24	▲ +0.49	-1.75
	Latvia	-2.41	▲ +0.63	-1.78
	Bulgaria	-2.36	▲ +0.51	-1.85
	Croatia	.	.	.
Oceania	Australia	.	.	.
	New Zealand	.	.	.
Northern America	Canada	.	.	.
	United States	.	.	.
Eastern Asia	Japan	.	.	.
	Korea	.	.	.

2012 vs 2007



largest increase
largest decrease
2012
2007

However, much of the income information in our 2012 data refers to 2011, so not all effects of the economic crisis may be visible yet. For affordability problems to increase, incomes have to decrease and/or costs have to increase. Apparently, this did not occur in combinations that change the prevalence of affordability problems dramatically in the data. On average, household income increased for all geographic clusters. In Spain the increase in affordability problems was one or two percentage points of the whole population. Furthermore, some households may already have been classified as having an affordability problem in 2007.
Lower-income households (Appendix Figure A5.3 and Table A5.10) show the same pattern, but the changes are generally less favourable. Lower-income households in Northern and Western European countries experience a small decrease in the composite indicator on average. In the other regional clusters, the composite indicator increases at relatively the same rate as all households, but by only half as much in absolute terms.

5.3 Inputs

5.3.1 Government expenditure

This section focuses on inputs, even though no useful indicator for personnel can be presented; as a second-best solution, government expenditure is used. Expenditure is based on the only reliable and comparable source for government spending on housing, based on COFOG (Classification Of Functions Of Government) developed by the OECD and by the United Nations Statistics Division (United Nations Statistics Division, 2015). COFOG includes direct government expenditure on housing as part of social protection (means-tested support to households) and housing and community amenities (housing and community development, including R&D, and water supply and street lighting).

Even though COFOG is the best available measure of government expenditure in the housing market, it is cumbersome for various reasons. In a sense, it is at one and the same time 'too broad' (including community amenities) and 'too narrow' (excluding indirect expenditure such as tax subsidies). As explained at the start of this chapter, only when all relevant effects are added together can we compare government interventions across countries. Thus whether the results of the housing system stem from spending on community amenities or on housing (an incomplete measurement of government involvement in housing), market influences or effects from the past remain a topic for further study. We use the COFOG data for their indicative value.
As housing outcomes are probably also influenced by government expenditure from the past – new construction is slow and dwellings have a long lifetime – the aim would be to take into account the average expenditure over as long a period as possible. See the Appendix for our considerations

and the resulting data (Table A5.11). It appears that with the exception of Denmark, the United Kingdom and Greece, government expenditure on housing and community amenities exceeded the expenditure on social protection in the 2007-2011 period. This might indicate that many governments have a preference for object subsidisation in the broadest sense (including investment in amenities) rather than housing-related income support for households.
Figure 5.9 shows that the five-year averages of total government expenditures on housing range from 0.5% to 3.0% of GDP per year (2007-2011). Low and high scores are not limited to one or two geographical clusters; clusters are mixed. All clusters are present in the 0.5-0.8% range, while France and Cyprus head the list with average annual expenditure close to 3.0% of GDP.

5.3.2 Expenditure does not seem to be related to outcomes

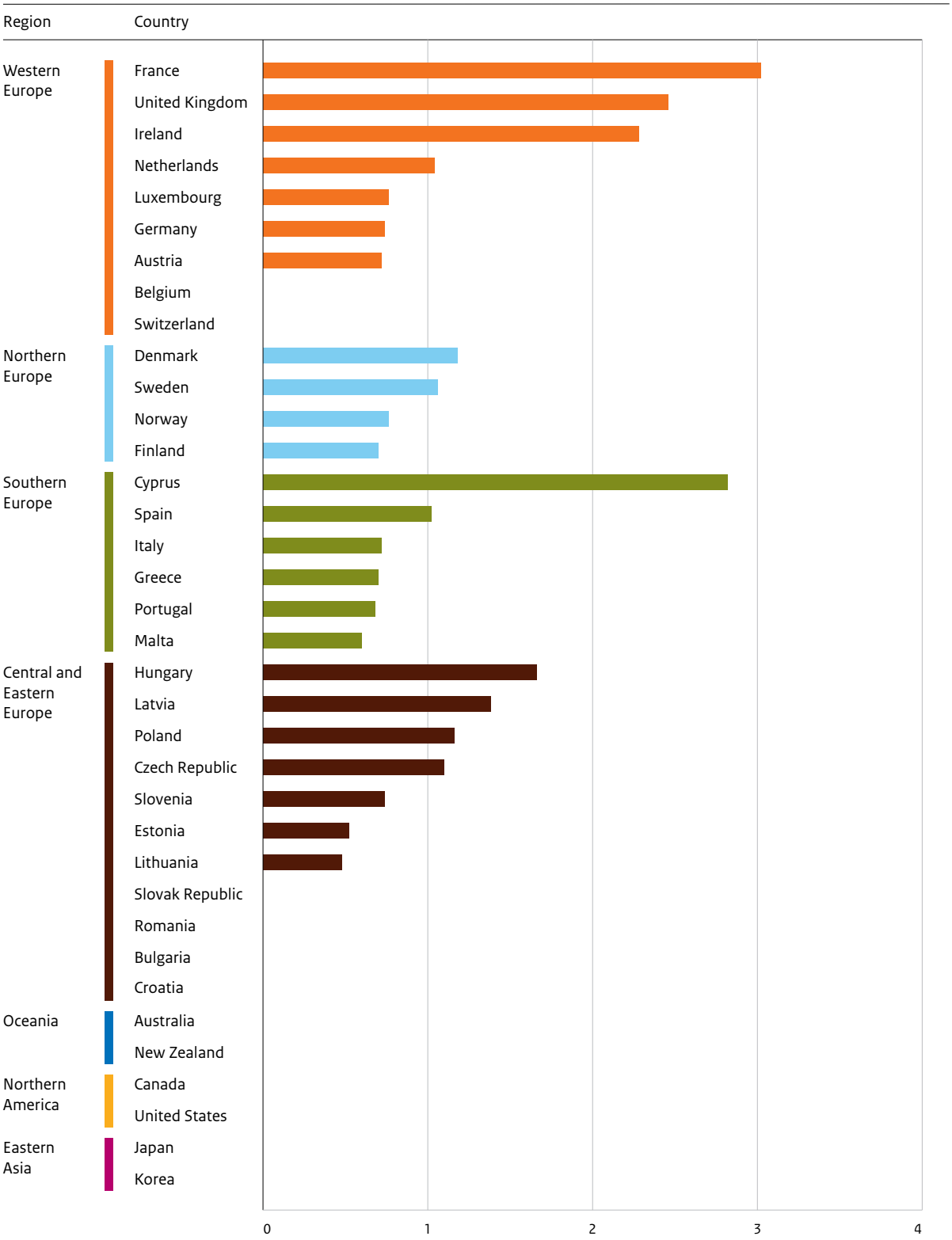
As mentioned, the measurement of government expenditure has its problems, and we have already argued that housing is primarily provided through the market. There is thus a large proportion of housing represented in the outcome score that is not necessarily influenced by budgetary involvement by the government. France and Cyprus have the highest (relative) expenditure, but they only rank 14th and 21th on the composite outcome indicator list. Countries with low relative expenditure are found in all four geographical clusters, at quite different outcome levels. One possible explanation is based on the earlier argument that current outcome scores are related to government expenditure from the past. It is also possible that unmeasured indirect subsidies or differences in market efficiency between countries obscure the effect of expenditure.

Abstracting from all measurement problems in relation to government expenditure on housing, the main conclusion of this section is that direct government expenditure cannot be directly related to the success of keeping household housing costs at affordable levels, high quality of all dwellings, and low overcrowding (as operationalised for this study).

5.4 Outputs

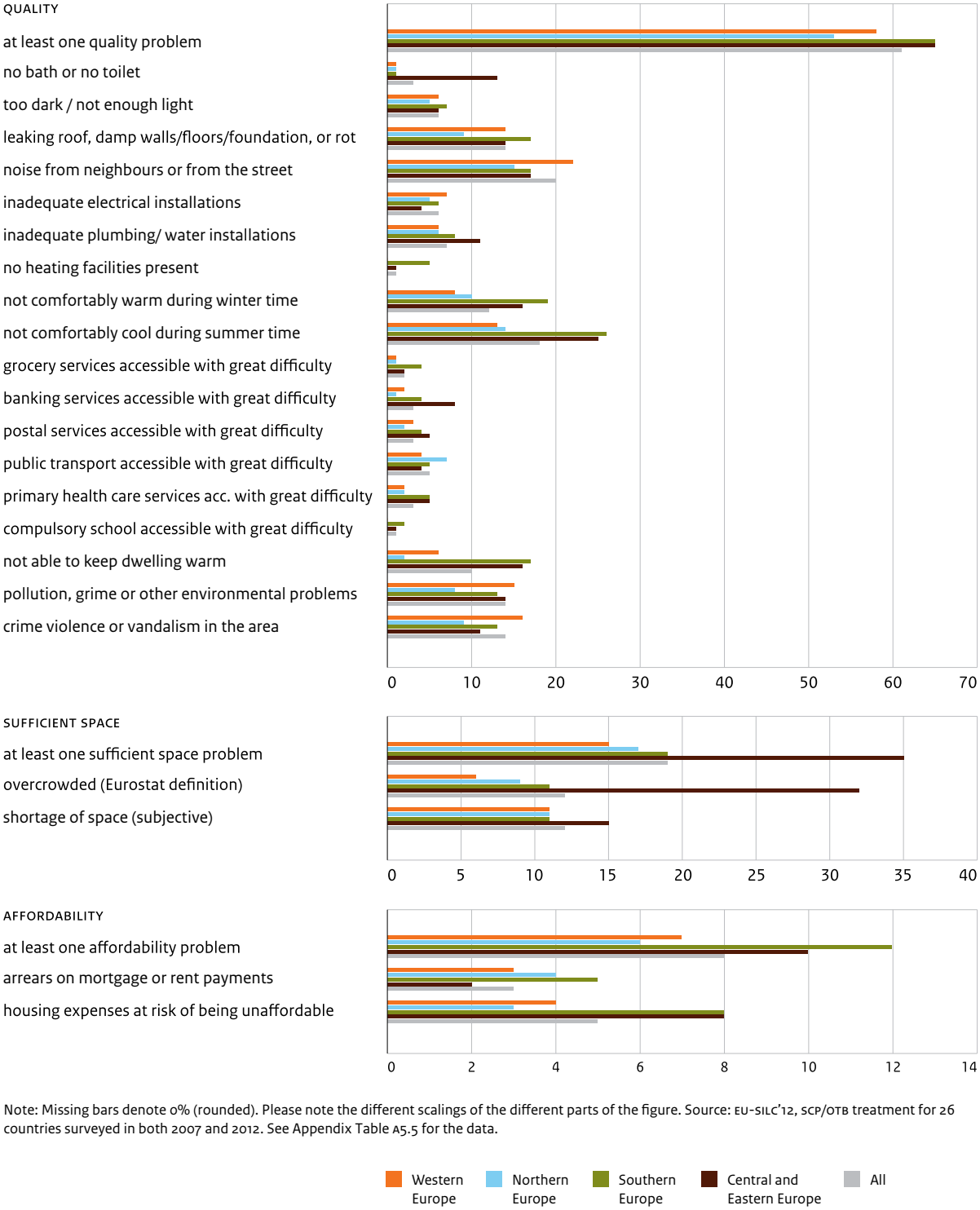
The composite outcome indicator is constructed on the basis of three dimensions (quality, sufficient space and affordability), which in turn are based on single variables such as 'presence of bath or toilet'. These individual indicators can be seen as output indicators: they are the result of input and throughput. In the composite outcome indicator (Section 5.2), some outputs are not included because they do not score on overall satisfaction with the dwelling. The outcome indicator is focused on indicators that are (implicitly) valued by households. In this section, all individual indicators are included.

Figure 5.9 General government expenditure[a] (average per year) on housing according to COFOG, 2007-2011 (% of gdp)



a Expenditure includes means-tested support to households plus administration costs of support systems, and government spending on housing and community development (including R&D), water supply and street lighting. Source: Eurostat (COFOG, 2007-2011). For data see Appendix Table A5.11.

Figure 5.10 Output indicators by geographical cluster (households with problems), households, 2012 (in percentages)



Note: Missing bars denote 0% (rounded). Please note the different scalings of the different parts of the figure. Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012. See Appendix Table A5.5 for the data.

Western Europe | Northern Europe | Southern Europe | Central and Eastern Europe | All

Of course, the caveats mentioned above still hold: the influence of housing policy may be considered modest, and the output indicators should therefore certainly not be seen as 'government output'; there is also a strong influence from the housing market, the family and the past.
We present the scores on the indicators by dimension and by four European regional clusters (see Figure 5.10). This kind of information at item level is called output indicators here. We present the outputs as problem measures here (share of households having a problem, per item), because most of them are closer to 0% than to 100%.

1 Figure 5.10 shows that the share of households with at least one housing problem is largest in Central and Eastern Europe. Sufficient space problems are the main cause of the high score. The lack of bath or toilet and problems keeping the dwelling warm or cool are also often present.

The extent to which dwellings are overcrowded was calculated according to Eurostat's definitions. This indicator and its subjective variant (shortage of space) each account for twelve percentage points. One might expect a correlation between these two indicators a priori, but only a third of 'objectively overcrowded' households self-report a shortage of space, and vice versa.

2 35% of households in Central and Eastern Europe are ascribed space problems. This is much higher than in the other geographical clusters (15%-19%). The objective indicator is almost completely responsible for this European divide, suggesting that people's subjective expectations are steered by the actual situation (Sunega 2014).
3 Southern Europe scores high on quality problems (keeping the dwelling warm or cool) and affordability (all indicators), but fairly low on space problems.
4 Western Europe combines an average score on quality problems (with relatively high scores on noise, pollution and crime problems) with few sufficient space and affordability problems. Northern Europe scores best on quality and affordability and nearly the best on sufficient space.

5.5 Explaining differences in outcomes

As mentioned in the introduction, housing outcomes are mainly determined by the market (Bengtsson, 2001). Houses are bought and sold on the property market and rental housing is mostly allocated by means of market contracts between landlords and tenants (Dewilde 2015). With higher levels of economic development, the financial capacity and demand for more spacious and better quality dwellings increase. This may lead to faster replacement of old dwellings with new stock.[12]

The influence of the state is 'corrective', in order to make affordable housing of a certain standard accessible (Bengtsson, 2001). This correction is difficult to describe, as the means differ widely (explicit and implicit subsidies of different types, forms of regulation), expenditure cannot be measured precisely (Dewilde, 2015) and effects are hard to assess. Furthermore, the past has a large influence because of the longevity of dwellings and their tenure, which is directly related to housing costs. This means that housing policy influences housing outcomes, but not as much as in other sectors such as education or health.
In addition to the market, the family helps in providing housing, especially in Southern and Eastern Europe.
In general, we may expect national housing outcomes to be related to income levels, because of the predominant role of the market. Other possible explanations of differences between countries will relate to COFOG-government expenditures (Section 5.3) and tenure differences (beginning of this chapter). Testing for causal relationships goes beyond the scope of this study.

Income correlates with housing outcomes
Housing outcomes are mostly related to the housing market, and thus to the economic situation of households (see Haffner et al., 2012). For the economic situation, we focus on income differences between countries.[13] As those differences are fairly stable over time, actual national average income may provide a substantial part of the explanation for housing outcome differences.

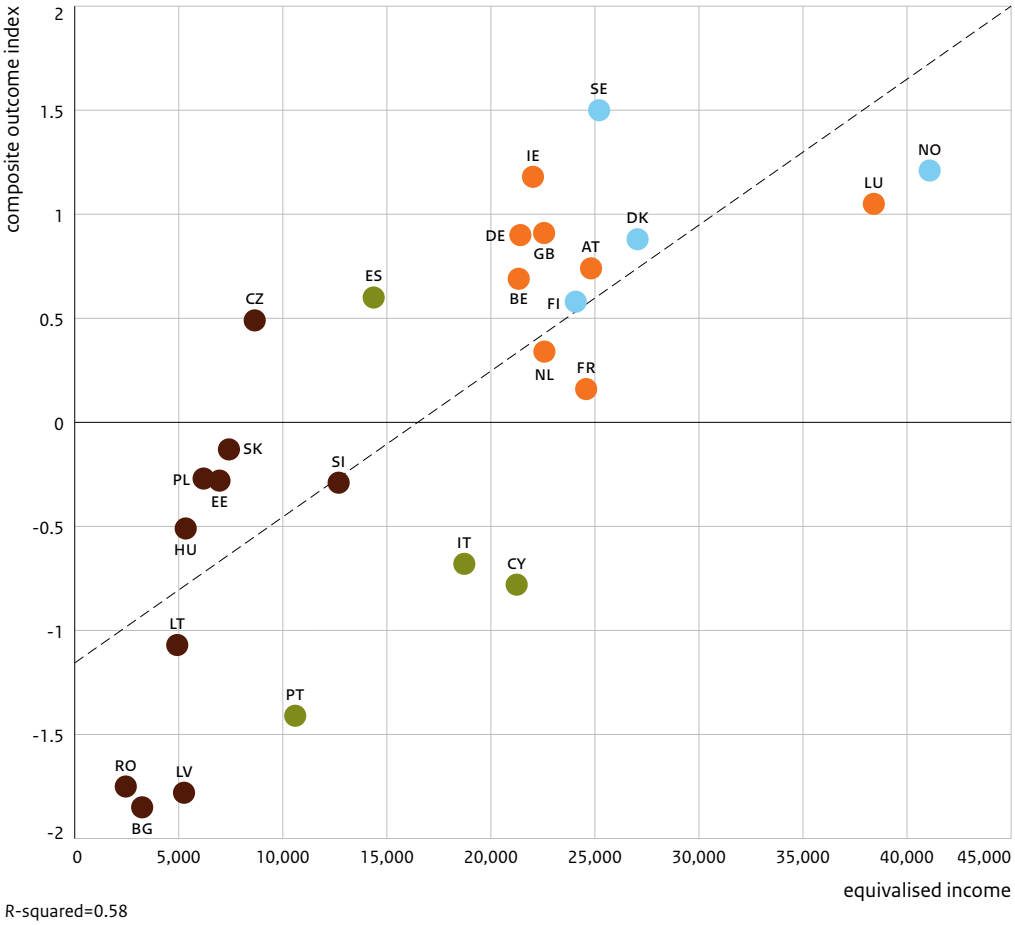
1 Figure 5.11 shows the relationship between the share of households without housing problems and the equivalised disposable income. At 0.58 the R-squared can be considered relatively high.

One might question whether this relationship also exists for lower-income households, which are less likely to have access to decent and affordable housing. For these households, the role of non-market forces (government, family or tenure structures) may be more important. We present the relationship for the 30% lowest incomes in Figure 5.12.

The relationship appears to be almost as strong as for all households. The pattern of regional differences is the same. This confirms the argument that the impact of governments on housing outcomes is not observable, whether it be the result of the government-family-market constellation or the specifications of the measurement exercise (see above).

2 In general, Southern European countries (except Spain) have a lower housing index than expected on the basis of their income levels, and Central and Eastern European countries and Spain have a higher index (except the three lowest income-level countries).

Figure 5.11 Composite outcome indicator by average equivalised annual disposable household income, households, 2012 (in euros and index)



R-squared=0.58

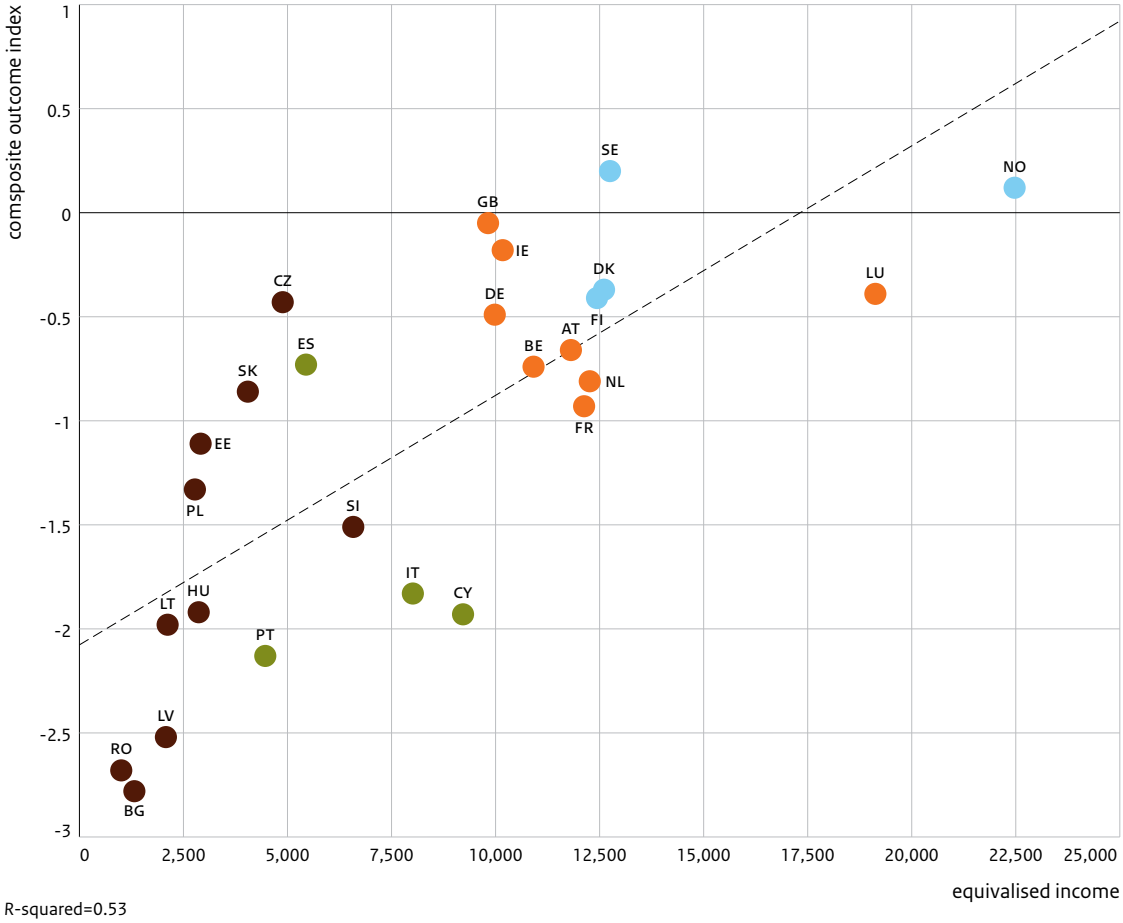
Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012. See Appendix Table A5.12 for the data.

In contrast to our results, Hoekstra (2010), Dewilde (2015) and Lowe (2011) conclude that a unitary rental market (the social rental sector and the private rental sector competing with each other in one and the same market, largely subject to the same kind of rent regulation) improves housing outcomes for lower incomes. However, there may also be a relationship with income levels, and the differences in housing outcomes are not always very large. Further research is needed to shed light on the 26 countries in our dataset.

Government expenditure does not correlate with housing outcome

As indicated in Section 5.3, Figure 5.13 shows that there is no relationship between outcome scores and government expenditure on housing as a percentage of GDP. This conclusion also applies to the different subsectors (renting, outright home ownership, home ownership with a mortgage), but this is not shown here (see Appendix Table A5.13).

Figure 5.12 Composite outcome indicator by average equivalised annual disposable household income, 30% of households with lowest income, 2012 (in euros and index)



R-squared=0.53

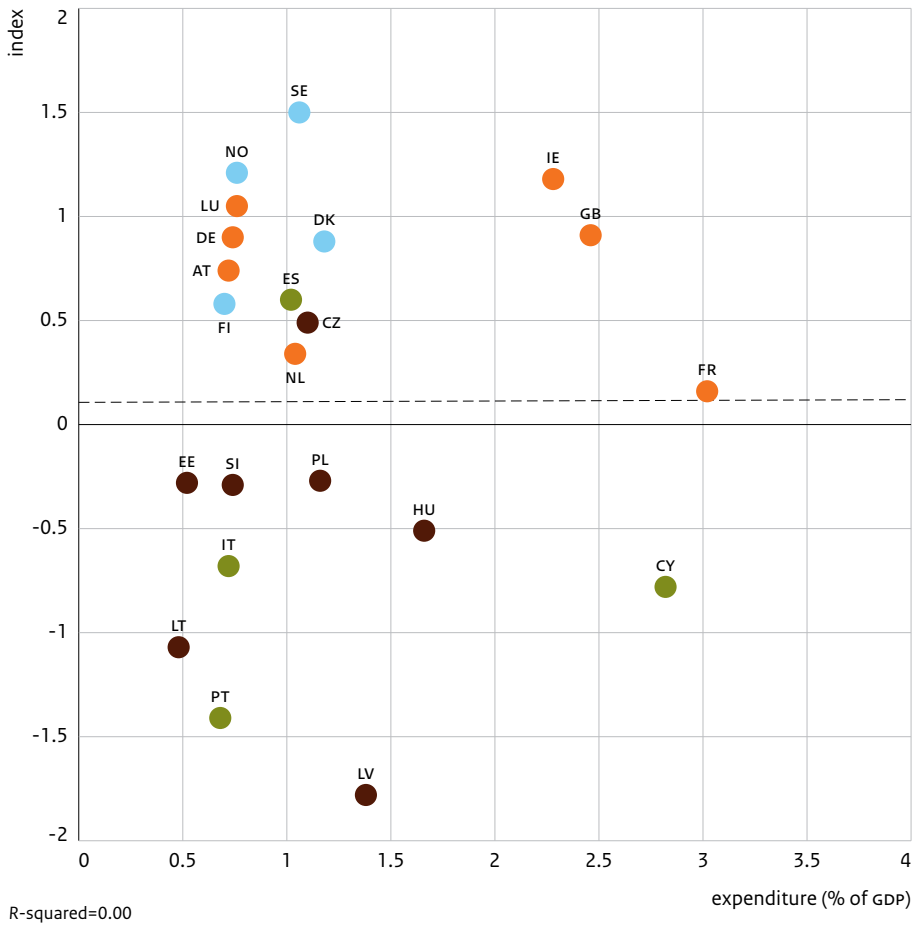
Source: EU-SILC'12, SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012. See Appendix Table A5.12 for the data.

Here again one may argue that the effects of government expenditures might be more visible when we focus on lower incomes. However, the relationship for lower incomes is as weak as it is for all households (see Appendix Figure A5.4).
The relationship may be weak, but it is also possible that measurement problems hamper the assessment. A more detailed analysis might provide more insight, but is not possible within the framework of this publication.

Tenure differences are reflected in housing outcomes

1 On average, rental dwellings have lower outcome scores. Within geographical clusters their scores generally are as low as half those of homeowners (see Appendix Table A5.13). The best scores for rental houses (Western and Northern Europe) are only slightly higher than the lowest scores for owner-occupied houses (outright owners in Central and Eastern Europe).

Figure 5.13 Government expenditure on housing (average percentage over five-year period 2007-2011) versus composite outcome indicator, households, 2012 (in percentages of GDP and index)



Source: Eurostat (Government Statistics 2007-2011; EU-SILC'12); SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012.

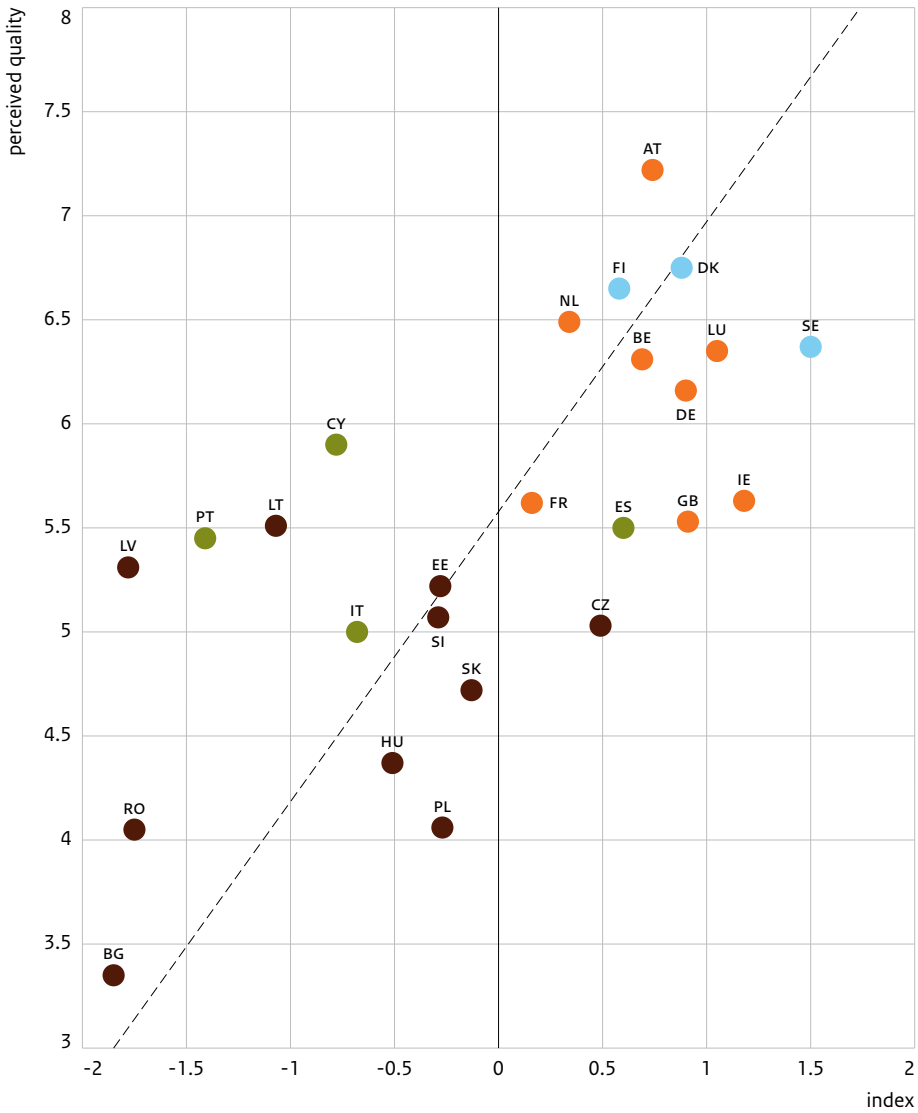
2 The differences relate to all dimensions: quality, sufficient space and affordability indicators.

These averages hide large differences, but the maximum outcome for tenants (30% without housing problems, in Sweden) is clearly much lower than that for homeowners (60%, also Sweden). These results are not substantially altered when we include mortgage repayments. Apparently, (historically based) tenure structure does have influence on outcomes.

5.6 Citizens' perceptions of the quality of social housing

In this section we investigate the relationship between differences in outcome and citizens' perceptions of the quality of the sector. As EU-SILC does not contain this type of information, we use the European Quality

Figure 5.14 Composite outcome indicator by average equivalised annual disposable household income, 30% of households with lowest income, 2012 (in euros and index)



R-squared=0.45

Source: Eurostat (EU-SILC'12), Eurofound (EQLS'12);SCP/OTB treatment for 26 countries surveyed in both 2007 and 2012.

of Life Survey (EQLS) which contains a variable 'perceived quality of social/municipal housing' (Q53f; Eurofound, 2014). Figure 5.14 compares this information for each country with the composite housing indicator for the year 2012. As the variable is not available in EU-SILC, the outcome indicator cannot be limited to households living in social housing.

1 Perceived quality of social/municipal housing shows a positive relationship with the outcome indicator. The Western and Northern European countries score higher on both indicators than the Southern and

Central and Eastern European countries, with the Southern European countries scoring as high as Ireland, the United Kingdom and France on the perceived quality of social housing.

2 It must however be remembered that social or municipal housing stock may not be available (in large quantities) in all countries.

If the definition of social/municipal housing refers to rental housing only (which one would expect in the case of municipal housing), then it is clear that most of the Central and Eastern European countries which have a very small rental stock will also have a small or non-existent social rental sector (Figure 5.1). That in itself may be an explanation for the lower score on satisfaction. On the other hand, in some countries (e.g. Spain) there is a form of social or subsidised home ownership that may not be engrained in a perception of quality of the public sector (Hoekstra et al., 2010). There may also be countries that formally do not have a social housing stock, but which may subsidise housing for lower-income households. An example of the latter can be found in Germany, a country that scores relatively high in Figure 5.11 (Haffner et al., 2009).

5.7 Conclusion

Our main findings indicate that:

- Present-day housing outcomes are influenced by the housing system: many actors (demand and supply-side market forces, government and family behaviour) and policies from present and past. Housing policy operates as a state corrective to the market. Attempting to measure its effectiveness in combination with its costs is quite difficult.
- Northern and Western European countries score highest on the composite outcome indicator in 2012. On average, they also have the best scores on the three dimensions of the composite outcome indicator: quality, sufficient space and affordability. This also holds for 2007, although the levels were lower then and the differences between the country clusters were more marked. This conclusion also generally holds for lower-income households. In 2012, Sweden scores highest (lowest share of households with one of the housing problems that were defined for this study), followed by Norway and Ireland. Bulgaria, Latvia and Romania are at the other end of the scale. However, the regional clusters are slowly converging over time (2007-2012), partly in line with economic developments.
- Satisfaction follows the same pattern as the composite outcome indicator, but the country scores partly overlap. Objective differences are apparently not precisely mirrored in the subjective expectations based on the actual situation in a country.
- High country scores on the composite indicator are generally in line with high average household incomes. This will not come as a surprise, since housing is largely produced via the market. We found no meas-

urable influence of government expenditure (as measured in COFOG, government statistics collected for the National Accounts) on housing outcomes.

- In Northern and Western Europe, larger shares of households generally consist of owners paying a mortgage (except in Austria and France) or renting the dwelling, as opposed to outright owners (and households living in dwellings provided free). This does not seem to be a practical 'recipe' for better housing in the other clusters, however, as these patterns emerged against a certain historic background. Mortgage markets are often not well developed in the Eastern European countries (IMF 2008). Moreover, mortgage loans can turn out to be risky, especially when mortgage loans exceed decreasing dwelling values (negative equity; Hoekstra et al., 2013) or are based on foreign currencies.
- Housing problems most often concern quality (59% of households in the EU), followed by sufficient space problems (19%) and affordability problems (8%). Most households with quality problems (78-79%) are found in Portugal, Bulgaria, Latvia and Romania. The highest prevalence of sufficient space problems is found in Hungary (39%) and Romania (43%). Most households with affordability problems are found in Bulgaria (18%) and Latvia (17%).
- Given the context of the global financial crisis in our period of analysis, it may be considered remarkable that almost all countries experienced an increase in the share of 'no problem' households. Possible effects of the crisis are hardly visible in these data. This may be due to timing (incomes mostly being measured in 2011), and also because income reductions affect relatively small percentages of households. Average household income actually increased in all clusters.
- The perceived quality of social/municipal housing correlates with the composite housing indicator. It may be that citizens perceive the level of general government intervention (in social housing; possibly renting as well as home ownership) to be related to housing outcomes.

In addition, a number of methodological reflections need to be considered:

- The composite housing indicator is a combination of information on separate indicators. There is no natural means of aggregation. An argued choice is made, and some alternatives are investigated.
- The choice is for a combination of objective and item-specific subjective indicators. General satisfaction with the dwelling is used to select relevant indicators in relation to dwelling quality, dwelling space and affordability. These three indicators are weighted equally. However, it must be observed that the subjective measure of shortage of space scores much lower than the objective measure for Central and Eastern Europe. This difference more than likely reflects 'Western' norms and illustrates the difficulty of setting 'norms' that are equally useful for all countries under study.

– A specific definition of affordability based on residual income was used. For each country, an income benchmark was developed based on households reporting great difficulty in making ends meet.

Given the methodological reflections, we conclude that the composite housing outcome indicator used is a credible and fairly robust composite indicator that correlates with all three indicators, of sufficient quality, sufficient space and affordability.

We have shown why housing has been called the 'wobbly pillar' of the welfare state: influences other than government spending alone shape housing outcomes, such as (developments in) income and historic tenure structures. National and local housing market contexts, as well as the preferences of households, in combination with the economic circumstances, interact with housing policies to produce housing outcomes. Only part of this could be measured in our preferred definitions.
Given our approach, no housing tenure can be put forward as the housing tenure which minimises housing problems. Housing tenures all have their advantages and disadvantages for households. Large social rental sectors which generally provide affordable housing with long-term tenant security, usually need public investments and are thus expensive for government budgets. Private rental sectors often cannot count on public investment. Diversity on the housing market – a wide range of options for different purses and preferences – may deliver the desired housing solutions for many households.

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