Child Deprivation and Well-being in Luxembourg

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1   Introduction

Combating child poverty and investing in child well-being has featured on the agenda of the European Union (EU) for many years. In February 2013, a new milestone was reached when the European Commission published a recommendation entitled 'Investing in children: breaking the cycle of disadvantage' (European Commission, 2013), which was then adopted by the EU Council of Ministers. One key element of the EU recommendation is the fact that it calls on Member States to '(reinforce) statistical capacity where needed and feasible, particularly concerning child deprivation'.

The best way to provide accurate information on the actual living conditions of children in the EU, without making assumptions about the sharing of resources within the household, is to develop child-specific deprivation indicators – i.e. indicators based on information on the specific situation of children, which may differ from that of their parents. Children's needs and standards of living may differ from those of adults, even within the same household (Gordon und Nandy

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2012; Main und Besemer 2013; Dermott und Pomati 2016; Main und Bradshaw 2016), meaning that data specific to the children themselves is required.

Understanding and measuring child deprivation is crucial, as it can have both a direct and an indirect impact on well-being. Children experience direct and immediate suffering due to elements they are lacking in terms of food, clothing, comfort and activities. However, they also suffer indirectly as result of the consequences of these deprivations for their health and emotional well-being. Some forms of deprivation (nutrition, housing comfort[1], lack of protection and care) may have an impact on short-term and long-term physical health (Repka 2013). Children may also experience feelings of shame and stigmatisation relative to their peers. Qualitative studies have also shown that children in households suffering from deprivation often do not ask their parents for things they need that cost money, in an attempt to protect their parents from stress and feelings of guilt (Ridge 2002 and 2011). In general terms, it has been shown that growing up in poverty increases the risk of experiencing poverty as an adult via numerous mechanisms relating to education, health, self-worth and so on (Pascoe et al. 2016; Gregg et al. 1999; Bellani and Bia 2017).

The EU's 2009 statistical survey on income and living conditions (EU-SILC) included for the first time an ad-hoc module designed to collect this information. The first in-depth analysis of this data, performed by Guio et al. (2012), identified an optimal set of deprivation items specific to children and proposed an aggregated index. These items were then collected in the EU-SILC 2014 ad-hoc module, enabling supplementary analysis by Guio et al. (2018). The final list of items proposed by these authors was adopted at a European level in March 2018, in order to measure child deprivation on a comparable basis across the entire Union. This list is made up of 17 items covering both the material and the social aspects of deprivation, which have been put together to form a child deprivation scale.

This chapter analyses the determinants of child deprivation in Luxembourg, using this new child deprivation indicator adopted at European Union level in March 2018. It serves as an extension to the econometric analyses performed by Guio et al. (2020), which sought to identify micro-level and macro-level risk factors in child deprivation across 31 European countries[2]. Section 2 presents the

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[1] Marsh et al. 2000.

[2] A similar analysis of deprivation in Belgium is available in Guio und Vandenbroucke 2018.

indicators used. The third section discusses the drivers of child deprivation. The subsequent section presents the results of econometric tests in Luxembourg, and the final section offers a conclusion.

2   Child poverty and deprivation: what indicator(s) should be used?

Income can be taken into account when measuring child poverty: the members of a household (children and adults) are considered 'poor' if their income is below a threshold set at 60 % of the national median income. The income poverty rate commonly used in Europe therefore depends on each country's income level. It is a relative indicator.

To study more 'absolute' differences between countries, material deprivation indicators are also used on a European level. The conceptual approach used was inspired by the research conducted by Peter Townsend into relative deprivation during the 1960 s, which he succinctly described as follows in 1979:

> 'Poverty can be defined objectively and applied consistently only in terms of the concept of relative deprivation. […] Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the type of diet, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged or approved, in the societies to which they belong. Their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs or activities.' (Townsend 1979, p. 31).

Until 2018, European deprivation indicators were based on information relating to a household as a whole, or to the adults within it. To measure the everyday difficulties experienced by children, which may differ from those of their parents, researchers developed an additional European-level indicator: the **child-specific deprivation indicator**[3]. This indicator measures **access to the same set of 17 items considered as socially perceived necessities for all children living in Europe:** Does the child eat fruit and vegetables every day? Do they sometimes invite friends round to their home? Can they participate in school trips and events? Do they live in an adequately warmth home? Do they go on holiday for at

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[3] For more information about this indicator, see Guio et al. 2018.

least one week per year? **A child is considered to be experiencing deprivation if they are deprived of at least three of the 17 items** (*see complete list below*). The higher the number of items lacked, the more severe the deprivation. Only deprivation resulting from unaffordability (and not life choices) is included in the calculation.

List of 17 items used to measure child deprivation
  1. Child: Some new (not second-hand) clothes
  2. Children: Two pairs of properly fitting shoes
  3. Children: Fresh fruit and vegetables daily
  4. Children: Meat, chicken, fish or vegetarian equivalent daily
  5. Children: Books at home suitable for the children's age
  6. Children: Outdoor leisure equipment
  7. Children: Indoor games
  8. Children: Regular leisure activities
  9. Children: Celebrations on special occasions (birthday etc.)
 10. Children: Invitation of friends to play and eat from time to time
 11. Children: Participation in school trips and school events
 12. Children: Holiday (one week per year)
 13. Household: Replace worn-out furniture
 14. Household: No payment arrears
 15. Adults in household: Access to internet
 16. Household: Home adequately warm
 17. Household: Access to a care for private use

Table 1 presents the proportion of children in this situation for each item for every country in the EU, and the average for the EU-27. This data was collected as part of EU-SILC 2014.[4]

The table uses colours to highlight the countries with systematically high deprivation levels for different items (in orange/red), such as Bulgaria or Romania, and conversely those with low levels (in green: Nordic countries, Austria, the Netherlands and **Luxembourg**). It also shows the countries that have

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[4] See   https://statistiques.public.lu/en/surveys/espace-households/EU-SILC/index.html   for more information about this survey in Luxembourg. The sample covers 3800 households in Luxembourg. For information about all EU countries, see the Eurostat website (https://ec.europa.eu/eurostat/web/income-and-living-conditions/overview).

Table 1 'Heat map' showing the proportion of deprived children in the country for each item, population of children aged 1 to 15, EU countries, 2014, %

	Fruit & vegetables	Books	Shoes	Indoor games	Protein	Internet	Celebrations	Outdoor leisure	Clothing	School trips	Friends	Car	Warm home	Recreation	Arrears	Holidays	Furniture
Sweden	0.1	0.6	0.3	0.3	0.0	0.4	1.3	0.8	0.9	0.8	0.7	3.1	0.8	2.5	8.8	5.5	5.6
Finland	0.3	0.5	0.8	0.2	0.2	0.4	0.3	0.3	3.5	0.6	0.1	3.6	0.7	1.3	16.5	7.2	11.6
Denmark	0.5	2.5	2.3	0.8	0.6	0.6	1.3	2.2	2.0	1.4	1.5	5.1	2.5	3.3	9.5	9.1	14.6
Austria	0.5	1.3	1.1	1.1	1.8	1.0	1.8	3.1	1.9	2.5	3.6	7.4	4.3	10.2	10.6	17.8	15.7
Netherlands	0.6	0.5	3.6	0.4	2.5	0.2	1.9	1.6	1.6	1.4	1.2	6.5	2.8	6.4	9.5	16.2	25.2
Luxembourg	0.8	0.8	1.0	1.5	1.1	1.4	1.9	2.7	2.9	3.6	2.3	2.1	1.0	2.7	6.3	9.4	20.9
Slovenia	1.0	1.1	1.2	1.3	1.4	1.3	2.5	2.0	5.9	2.3	3.4	3.3	4.0	10.7	28.0	7.2	15.8
Spain	1.7	2.3	3.0	3.5	2.9	13.5	11.4	5.8	7.7	10.6	12.8	6.6	12.0	13.1	17.8	34.5	46.4
Germany	1.8	0.7	2.2	0.6	3.6	0.9	1.5	1.3	2.1	0.6	1.7	4.4	5.3	6.2	9.7	17.4	17.8
Malta	1.9	2.0	5.9	2.1	6.9	4.4	4.9	4.1	6.1	2.7	4.9	4.5	21.6	6.0	22.0	34.9	29.7
Cyprus	2.1	5.4	1.3	3.6	2.4	8.7	10.8	7.7	5.4	2.5	12.3	1.4	25.4	21.2	41.7	40.2	60.9
Belgium	2.3	4.4	3.6	2.5	2.7	3.8	5.8	4.2	8.2	3.8	6.0	7.4	4.8	9.0	12.1	19.2	18.4
Italy	2.6	7.7	2.9	5.6	5.7	10.8	7.1	6.0	8.5	9.5	7.5	2.3	18.4	13.7	20.6	29.5	38.8
Ireland	2.6	1.0	6.5	1.4	3.1	4.8	3.0	3.2	12.3	3.3	3.2	6.6	9.4	7.3	25.6	53.1	28.6
France	2.7	1.2	5.2	1.0	2.3	1.8	5.2	1.7	8.9	4.8	2.4	2.8	5.1	6.2	15.0	11.6	28.0
Portugal	2.9	6.4	3.6	5.4	1.2	11.5	8.3	4.6	14.4	9.1	13.6	9.9	25.2	23.4	17.7	36.7	57.5
Czechia	3.0	2.0	3.0	2.8	4.7	4.0	3.6	7.8	6.3	5.0	2.4	11.8	6.0	8.5	10.4	8.7	47.8
Poland	3.5	2.9	1.4	2.3	3.0	3.1	9.7	4.3	3.2	8.5	8.7	7.5	7.9	18.8	19.3	26.2	31.5
EU-27	4.1	4.4	4.7	4.7	5.2	6.9	7.2	7.1	7.5	7.4	8.2	8.7	10.0	12.6	18.3	26.3	33.8
Croatia	4.5	7.2	3.2	5.7	6.2	4.9	5.6	5.9	5.3	7.8	7.4	7.0	9.1	8.9	35.9	29.2	32.3
Greece	5.4	7.2	0.6	4.1	9.2	8.9	18.9	10.1	1.8	21.2	14.1	8.6	30.5	15.8	54.2	41.3	57.5
Estonia	6.7	2.5	1.6	1.6	6.1	0.9	3.4	3.7	2.4	3.0	4.9	9.7	1.4	4.1	16.2	10.3	27.4
Lithuania	7.8	2.3	0.4	2.8	6.3	5.3	5.0	6.6	13.0	5.8	9.9	12.0	25.6	18.8	17.8	19.2	50.1
Slovakia	9.8	10.4	6.6	7.6	12.9	9.1	12.0	11.0	14.0	9.1	15.3	13.9	7.8	11.0	10.8	15.5	45.3
Latvia	10.0	11.0	11.7	8.7	8.2	8.1	10.3	16.4	24.5	7.6	11.3	23.4	18.2	16.2	31.6	27.6	57.7
Romania	14.8	24.8	28.0	42.4	21.6	36.7	33.2	55.5	26.6	30.3	40.1	45.3	15.4	60.1	29.3	61.4	67.3
Hungary	22.8	15.5	7.8	13.7	22.0	18.2	15.4	17.0	27.2	15.2	30.6	31.1	12.5	20.9	36.2	51.1	52.9
Bulgaria	40.2	43.2	49.0	38.4	42.4	26.9	32.3	52.0	36.2	42.5	41.4	30.2	40.2	52.3	43.9	54.6	72.1

Source: Guio, Marlier, Vandenbroucke und Verbunt (2020).
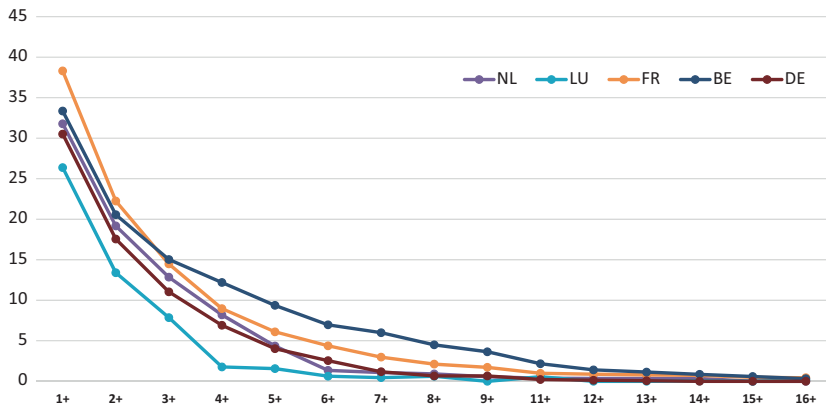
Fig. 1 Child distribution (aged 1 to 15) by the number of items of which they are deprived, Belgium, France, Germany, the Netherlands and Luxembourg, 2014, %. Source: Guio and Vandenbroucke (2018), op. cit.

a more nuanced picture depending on the item, i.e. countries that are at a relative disadvantage for some items and a relative advantage for others.

Despite Luxembourg's overall enviable results, child deprivation is not non-existent here. 9 % of children live in a household that does not have the resources to offer them a week of holiday per year. More than 20 % of children in Luxembourg live in a household that is not able to replace worn-out furniture. Some children suffer from the lack of the most severe items: 3–4 % of children are unable to buy new clothes or pay for school trips.

This table shows the percentage of children deprived of *each item taken separately*. We will now examine the extent to which children accumulate these 17 items. Figure 1 shows child distribution by the number of items of which they are deprived, for Luxembourg and for neighbouring countries (the Netherlands, France, Germany and Belgium).

This chart shows that Luxembourg has the best relative position among neighbouring countries: Luxembourg is the best-positioned country, whatever the deprivation threshold (i.e. the 'severity' of the deprivation). Using the threshold of three items lacked (the threshold used on a European level), Luxembourg has a child deprivation rate of 8 % compared with 15 % in Belgium and France, 13 % in the Netherlands and 11 % in Germany.

If the threshold is set at four or more items lacking (i.e. for more severe forms of deprivation): 12 % of children are deprived of at least four items in Belgium,
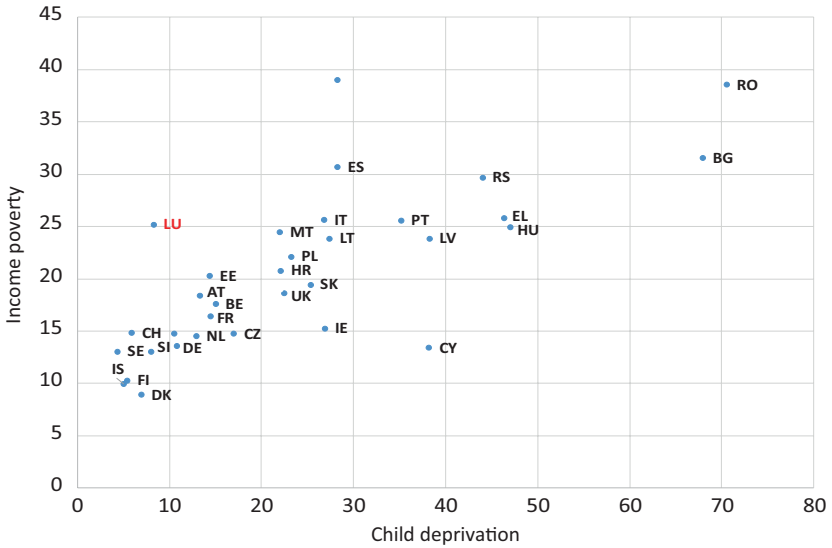
Fig. 2 The proportion of children (aged 1 to 15) deprived of at least three items (of the 17) and the proportion of children suffering from income poverty, EU 27 countries and non-EU countries covered by the EU-SILC, 2014, % *NB:* For a list of country abbreviations, see Appendix 1. Source: Guio, Marlier, Vandenbroucke und Verbunt (2020), using cross-sectional data from the EU-SILC 2014 study

whilst this proportion is extremely low in Luxembourg (2 %) and at 7–9 % in the Netherlands, Germany and France.

These figures illustrate that this child-specific deprivation indicator sheds new light on the situation of children in Luxembourg. Until this point, it was traditionally thought that a quarter of children in Luxembourg were living below the poverty threshold. This new indicator pinpoints 8 % of the child population as suffering from deprivation. Figure 2 compared the child poverty rate with the child-specific deprivation rate in all EU countries. The European indicator for **child poverty** is defined as being the proportion of children living in households with an income below 60 % of the equivalent national median household
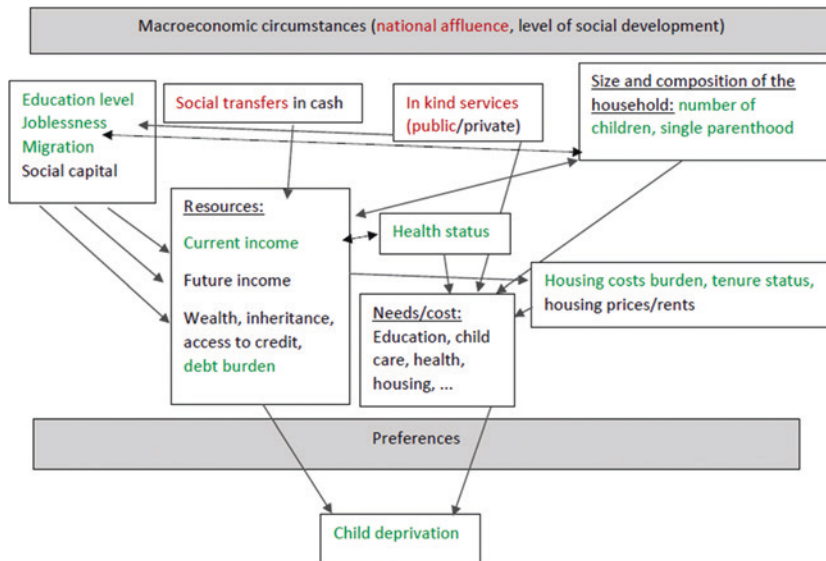
Diagram 1 Determinants of child deprivation. Source: Guio und Vandenbroucke, 2018, op. cit

income[5]. This is a relative income poverty indicator (given that the poverty threshold varies from one country to another).

This chart confirms that in comparison to the rest of Europe, Luxembourg has a higher child poverty level (25 %) but a lower child deprivation level (8 %).

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[5] A household's equivalent income is the net (disposable) income. It is calculated in three stages: a) all monetary income received from any source by each member of the household or by the household itself is added up (including labour and capital income, social benefits in cash, and cash transfers between households), deducting any taxes and social contributions paid; b) to reflect differences in household size and composition, the total (net) income of the household is divided by the number of 'equivalent adults' using the 'modified OECD equivalence scale' which applies a weighting to all household members (1 to the first adult, 0.5 to the second and all subsequent people aged over 14, and 0.3 to each child aged under 14); and c) the final result, the equivalent disposable income, is assigned equally to each member of the household (adults and children).

This chart is based on *aggregate* data on a macro level. It shows the position occupied by Luxembourg within the European rankings, and the wide variety of national situations within the EU. But what are the specific risk factors for deprivation in the EU and Luxembourg? In order to better understand these factors at household level and institutional level, the following sections continue this analysis at the *individual (child)* level, using econometric analysis to highlight which household/ parent characteristics play a significant role in explaining child deprivation.

3 Child deprivation drivers in EU countries and Luxembourg

This section presents the conceptual framework of Guio et al. (2020), who used various models to analyse risk factors for child deprivation in the EU.

From a theoretical perspective, the authors identified three sets of factors that could explain the probability and/or intensity of child deprivation[6] as shown in Diagram 1:

1) the longer-term command over resources;
2) the needs and costs;
3) the size and composition of the household.

The relationships between these different types of determinants are also set out in Diagram 1.

First of all, the authors explain that children's material well-being depends on how much the household is able to consume, which, in turn, depends on its **'longer-term command over resources'**[7].

Although current (disposable) household income as measured by the survey is usually used as a proxy for 'command over resources', this is only one element in a household's resources, which are also affected by its previous, current and future income, its wealth and its ability to borrow. However, these elements are difficult to collect and are not available in the EU-SILC survey. There are variables that offer a way to approximate them: level of education, position on the labour market, and migration background. These factors act as follows:

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[6] For a review of the determinants of material deprivation, see Perry, 2002; Bárcena-Martin et al. 2014, 2017 and 2018; Boarini and Mira d'Ercole 2006.

[7] See also Fusco et al. 2011 for a similar frame of reference.

- Level of education offers a more enviable position on the labour market and relatively easy access to credit institutions to overcome potential liquidity problems. Level of education is also an indicator of future income (especially for young people) according to investment in human capital. In the same way that highly qualified individuals are often the offspring of highly qualified individuals, we can also presume that they often benefit from larger inheritances, which will contribute to their wealth.
- *Ceteris paribus,* a non-EU migration background often correlates with a more vulnerable position on the labour market, a smaller inheritance, and less easy access to credit institutions.
- Similarly, joblessness within the household is a probable indicator of a precarious position on the labour market for working-age members of the household, which is a predictor of future risk of unemployment and can also hinder access to credit institutions in order to overcome liquidity problems. If joblessness is due to long-term unemployment, it can also result in the household's wealth and savings being eroded and ultimately lead to debt.

Furthermore, available resources are affected by social transfers in cash (which are included in the available income variable used). However, the type and design of social transfers can also be important for combating child deprivation. For similar aggregate transfers between two countries, we can assume that the country that best targets its transfers towards the poorest and where replacement transfers are the most appropriately used will be the most effective at combating child deprivation.

Secondly, the authors argue that deprivation is also affected by **costs and needs;** households with the same resources may have different needs and may be facing different costs. Needs in particular depend on the health of the people in the household, home ownership, housing costs and cost of public services such as education or childcare. The link between health and deprivation has been widely documented (see for example Marsh et al. 2000).

The third set of explanatory factors mentioned above (**size and composition of household**) affects the level of resources, the probability of joblessness, and the costs faced by the household. For example, single-parent households are more economically vulnerable (because they have a reduced ability to pool the risk of unemployment between multiple adults in the household). Single parents also find it harder to reconcile their professional and family life, and are therefore more likely to opt for part-time work or no work. In terms of needs/costs, they are facing fixed costs (housing, education, etc.) that generally represent a higher proportion of their resources than would be the case in households with multiple adults.

Furthermore, similar levels of resources and needs do not necessarily imply similar levels of deprivation. **Individual preferences** also play a role and affect consumption (it could be argued that to a certain extent, preferences are shaped by the level of resources, education, cultural context, etc.).

Diagram 1 also shows that certain relationships go both ways. For example, it can be assumed that there are interactions between parents' level of education, professional status and cultural context on the one hand, and the size and composition of the household on the other. Health affects employment and wage level, and is affected by the general level of resources.

Applying this model to the available data, it is difficult to analyse the impact of each determinant given the lack of information for certain variables. The variables in green in Diagram 1 are available at individual (child) level in the data sample. Some important factors affecting both the household's command over resources and its costs are not available: for example, in-kind support provided by family/friends or a direct measurement of inheritance. Data in this field is limited to the national total for this social spending in-kind (the volume received by each household is ignored in the sample). In Diagram 1, the variables shown in red are available at macro level. Those in black are not available at all.

Diagram 1 does not include one element that can affect econometric results: the difficulty of measuring income and deprivation (and potentially other explanatory variables) equally well. For example, it is difficult to measure income from self-employment or capital. Similarly, it is not always easy to collect reliable information on child deprivation due to parents' potentially feeling ashamed to admit that their children are deprived of essential items. As for people living in long-term poverty, it is known that preferences can be adaptive (such people may lower their expectations and claim that they do not need an item that they cannot afford to purchase). Some of these difficulties are incorporated into the empirical model.

4 What Factors Cause Deprivation in Luxembourg?

4.1 Econometric Strategy

To evaluate the *specific risks of deprivation* in Luxembourg, we have chosen an econometric model designed to test the relationships highlighted in Diagram 1 by grouping together Luxembourg, Belgium and the Netherlands. This enables us to shed new light on whether determinants in Luxembourg are different from the other two countries. The dependant variable varies from 0 to 17 (deprivation

Table 2 Results of negative binomial model, Luxembourg, Belgium and the Netherlands, 2014

	Coef	Impact	Different in Luxembourg?	Different in the Netherlands?
Self-employment (reference: no member of household self-employed)	−0.3***	Mitigating	No	No
Income	−0.1***	Mitigating	Yes, more mitigating	Yes, less mitigating
Jobless household (ref: with job)	0.4***	Aggravating	No	Yes, less aggravating
Single parent (ref: other households with children)	0.2***	Aggravating	Yes, more aggravating	No
Primary, lower secondary education (ref: tertiary education)	0.7***	Aggravating	Yes, less aggravating	No
Upper secondary education (ref: tertiary education)	0.5***	Aggravating	Yes, less aggravating	Yes, less aggravating
Very heavy housing burden (ref: light burden)	16.8***	Aggravating	No	No
Slightly heavy housing burden (ref: light burden)	1.0***	Aggravating	No	No
Number of children	0.0	No	No	No
Non-EU migrant (ref: Lux or EU)	0.2***	Aggravating	No	No
Renting (ref: owners or free housing)	0.7***	Aggravating	No	No
Heavy debt burden (ref: light debt burden)	0.4***	Aggravating	No	Yes, more aggravating

NB: ***Coefficient significantly different from zero, Significant at *1 %* level. *Reading note:* Children living in single parent households are at a greater risk of deprivation than others, this risk is higher in Luxembourg than in the other two countries. *Source:* EU-SILC 2014 cross-sectional data, author's computation.

items) and has a high level of over-dispersion, a variance that is higher than average. Using a negative binomial model is therefore recommended. By grouping together data from Luxembourg, Belgium and the Netherlands, we are able to perform tests to estimate if the impact of each variable differs between the different countries.

4.2   Results

Table 2 presents the results of the (negative binomial) model, explaining the *number* of deprivations experienced by a child based on the characteristics of the household in which they live. Essentially, a model of this type helps enable an understanding of *each* characteristic's impact on the number of deprivations suffered by a child, once the impact of other characteristics has been taken into account (in other words, 'all other things being equal'). Traditionally, the impact of each characteristic is measured by comparing the difference in deprivation risk between a group suffering from a risk factor (e.g. those living in a jobless household) and a reference group (e.g. those living in a household with employment). The results shown in the first column demonstrate the impact of these explanatory factors for the three countries. We then test the differences between Luxembourg and the other two countries (second column) or between the Netherlands and the other two countries (third column).

The results confirm the impact of variables linked to 'longer-term command over resources' and to 'household needs', as implied in Diagram 1. In particular, they show that:

Household income has a significant impact on child deprivation in the three countries, but this impact is even higher in Luxembourg. Living in a (quasi-) jobless household increases child deprivation, even if income is already taken into account by the model. However, living in a jobless household in the Netherlands increases deprivation by a smaller amount than in the other two countries. Parents' level of education also has a significant impact on the intensity of child deprivation, even once other household characteristics are taken into account. People with lower qualifications are more likely to suffer deprivation than those with higher levels of education. Nevertheless, this negative impact is less pronounced in Luxembourg (and in the Netherlands for the intermediate category), which is doubtless due to the fact that there are more employment opportunities for less skilled people than in Belgium, where unemployment levels are very high. For similar income level, households with one or more self-employed members tend to suffer from fewer deprivations. As explained above,

Table 3 Deprivation rate
for all children compared
with those living in a
single-parent household
(in %), and risk ratio,
Population of children
aged 1 to 15, EU countries
covered by EU-SILC, 2014

Country	All children	Single parent	Risk ratio
IT	27	30	1.1
BG	68	82	1.2
RO	70	89	1.3
ES	29	36	1.3
PT	36	48	1.3
EL	46	64	1.4
LV	38	56	1.5
HU	47	77	1.6
EE	14	24	1.6
HR	21	36	1.7
CY	38	66	1.8
LT	27	49	1.8
DK	7	13	1.9
SK	25	49	1.9
IE	27	52	2.0
PL	23	46	2.0
UK	22	44	2.0
SI	10	21	2.1
FR	14	30	2.1
CZ	17	36	2.1
DE	11	26	2.3
AT	14	32	2.3
FI	6	14	2.4
MT	22	54	2.5
SE	4	11	2.5
BE	15	38	2.5
NL	13	33	2.6
LU	8	30	3.5

NB: For a list of country abbreviations, see Appendix 1. Source Own computations using
cross-sectional data from the EU-SILC 2014 study

this may be partly due to the difficulty of correctly measuring income from self-
employment in surveys such as EU-SILC, or of drawing a distinction between
personal and professional assets and costs for the self-employed.

Variables relating to debt or housing costs prove to be important predictors of
child deprivation. Renters are at a greater risk of deprivation than homeowners,

even when other variables are taken into account. Non-EU migrants are at risk of greater deprivation than native or EU migrants, once other characteristics are taken into account.

Finally, living in a single-parent household significantly increases child deprivation, even once other differences are accounted for. Living alone with children is a risk factor in itself. As explained above, this may be due to higher fixed costs (housing, education, childcare etc.) that generally represent a higher proportion of the household's resources than would be the case in households with multiple adults. Where income levels are comparable, single-parent households can also suffer from greater income volatility (because they do not have the income of another adult to rely on). It should be noted that this risk is even higher in Luxembourg. Table 3 illustrates the extent to which single-parent households are at a very high relative disadvantage in Luxembourg. This table presents the child deprivation rates in all European countries, both for the total child population and for those living with a single parent. The ratio between these two figures is then calculated. A ratio above 1 means a higher risk for single-parent households. This table shows that Luxembourg is the European champion, with the deprivation risk three times higher for children living with a single parent than it is for children as a whole.

5   Conclusions

What conclusions can be drawn from this analysis in order to understand child deprivation in Luxembourg? Our analysis has shown that children in Luxembourg are better protected from deprivation than those in neighbouring countries. Nevertheless, this good performance on a national level hides some disparities among children living in Luxembourg. Those living with a single parent are particularly at risk: nearly a third of such children suffer from deprivation in their daily lives, 3.5 times higher than for the general population of children.

There are also other factors affecting the risk of deprivation. The most powerful predictors are housing costs, household income, household joblessness, and parents' level of education. However, our results also clearly show that the explanatory power of the different variables affecting households differs from one country to another, even between neighbouring countries such as Belgium, Luxembourg or the Netherlands. This means that countries differ in terms of how each variable relates to the risk of child deprivation, in other words that household income, unemployment, the burden of single parenthood, housing costs, and debt level have a different impact on child deprivation in each country.

This could be due to differences that are not measured in the data, such as in-kind transfers or the quality and cost of public services (education, childcare, public transport, etc.). These elements can substantially increase permanent income and/or reduce household needs and the related costs in countries where they are provided for free or at low cost.

These analyses show that it is important to measure child-specific deprivation and to understand its determinants in order to remedy them by putting in place appropriate public measures. Every child growing up in a situation of deprivation has a higher probability of suffering from poverty in adulthood. This is therefore an acute problem right now, with repercussions for the future. In Luxembourg, our study shows the importance and urgency of remedying the heightened risk and difficulties experienced by single-parent households, households in debt, and those facing high housing costs.

Appendix 1 List of country abbreviations

BE Belgium	LT Lithuania
BG Bulgaria	LU Luxembourg
CZ Czechia	HU Hungary
DK Denmark	MT Malta
DE Germany	NL Netherlands
EE Estonia	AT Austria
IE Ireland	PL Poland
EL Greece	PT Portugal
ES Spain	RO Romania
FR France	SI Slovenia
HR Croatia	SK Slovakia
IT Italy	FI Finland
CY Cyprus	SE Sweden
LV Latvia	

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