CROSS-NATIONAL DATA CENTER in Luxembourg

Inequality Matters

LIS Newsletter, Issue No. 11 (September 2019)

Dear readers,

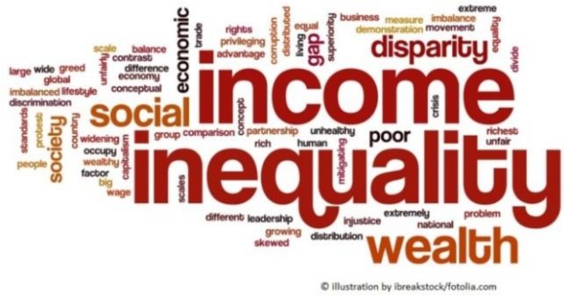
We are happy to announce the release of various new datasets in the LIS Database: Austria (at16), Brazil (br16), Colombia (co16), Finland (fi16), Japan (jp10 & jp13). Likewise, we made additions to the LWS Database – a whole new series of the Spanish wealth data has been harmonised (es02-es14).

The Central Banks of Estonia and Luxembourg have recently signed agreements to share their wealth data with us to be added to LWS Database, and so has the Lao Statistics Bureau for its Expenditure and Consumption Survey to be added to the LIS Database.

We are glad that Hugo del Valle-Inclán (University of Vigo), a former visiting scholar at LIS, shares his latest research findings with our readers. Hugo is proposing to use data on household capital income as a proxy of family background in the analysis of inequality of opportunity. His argument is very striking as capital income is much more widely available than family background information. Hugo applies various sensitivity analyses to test the accuracy of the method.

Our two *highlights* focus on the development of poverty measures. Laure Doctrinal and Rense Nieuwenhuis (both SOFI, University of Stockholm) raise a thoughtful question of our time – 'who closes the gender gap in old age poverty?'. It is an important question to ask, given that the gender pension gap between men and women is approximately twice as high compared to the gender wage gap. The second article by Gintare Mazeikaite (LIS) looks at extreme child poverty after the great recession. A closer look at selected country statistics decomposed by citizenship status reveals that increases in child poverty did not affect all population groups equally.

Enjoy reading! *Jörg Neugschwender, editor*



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Using Capital Income to Proxy Family Background: An Approach to Measuring Inequality of Opportunity

Hugo del Valle-Inclán ✉ (University of Vigo)

This article draws from ECOBAS Working Paper No. 2019-01, "Estimating Inequality of Opportunity in Many New Periods: The Capital Income Approach" (June 2019), where the reader can find the detailed results.

What is inequality of opportunity and why does it matter?

When asked about the ideal distribution of income or wealth, people do not think of perfect equality. Instead, individuals seem to care about economic fairness, even if in actuality this may imply some inequality. A number of political philosophers and economists, from John Rawls to John Roemer, have tried to define what makes a distribution fair. In a nutshell, they propose that what should be equalized are not outcomes – whether income, wealth, educational attainment and such like – but the *opportunities* for attaining them. If when enjoying the same opportunities (think of them as choice sets) as anybody else, some individuals manage to attain greater levels of a certain outcome by means of personal effort, then no moral objection to such inequality could be put forward. Hence, in the field of inequality of opportunity, IOP henceforth, inequalities with respect to any outcome are deemed "fair" or "unfair" depending on where they stem from. Simply put, are considered fair those inequalities produced by factors individuals can choose – such as the degree of effort exerted – while unfair inequalities, on the contrary, arise from personal characteristics individuals cannot control – such as gender, race or family background. These personal characteristics, called *circumstances*, may indeed play a role in people's social and economic development prospects, and this influence is judged ethically offensive on the grounds that these circumstances fall outside an individual's responsibility. Of course, deciding which ones are the relevant circumstances is a normative task, as well as an essential step in the measurement of IOP.

The most common approach to empirically measuring IOP is to define a set of circumstances and to observe their joint distributions across a given outcome, most commonly income. With a representative sample, under the assumption of equality of opportunity (outcome distributed independently of circumstances), we should see no systematic inequality in outcomes between people of different circumstances. Nonetheless, in the real world we do observe a distance between this counterfactual ideal and the actual joint distributions, and that distance is what we call IOP. A more detailed overview of the underlying philosophy and measurement of IOP is presented in the article by Francisco H.G. Ferreira in this newsletter. Also in this publication, Maurizio Bussolo, Daniele Checchi and Vito Peragine have described an approach to estimating its long term evolution, while Paul Hufe and Andreas Peichl discuss a broader conception of what economic fairness entails.

Why would we want to use capital income to proxy family background?

The measurement of fair and unfair inequality has been attracting increasing attention in recent years. However, its empirical application is limited by the scarce availability of a key piece of information routinely included in the set of circumstances: the family background of individuals. For instance, in the LIS database we have information on parental education or occupation (variables typically employed to proxy family background) in only about 18 per cent of all waves.[1] In the case of the EU-SILC, another well-known database for the study of poverty and inequality, we have this kind of information for around 14 per cent of the waves.

This text explores how to overcome this data limitation. Instead of relying on the scarce availability of information on parental education or occupation we propose to use data on household capital income because this also proxies family background *and* it is widely available. In the case of LIS, we have information on household capital income for around 99 per cent of waves, while the EU-SILC approximates 93 per cent of them. Though the article on which this text is based employs only the EU-SILC database at this moment similar exercises have been carried out employing LIS data obtaining equivalent results. Naturally, nothing impedes applying this approach using any other database suitable for the study of poverty and inequality.

Why could capital income make a good proxy of family background?

In his famous book "Capital in the Twenty-First Century", Thomas Piketty (2014) wrote about the return of what he dubbed *patrimonial capitalism*, referring to the importance of bequests in the determination of wealth. If patrimonial capitalism is truly back, then capital income could serve as a proxy for family background. And in addition to that, other mechanisms may be at play too: on the one hand, from the intergenerational mobility literature we know that more educated parents tend to transmit more social advantages, such as education, to their children (see for example Chetty *et al*., 2014, or Jäntti and Jenkins, 2015), while returns on investments appear to be linked to education and financial literacy, something we know from the portfolio literature (Von Gaudecker, 2015; Bucher-Koenen and Ziegelmeyer, 2011); on the other hand, savings and wealth ownership have been found to be largely determined by the intergenerational transmission of human capital, something explored by the wealth inequality literature (Charles & Hurst, 2003; De Nardi & Fella, 2017; Hällsten & Pfeffer, 2017; Hansen, 2014).

But wait, can we include a non-exogenous variable in the set of circumstances?

In Roemer's definition (1998), only exogenous variables (exogenous meaning being beyond the influence of individual choice) may qualify as circumstances. Our proposal of including capital income in the circumstances' set violates this principle. We defend our strategy on three grounds: a) capital income should be understood not as an income variable, but as a variable correlated to family background – to the extent that it accurately proxies parental features, the concern of it being within individuals' control is lessened; b) to tackle this concern further we follow a procedure for "isolating" the exogenous component of capital income and to only then use it for the estimation of IOP; finally c), we perform an accuracy test of the IOP estimates produced, with satisfactory results. In sum, this method appears to constitute an informative approximation of IOP estimates obtained with a "standard" set of circumstances (i.e., including parental education), but it is much less limited by data availability. Using a measure of capital income to proxy family background is not likely to be preferable over employing data on parental characteristics; however, we suggest it is a useful alternative when the latter information is not available.

The capital income approach

Our project consists of three parts:

- We first construct an "exogenous" measure of capital income to be included in our set of circumstances that we will use to estimate IOP;
- Second, we test the accuracy of our approach by comparing IOP estimates obtained with a "standard" set of circumstances (i.e., including parental education) and our set (excluding parental education but including a measure of capital income). For this purpose we consider datasets in which information on both parental background and capital income is available. In the EU-SILC database these correspond to the waves of 2004 and 2010 only. We conclude that our approach is accurate to the extent that it returns similar results to those of the "standard" method that we adopted as our baseline;
- Once the reliability of our strategy has been assessed, we benefit from it and estimate IOP in datasets that do not have information on parental background, that is, most waves.

The database we use, the EUropean Survey of Income and Living Conditions, is a well-known and researched database for the study of inequality, poverty, and social exclusion. It offers harmonized data on income and circumstances at the individual and household level for up to 31 European countries in its most recent waves.

We employ the mean log deviation as inequality measure and use both a parametric and a non-parametric method to obtain lower bound estimates of ex-ante IOP (although for the sake of brevity we will only show the results of the non-parametric method in this text). Our outcome of interest is annual gross wage and we restrict our sample to individuals aged 30 to 59 whose main activity status is "at work".

We keep in our sample only countries that were already present in the 2004 wave, thus excluding Bulgaria, Croatia, Malta, Romania and Switzerland. We also exclude from our analysis economies where the distribution of capital income was so skewed that only a tiny proportion of households received any capital income at all, since it impedes the grouping of individuals according to it. These economies are Estonia, Hungary, Ireland, Latvia, Lithuania, Poland and Slovakia. In addition, we do not estimate IOP in waves prior to 2007 in France, Greece, Italy, Spain and Portugal, because our outcome variable, gross annual wage, is not available in those datasets. Nonetheless, despite all these limitations, we are able to obtain a remarkable number of new IOP estimates.

For our set of circumstances we consider binary gender (2 groups), immigrant status (2 groups), and *either* parental education, for our baseline set of circumstances, *or* capital income, for the set of circumstances we propose (3 groups). Although a vector of three circumstances is without doubt smaller than the "true" vector, we make this choice in order to perform a stricter accuracy test of our method. Generally, the more circumstances are included in the set, the smaller the relative role of each one will be. For our case, this means that the difference of including parental education or capital income would be reduced as we increase the number of circumstances. Therefore, we believe that this reduced set is adequate for the task at hand, which is accuracy assessment. If our method performs satisfactorily with such a sparse number of circumstances, it is likely to perform better as the dimension of the set increases.

● *Construction of an "exogenous" measure of capital income*

We can think of wealth ownership and capital income as determined by two elements: a *dynastic* component, the product of advantages acquired through birth such as access to good education and bequests, and a *meritocratic* one, resulting from effort exerted during our lifetime. To reduce the influence of the latter component we will follow a procedure endeavouring to isolate the former, and only then include it as a measure of capital income in our set of circumstances. This procedure consists of running an OLS regression of per capita gross capital income of households against a number of individual characteristics representing individual effort (namely education and occupation), and position in the life cycle (age). A time dummy is included as well.[2] Then, after obtaining the residuals ϵ_i from (1), which can be seen as the value of per capita capital income once the influence of non-dynastic factors has been removed, we construct a discrete variable grouping individuals according to the size of these residuals.

$$pckinc_i = \beta_0 + \beta_1 education_i + \beta_2 occupation_i + \beta_3 age_i + \\ + \beta_4 year + \epsilon_i \qquad (1)$$

Now that we have constructed an "exogenous" measure of capital income, let us look at how it is related to parental features. Table 1 shows the average marginal effects obtained after two ordered logistic regressions. In the first regression, column (A), the dependent variable is an ordinary measure of capital income (including both the dynastic and meritocratic components), and the second one, column (B), shows our "exogenous", or dynastic, measure. These regressions are run using pooled cross-sectional data of our subset of 19 countries, including observations from both the 2004 and 2010 waves. In short, we can see that capital income appears to be related to parental education and that this relationship becomes stronger if we consider our "exogenous" measure. Also, by following our isolation procedure, it seems that we have managed to reduce the influence of non-dynastic variables, as seen by comparing the results in (A) and (B). Therefore, we conclude that our proxy of family background might be a valid alternative to parental information and can proceed to use it to estimate IOP.

● *Testing the accuracy of the approach*

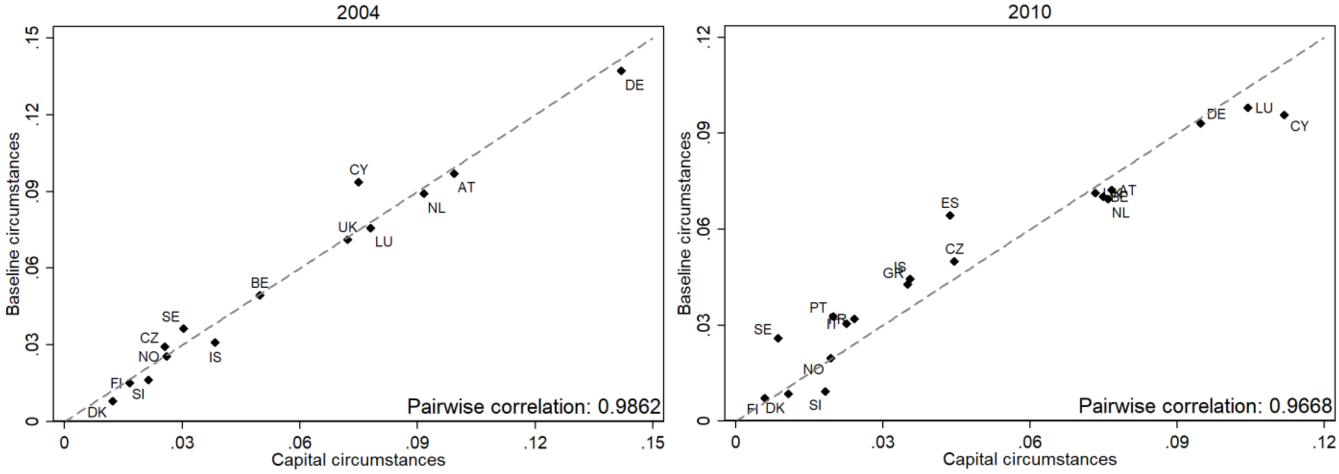
Using the EU-SILC database we obtain the estimates of absolute IOP shown in Figure 1, referring to 2004 and 2010. On the vertical axes are estimates obtained using the "baseline" set of circumstances; on the horizontal axes are shown the "capital" estimates. The closer these points are to the diagonal grey line, the more similar both kinds of estimates are. They are generally similar, and we find pairwise correlations close to 1.

Table 1: Average marginal effects after ordered logit. Dependent variables: ordinary measure of household per capita capital income (A) and "exogenous" household per capita capital income (B). EU-SILC database.

	(A)			(B)		
	Pr(=1)	Pr(=2)	Pr(=3)	Pr(=1)	Pr(=2)	Pr(=3)
Parental education						
Secondary	-0.215**	0.0937**	0.121**	-0.258***	0.108***	0.150**
	(0.0760)	(0.0334)	(0.0441)	(0.0704)	(0.0281)	(0.0501)
Tertiary or more	-0.260***	0.106***	0.155***	-0.303***	0.114***	0.189***
	(0.0733)	(0.0300)	(0.0447)	(0.0664)	(0.0262)	(0.0514)
Parental occupation						
Skilled workers (ISCO 4-8)	-0.0493*	0.0193*	0.0301*	-0.0428	0.0161	0.0267
	(0.0202)	(0.00825)	(0.0123)	(0.0234)	(0.0103)	(0.0141)
Professionals (ISCO 1-3)	-0.0129	0.00534	0.00761	-0.00258	0.00105	0.00152
	(0.0202)	(0.00836)	(0.0119)	(0.0281)	(0.0115)	(0.0166)
Education						
Secondary	-0.0848***	0.0376***	0.0471***	-0.0137	0.00404	0.00968
	(0.0224)	(0.0105)	(0.0127)	(0.0373)	(0.0116)	(0.0259)
Tertiary or more	-0.117***	0.0498***	0.0675***	0.132***	-0.0551***	-0.0774**
	(0.0225)	(0.0111)	(0.0126)	(0.0370)	(0.0143)	(0.0281)
Occupation						
Skilled workers (ISCO 4-8)	-0.0698***	0.0309***	0.0389***	0.0894	-0.0208	-0.0686
	(0.00801)	(0.00337)	(0.00562)	(0.0541)	(0.0140)	(0.0435)
Professionals (ISCO 1-3)	-0.104***	0.0440***	0.0600***	0.176	-0.0551	-0.121
	(0.0151)	(0.00652)	(0.0101)	(0.0989)	(0.0390)	(0.0645)
Age group						
40 to 49	-0.0809***	0.0347***	0.0462***	0.0216	-0.00704	-0.0145
	(0.00725)	(0.00476)	(0.00427)	(0.0231)	(0.00686)	(0.0167)
50 to 59	-0.171***	0.0634***	0.108***	0.136**	-0.0566***	-0.0793**
	(0.0118)	(0.00922)	(0.0108)	(0.0417)	(0.0159)	(0.0294)
Year dummy						
2010	-0.0426	0.0165	0.0261	0.0611	-0.0223	-0.0388
	(0.0542)	(0.0215)	(0.0328)	(0.0572)	(0.0234)	(0.0345)
Observations		131,407			131,407	

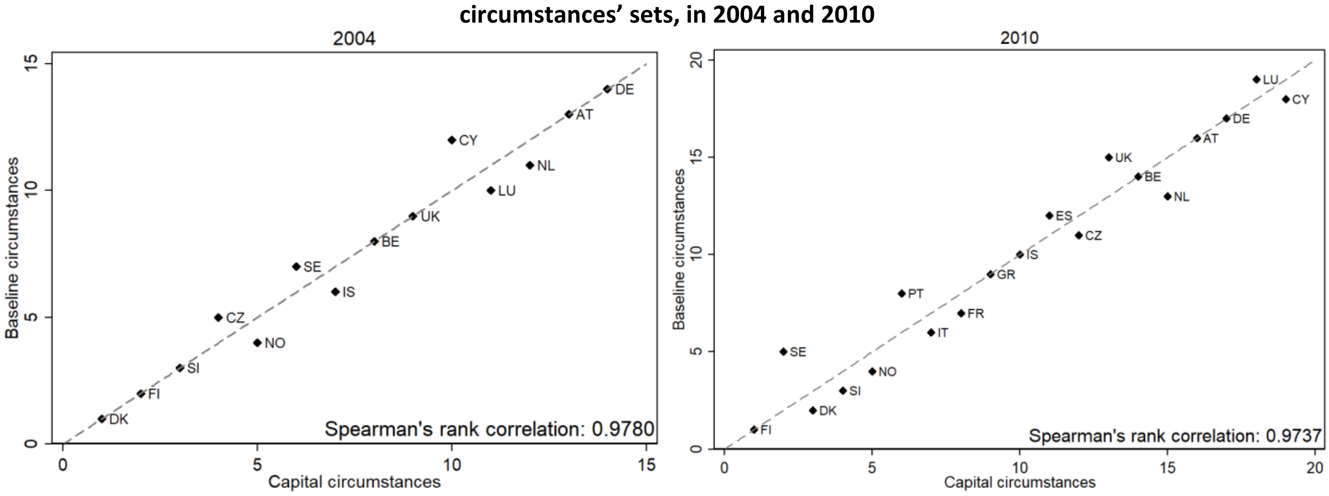
Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Robust standard clustered by country errors in parentheses. This table shows average marginal effects after ordered logit on the three levels of the dependent variables. Effects with respect to the base category of each regressor (``Pre-primary, primary or lower secondary education (levels 0, 1, and 2 of ISCED-97)'' in the case of parental and personal education, ``Unskilled workers (ISCO 9)'' with parental and personal occupation, group ``30 to 39'' years old in the case of age, and 2004's wave in the case of year). These regressions include observations from 2004 and 2010 of Austria, Belgium, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Sweden, Slovenia and the United Kingdom (19 countries).

Figure 1: Comparison of absolute inequality of opportunity estimates obtained with "baseline" and "capital" circumstances' sets, in 2004 and 2010



Source: EU-SILC.

Figure 2: Comparison of country rankings with respect to absolute IOP estimates obtained with "baseline" and "capital" circumstances' sets, in 2004 and 2010



Source: EU-SILC.

A common use of cross-country IOP measures are international rankings. Figure 2 shows comparisons of IOP ranks. It would be an interesting feature of the capital income approach to be a rank-preserving method with respect to baseline estimates, although it is not the case. Nevertheless, the rank correlations between our "baseline" and "capital" estimates are also close to 1, meaning that if a country ranks high (low) according to the "baseline" IOP measure, it will rank high (low) as well if measured with the capital income approach, and vice versa. For a more comprehensive accuracy test and a robustness analysis, the reader is referred to the working paper version of this article.

● *Benefiting from the approach*

Once we have tested the reliability of the capital income approach we can proceed to take advantage of it and obtain IOP estimates for almost the full extent of the EU-SILC database. Figure 3 shows, to the best of our knowledge, the largest number of IOP estimates of European countries produced so far. These IOP estimates have been obtained using a non-parametric approach and consist of relative IOP measures. The advantage variable is gross annual wage and the inequality measure employed is the mean log deviation. Confidence intervals are shown as grey areas, which have been calculated with standard errors computed via bootstrapping (400 replications) stratified by country, year and region. This figure includes as well IOP estimates obtained with our "baseline" circumstances, in which confidence intervals are displayed as red bars, for the only periods for which these are available, namely 2004 and 2010. This allows to rapidly assess the similarity between the "baseline" and "capital" estimates and illustrates how large is the number of new data points obtained thanks to the capital income approach.

Summing up

This article has introduced a strategy to estimate IOP that does not rely on the availability of data on parental characteristics. After testing the accuracy of our method we conclude that it is sufficiently reliable to be used in cases where we lack information on parental background, thus enabling us to obtain many new IOP estimates. Possible uses of the increased number of data points available include, for instance, studying the relationship of IOP with institutions, economic growth or electoral outcomes. It also helps to obtain historical estimates, allowing to use old datasets that do not contain parental data.

1 *As of the time of writing this article.*

2 *Previous versions also included as regressors dummies of population density, to account for the differences between rural and urban wealth, and mating, for the effect of marriages. Since the results do not change, they have been removed for the sake of simplicity.*

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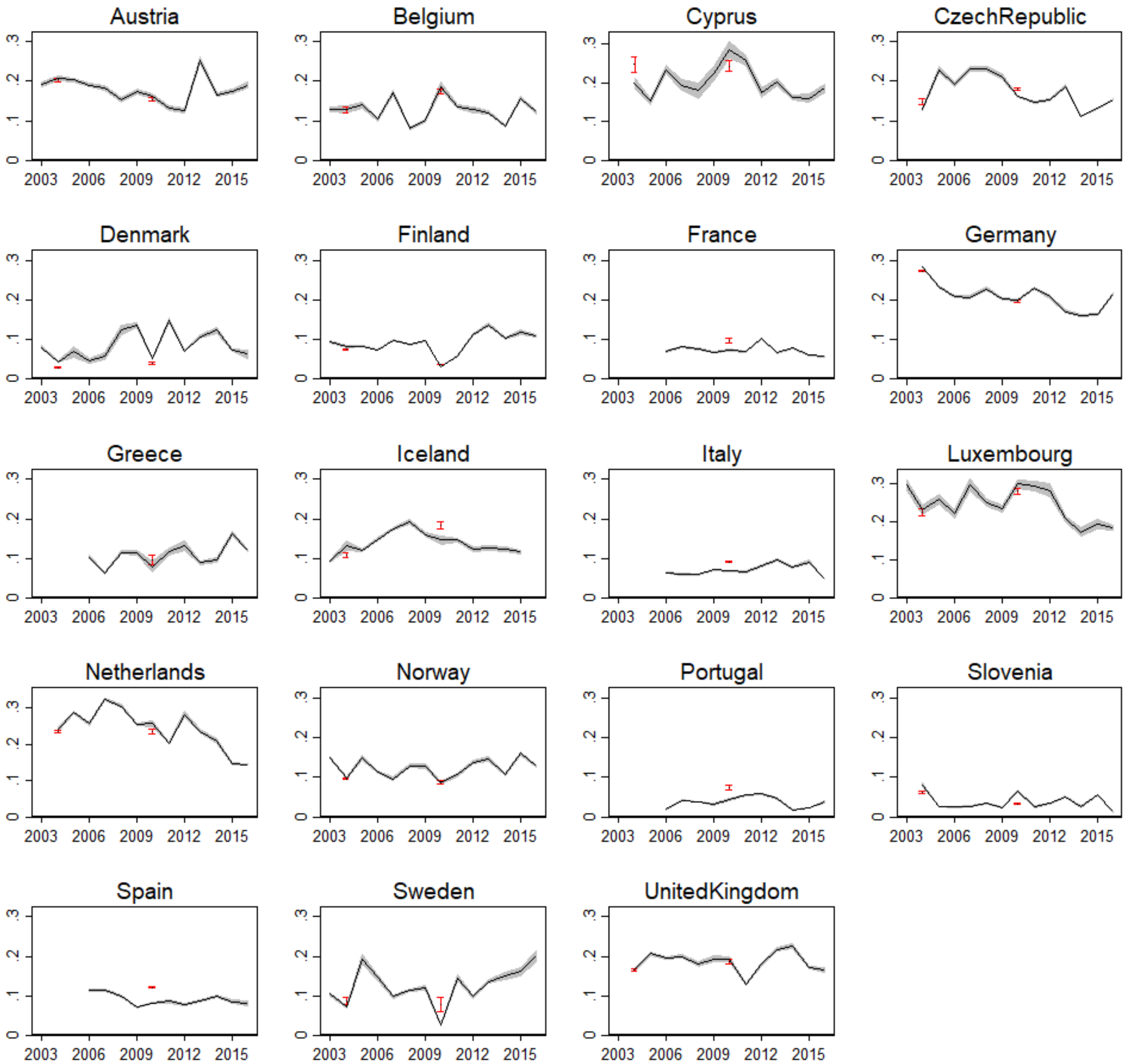
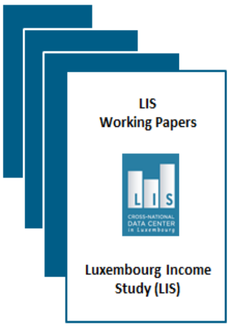
Figure 3: Evolution of relative IOP in Europe, estimated with the “capital” set of circumstances



Notes: Confidence intervals shown as grey areas, which have been calculated with standard errors computed via bootstrapping stratified by country, year and region (400 replications). Confidence intervals of IOP estimates obtained with “baseline” circumstances displayed in red bars. The advantage variable is gross annual wage, the inequality measure employed is the mean log deviation, and the estimation approach is non-parametric.

Source: EU-SILC.

Working Papers & Publications



Focus on ‘Child Poverty, Child Maintenance and Interactions with Social Assistance Benefits Among Lone Parent Families: a Comparative Analysis’. **LIS WP No.774 by *Mia Hakovirta* ✉ (University of Turku, Department of Social Research, Finland), *Christine Skinner* (University of York, Department of Social Policy and Social Work, UK), *Heikki Hiilamo* (University of Helsinki, Department of Social Research, Finland), *Merita* Jokela (National Institute of Health and Welfare, Finland)**

In many developed countries lone parent families face high rates of child poverty. Among those lone parents who do get child maintenance there is a hidden problem. States may retain all, or a proportion, of the maintenance that is paid in order to offset other fiscal costs. Thus, the potential of child maintenance to alleviate poverty among lone parent families may not be fully realized, especially if the families are also in receipt of social assistance benefits. This paper provides an original comparative analysis exploring the effectiveness of child maintenance to reduce child poverty among lone parent families in receipt of social assistance. It addresses the question of whether effectiveness is compromised once interaction effects (such as the operation of a child maintenance disregard) are taken into account in four countries Australia, Finland, Germany and the UK using the LIS dataset (2013). It raises important policy considerations and provides evidence to show that if policy makers are serious about reducing child poverty, they must understand how hidden mechanisms within interactions between child maintenance and social security systems can work as effective cost recovery tools for the state, but have no poverty reduction impact.

LIS working papers series

LIS working papers series - No. 768
Manufacturing Jobs and Inequality: Why is the U.S. Experience Different?
by Natalija Novta, Evgenia Pugacheva

LIS working papers series - No. 769
Work/Family Arrangements across the OECD: Incorporating the Female-Breadwinner Model
by Helen Kowalewska, Agnese Vitali

LIS working papers series - No. 770
Does Immigration Affect Native’s Labor Market Outcomes in Germany?
by Dilan Tas, Merima Kastrat

LIS working papers series - No. 771
Unfair Inequality and the Demand for Redistribution
by Leo Ahrens

LIS working papers series - No. 772
The Political Economy of Inequality in Rich Democracies
by Jonathan Rothwel

LIS working papers series - No. 773
Women in the Top of the Income Distribution – What Can We Learn From LIS-Data?
by Roman Bobilev, Anne Boschini, Jesper Roine
Forthcoming in *the Italian Economic Journal.*

LIS working papers series - No. 774
Child Poverty, Child Maintenance and Interactions with Social Assistance Benefits Among Lone Parent Families: a Comparative Analysis
by Mia Hakovirta, Christine Skinner, Heikki Hiilamo, Merita Jokela
Published in *the Journal of Social Policy* (First published online March 28, 2019): 1-21.
https://doi.org/10.1017/S0047279419000151.

Data News

Data releases

Luxembourg Income Study (LIS)

Austria

One data point has been added to the LIS Database; namely AT16 (Wave X). The AT16 dataset is based on the 2017 waves of the Austrian Survey on Income and Living Conditions (EU-SILC), carried out by Statistics Austria.

Brazil

One new dataset from Brazil, BR16 (Wave X), has been added to the LIS Database. The dataset is from the 2016 data of National Continuous Household Sample Survey (PNADC) from the Brazilian Geographical and Statistical Institute.

Colombia

One new dataset from Colombia, CO16 (Wave X), has been added to the LIS Database. The dataset is from the 2017 wave of the Great Integrated Household Survey / Gran Encuesta Integrada de Hogares (GEIH), carried out by the National Administrative Department of Statistics / Departamento Administrativo Nacional de Estadística (DANE).

Finland

One new dataset from Finland, FI16 (Wave X), has been added to the LIS Database. The dataset is from the 2017 wave of the Survey on Income and Living Conditions (SILC) which is carried out by Statistics Finland.

Japan

Two new data points from Japan, JP13 (Wave IX), and JP10 (Wave VIII) have been added to the LIS Database. The datasets are based respectively on the 2014, and 2011 of the Japan Household Panel Survey (JHPS), from Keio University Joint Research Center for Panel Studies.

Luxembourg Wealth Study (LWS)

Spain

LIS is delighted to announce the addition of Spain to the LWS Database. Five data points have been added to the LWS Database; ES14 (Wave IX), ES11(Wave VIII), ES08 (Wave VII), ES05 (Wave VI), and ES02 (Wave V). The datasets are based on the Survey of Household Finances (EFF) -Spain, acquired from Bank of Spain.

Data revisions

Luxembourg Income Study (LIS)

Austria - Variable *educlev* has been revised for the entire series.

Brazil - The entire Brazilian series has been revised: few income components have been reclassified and the entire labour market section has been improved.

Colombia - CO07, CO10, and CO13 have been substantially revised, with the inclusion of all 12 monthly samples and the full imputation of missing income data.

Finland - Three earlier datasets (FI07, FI10, and FI13) have been revised, namely variables *parleave*, and *secjob*.

Japan - JP08 has been revised, with the addition of *edmom_c, eddad_c, hxmort*, and weights.

United Kingdom - Variables *occ1_c* & *occb1* have been revised in the whole series. In addition, variable *educ_c* is now filled in UK86, UK91, UK94, and UK95 with the age when completing last year of education attended.

Panama - PA07, PA10, and PA13 - variable *educ* has been revised with no impact on the 3 major categories.

LIS/LWS Data Release Schedule

	Winter 2019	Spring 2020
	LIS Database	
Belgium		BE04/07/10/13/16
Canada		CA16
Denmark	DK16	
Germany	DE16	
Ireland		IE13/16
Italy		IT16
Laos		LA02/07/12
Lithuania		LT16
Mexico	MX14/16/18	
Norway		NO16
Peru	PE16	
Slovenia	SI15	
South Africa	ZA15/17	
Vietnam	VN93/98/02/04/06/08/10	
	LWS Database	
Chile		CL07/12/14/17
Germany	DE17	
Italy		IT16
Japan	JP04/09/11/14	
Luxembourg	LU10/14	
Norway		NO16
South Africa	ZA15/17	
United Kingdom		UK13/15

Highlights

Who closes the gender gap in old-age poverty?

Laure Doctrinal and Rense Nieuwenhuis
(Swedish Institute for Social Research (SOFI), Stockholm University)

This research highlight provides insights into parts of Doctrinal's ongoing doctoral thesis undertaken at the Swedish Institute for Social Research. A more detailed article on this topic is in preparation.

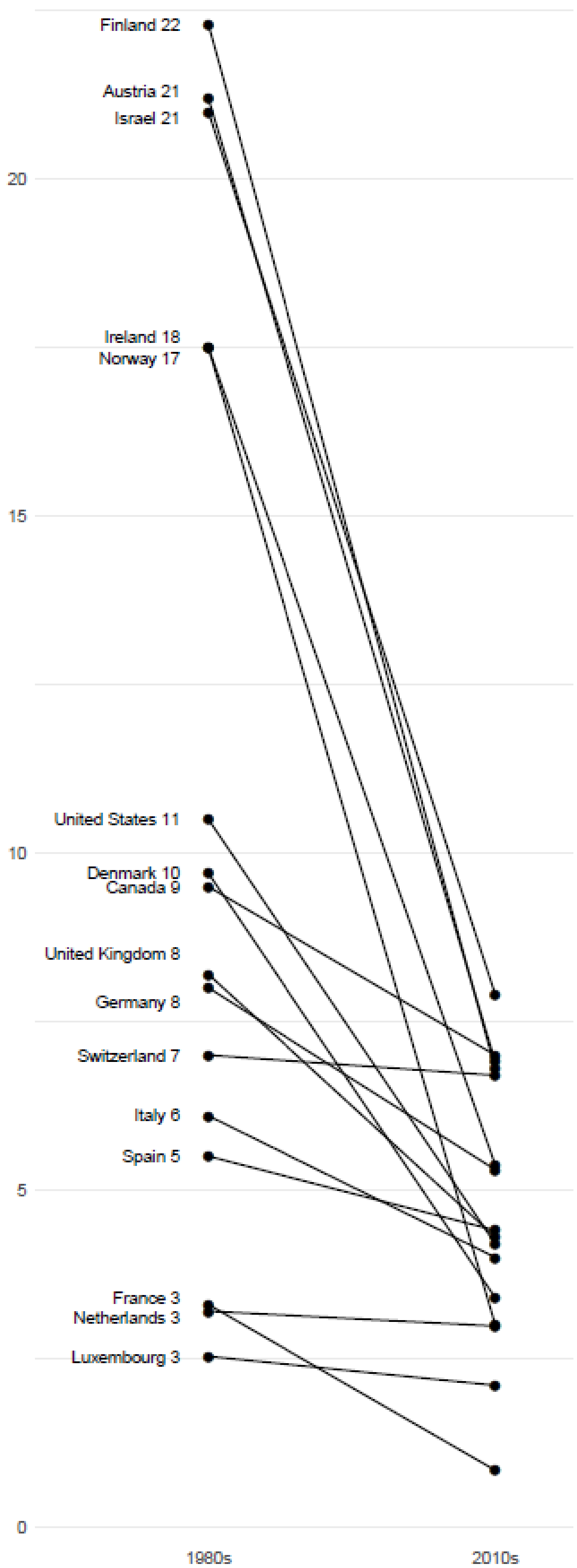
Old age no longer comes with the poverty risks that it used to a few decades ago and with the overall decrease in old-age poverty, concerns about economic inequalities and poverty have shifted to younger age groups (Fritzell and Ritakallio 2010). Yet, among those in old age, vast differences remain. In particular, older women are exposed to greater poverty risks than men (Ebbinghaus, Nelson, and Nieuwenhuis, 2019). Here, we focus on how this gender gap in old-age poverty has developed in recent decades across a number of OECD countries, a subject so far largely overlooked in the literature. Although different studies have shown that this gender gap remains (Smeeding and Sandström, 2005; Zaidi 2010), little is known about the trends of women's and men's respective poverty risks. We propose an analytical approach that highlights several distinct patterns that may drive changes in the gender gap in old-age poverty.

Exploring trends in the gender gap in old-age poverty confronts us with methodological challenges. As commonly used indicators of income poverty are based on household income, these measures assume that all income is shared equally among household members and do not differentiate between the poverty status of different members within the same household. As such, the gender gap in poverty based on such measures will be largely – although not exclusively – shaped by the different poverty risks of single men and single women. Longitudinal studies on old-age poverty usually do not take this aspect into consideration but its importance will be highlighted here. A second challenge in examining the gender gap in poverty over longer periods of time across multiple countries is that such analyses require high-quality data of sufficient sample size that is comparable across countries, as well as available for a longer period of time. The Luxembourg Income Study (LIS) database provides such data.

The following analyses focus on trends in poverty risks of single men and women in their early retirement age (65-74). After presenting general trends in the gender gap in old-age poverty in 16 countries, we focus on four (Canada, Finland, Norway, and the United States) that are indicative of distinct patterns in the data. Using LIS data, At Risk Of Poverty rates (AROP) are calculated at the 60% level and based on the median cash disposable household income. The gender poverty gap is calculated as the subtraction of men's poverty rates from women's poverty rates.

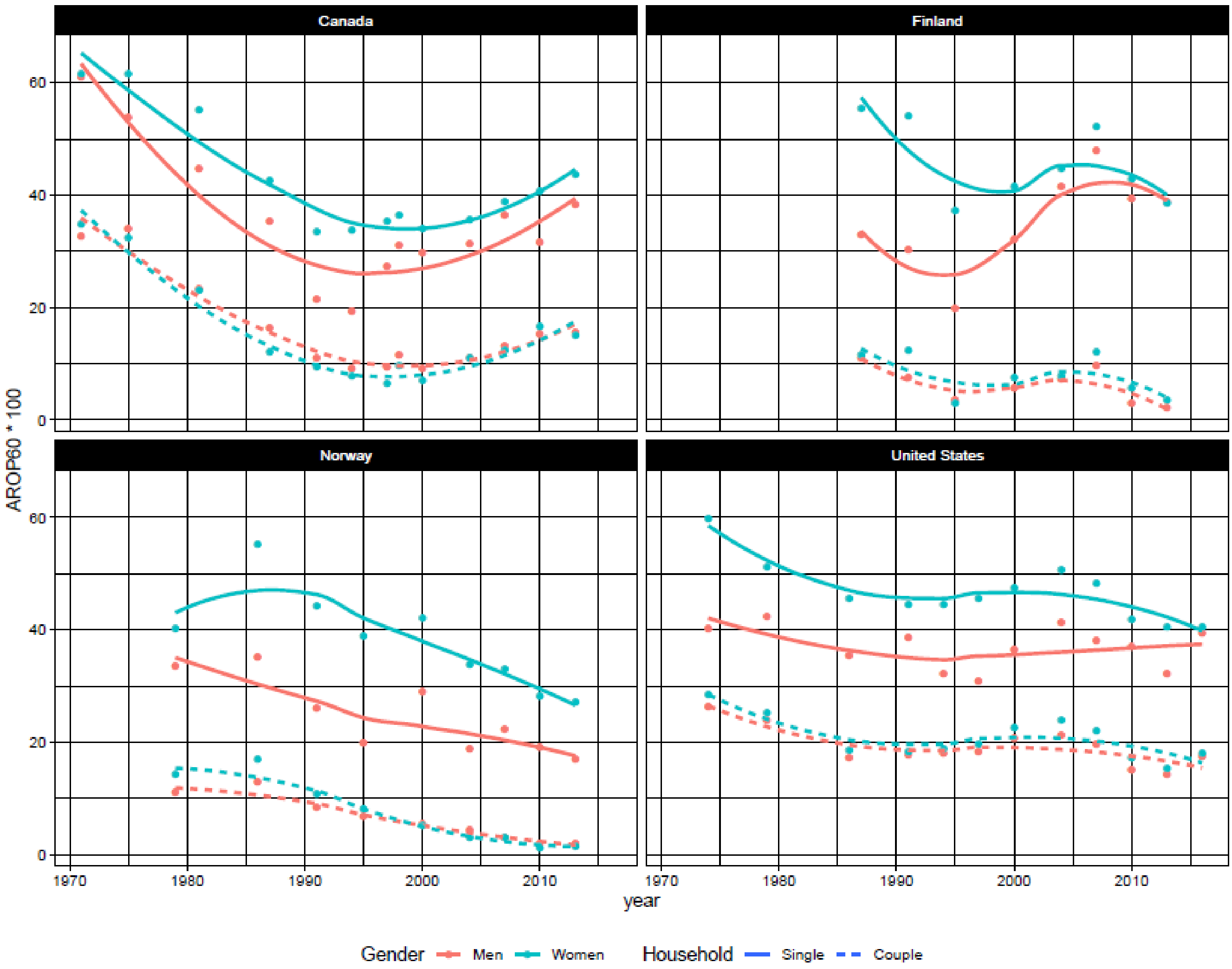
Figure 1 shows the evolution of the gender gap in old-age poverty among all households in old age – thus combining singles and couples – in 16 OECD countries from the 1980s to the 2010s. The gender gap in old-age poverty has been decreasing in all countries, although the extent of the decline varies across countries. Particularly large decreases were observed in countries as different as Finland, Austria, and Israel, while there was only a marginal decline in, for instance, the Netherlands, Luxembourg, and Switzerland. It is not our goal to explain the differences between countries here but rather to demonstrate that to do so it is pertinent to examine in particular old-age poverty among single women and single men. This is illustrated in Figure 2.

Figure 1. Gender gaps in old-age poverty, 1980s – 2010s



Source: Luxembourg Income Study (LIS) Database.

Figure 2. Poverty rates of single men and women in old age, 1971-2016



Source: Luxembourg Income Study (LIS) Database.

The general pattern shown in Figure 2 is that the poverty risks of old-age persons have been declining over the last decades, although again there is great variation across countries. This applies both to single and to elderly persons living with a partner, although the latter tend to have substantially lower poverty risks. As we argued above, the gender gap is predominantly visible among single women and men. There is only a very small gender gap in poverty among the elderly who live with a partner, which is the result of the sharing of resources assumed in the At Risk of Poverty measure. Hence, our findings highlight that to understand the gender gap in At Risk of Poverty (AROP), a focus on single people is pertinent.

Looking at the gender gap in poverty risks in relation to the respective poverty risks of elderly single men and women shows a few interesting patterns that could not be observed in the overall trends shown in Figure 1. In Finland, the gender gap has closed in part because single women's old-age poverty declined, but also because poverty increased substantially among single men. A similar pattern was observed in Austria, Germany, Israel, and Luxembourg (not shown). In contrast, old-age poverty in Norway declined both among single women and men, but at a faster pace among women. This figure also shows that the marked decline of the gender gap in Norway was in part due to an outlier for women's poverty in 1986; nevertheless, the overall interpretation holds even without this outlier. A similar pattern of single women's poverty rates decreasing faster than men's was found in France, Ireland, Italy, Luxembourg, the Netherlands, Spain and the United Kingdom (not shown). Finally, in the United States, we also saw a decline in the gender gap in old-age poverty but there it was driven by a decline in single women's poverty while men's poverty stayed more or less stable. A final pattern was observed in Canada (as well as in Denmark and Ireland) in which the changes in the gender gap were affected to a substantially lesser degree than the overall changes in poverty rates among single women and single men in old age.

To conclude, these results show that the gender gap in old-age poverty has been declining in the 16 countries analyzed here but to different degrees. The gender gap in old-age poverty was shown to be largely driven by single people. Focusing on singles specifically allowed for the identification of four distinct patterns: (a.) single men's poverty rates increasing relative to women's; women's poverty decreasing along with men's either (b.) declining at a slower pace; or (c.) remaining stable; or (d.) single women's and men's poverty rates following the same development leaving the gender gap relatively unchanged. These distinct patterns suggest that different causal mechanisms are at play. Explanations of the gender gap in old-age poverty should therefore focus on singles and consider determinants of both women's and men's poverty in old age separately.

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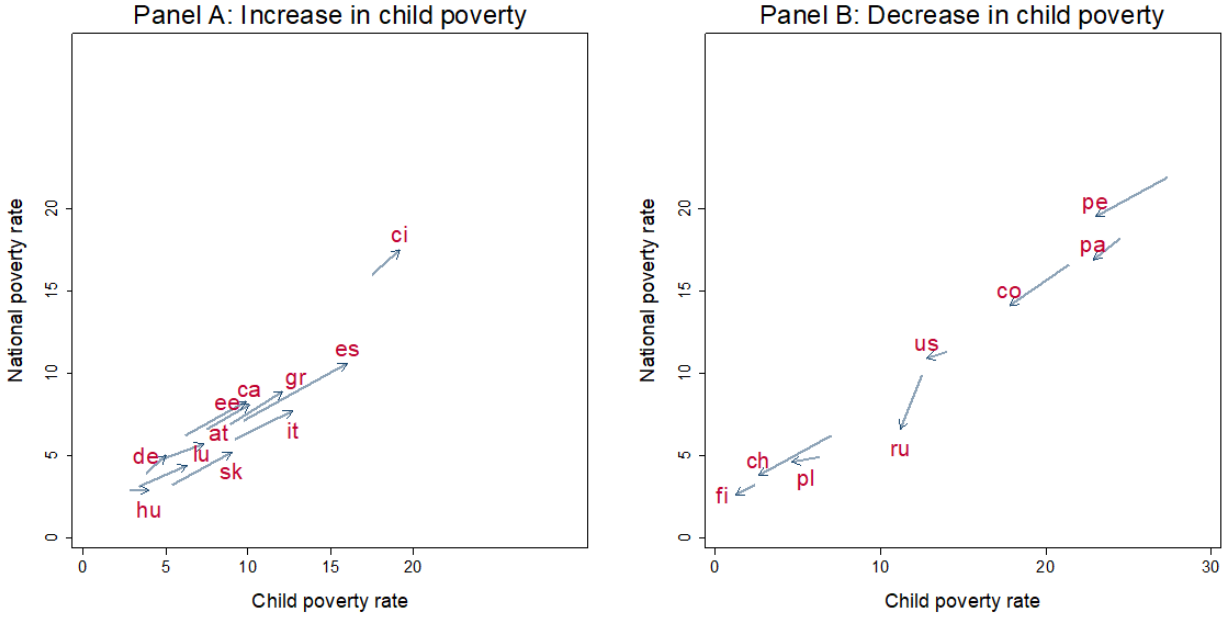
Trends in child poverty in LIS countries since the Great Recession

Gintare Mazeikaite ✉, (LIS)

The recent global economic crisis of 2008 has had severe effects on the employment and living conditions of adults and children in many countries. According to Thévenon *et al*. (2018), child poverty increased by two thirds in the OECD countries during the Great Recession, leaving one in seven children income-poor. Factors such as falling parental and maternal employment rates and wages, lack of support provided by the welfare state, and changes in family composition were among the factors identified behind this change. While poverty at any age is of concern, child deprivation is a particularly sensitive issue not only from an ethical point of view but also due to severe societal consequences. Among other things, child poverty has been linked to a myriad of lifelong problems such as poor health, low educational attainment and poor employment prospects later in life. It is therefore crucial to monitor child poverty and identify the characteristics of households where poor children reside in order to close the poverty gap.

In this note, we look at the trends in severe child poverty in LIS countries since the Great Recession. A child is considered poor when he or she lives in a household with equivalised household disposable income (henceforth – income) below 40% of the country median income. The LIS equivalence scale (household income divided by the square root of household members) is used to account for economies of scale[1]. While the poverty indicator calculated by EUROSTAT using the threshold of 60% of median income is considered the at-risk-of-poverty rate, incomes falling below the 40% median income threshold can be interpreted as severe poverty[2]. We use a relative or floating poverty line because it reflects children's wellbeing with respect to the rest of the country. Alternatively, an absolute or fixed poverty line could be used to measure changes in real disposable income over time. In countries with growing income, poverty rates estimated using the relative poverty line will be higher compared to the poverty rates estimated using the absolute poverty line. The reverse will be true in countries with declining income. Child poverty and the effectiveness of public policies targeted at poverty reduction in LIS countries, such as child allowances and other family transfers, have been investigated recently, amongst others by Cuesta *et al*. (2018), Evans *et al*. (2018) and Gornick & Nell (2018).[3]

Figure 1. Changes in severe poverty among children and the overall population after the Great Recession



Note: The figure shows changes in severe child poverty between the years 2007/2008 and the most recent available year in the LIS dataset: year 2016 for Austria, Estonia, Poland, Russia and the US; year 2015 for Ivory Coast, Germany and Hungary, year 2014 for Italy, and year 2013 for Canada, Switzerland, Colombia, Estonia, Finland, Greece, Luxembourg, Panama, Peru and Slovakia. Poverty is defined as income below 40% of median equivalised household disposable income in each country in a given year.
Source: Luxembourg Income Study (LIS) Database.

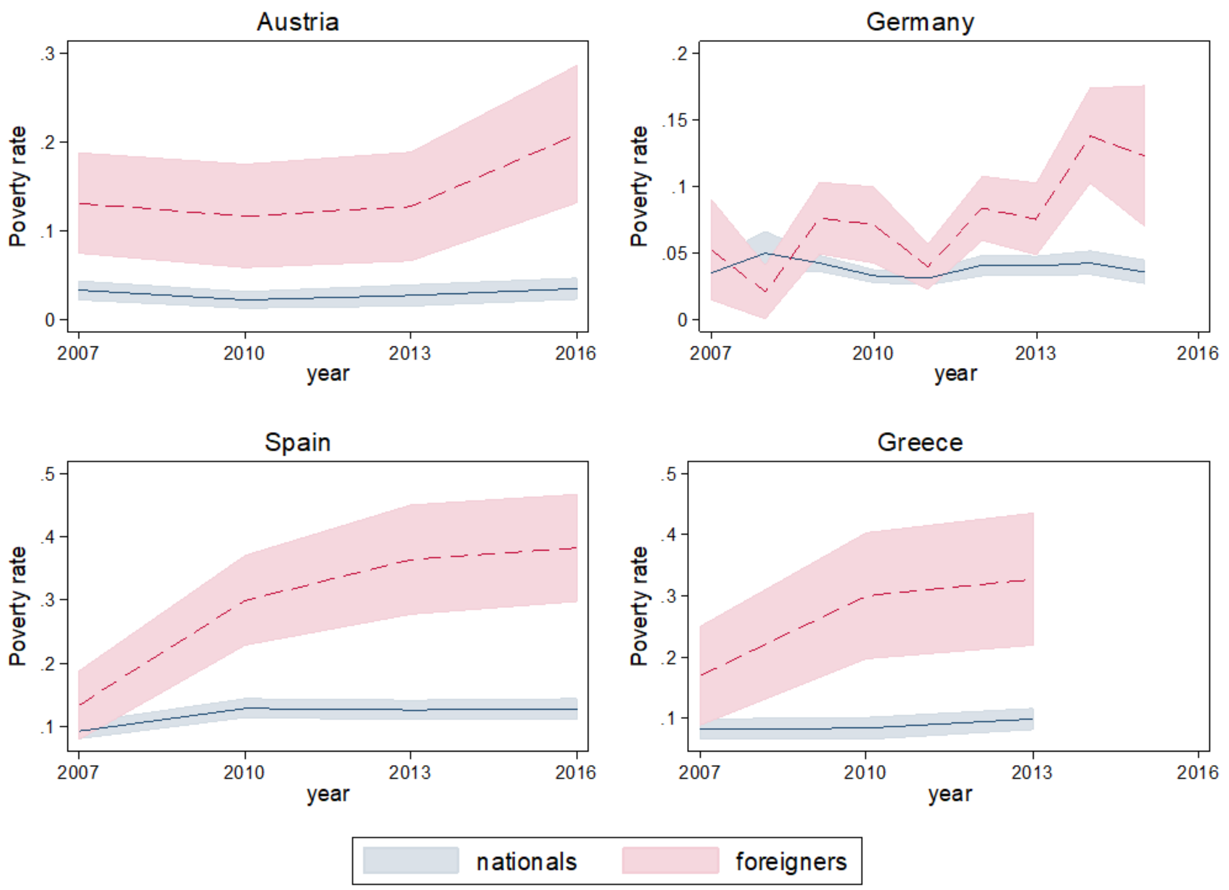
Figure 1 shows trends in national and child poverty rates in LIS countries since the Great Recession.[4] We find that more than half of LIS countries saw an increase in severe child poverty rates, and child poverty rates rose faster than national poverty rates (Panel A). Child poverty rose in many EU countries, in particular, the Southern EU countries such as Greece, Italy and Spain, which were some of the most severely affected countries by the Great Recession. Similar but less pronounced changes can also be observed in some Eastern EU countries such as Estonia and Slovakia, as well as Western EU countries such as Germany and Austria. On the other hand, in most LIS countries with favourable poverty trends, child poverty fell faster than national poverty (Panel B). This was the case in some of the Southern American countries with above-average poverty rates, such as Peru, Panama and Colombia, as well as low-poverty EU countries such as Denmark, Finland and Poland. In Russia, on the other hand, national poverty rates fell faster than child poverty.

A closer look at country data shows that increases in child poverty did not affect all population groups equally. For example, in some of the LIS countries for which data pertaining to immigration status is available, we find a disproportional increase in child poverty among children living in households with a household head who is not a citizen of the country (Figure 2). In fact, we find that differences in child poverty rates at any given moment tend to be more pronounced when citizenship status is considered rather than a broader definition of being an immigrant[5]. This is not surprising since naturalisation offers additional benefits beyond the right to vote, such as easier access to employment (including public sector employment) and better-paid and higher-skilled occupations, as well as a stronger position in the housing market (OECD/EU, 2018)[6].

The descriptive results presented in this note suggest that changes in poverty rates among children, both positive and negative, have been larger than changes in national poverty in most LIS countries during the Great Recession of 2008. Country-level trends in child poverty by citizenship status in some LIS countries suggests that the increase in child poverty has not been equally distributed within different socio-economic groups. Trends in child poverty by citizenship status and other characteristics such as family type, education and employment of household members, could be analysed in more detail using LIS data.

[1] *For a discussion on how the choice of equivalence scales might affect estimates of child poverty, see the note by Heba Omar in the previous LIS Newsletter issue.*

Figure 2. Trends in severe child poverty by citizenship status of the household head



Note: The figure shows changes in child poverty (defined as income below 40% of median equivalised disposable income in each country in a given year) since the Great Recession. We consider children as nationals if they live in households where the head of the household is a citizen of the country (including having a double nationality) foreigners otherwise. 95% confidence intervals are shown by the shaded area.

Source: Luxembourg Income Study (LIS) Database.

[2] *For country-year estimates and methodological notes, see LIS Key Figures.*

[3] *For more papers on child poverty using LIS data, see LIS working paper series.*

[4] *LIS countries with changes in poverty rates of 1 p.p. or less during the analysed period are not included.*

[5] *See METIS for more details on immigration variables in the LIS dataset.*

[6] *See, for example, how the immigrant-native gap in employment and wages in selected LIS countries (using a broader definition of immigration status than citizenship) has been described by Andrej Cupak and colleagues in an article* in the previous LIS Newsletter issue.

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News, Events and Updates

New Data archiving system in LISSY

(applies only to datasets that went under revision after May/June 2019 and for journal review purposes only).

Following the release of the 2019 LIS Template in May/June 2019, LIS is happy to introduce a new data archiving system. With our mission to continue adding new datasets and new countries while maintaining cross-country comparability and high quality data, we foresee that we will occasionally carry out revisions existing datasets. With this tool, users will be able to replicate the analysis that was carried out on datasets that were uploaded in LISSY after May/June 2019, and successively revised.

Note that due to the significant work required from our side to retrieve the archived data versions and to make them accessible through LISSY upon individual request, this tool can only be used for results replication for journal review purposes and for a period of maximum two weeks from the date the access is given.

How to request access to an earlier version of revised datasets?

In order to be able to replicate your analysis carried out on a pre-revised dataset, you need to write to the LIS user support at usersupport@lisdatacenter.org specifying the following:

- The Database (LIS/LWS)
- The Statistical package (Stata, R, SAS, SPSS)
- Date of accessing the dataset(s) and running the analysis.

You will subsequently receive an e-mail with instructions on how to access the pre-revised datasets.

For users interested in accessing the Databases following the 2011 Template (i.e. the last version of the datasets on LISSY prior to May 2019 for LIS and mid-June for LWS), choose the project “LISPRE” from LISSY for the LIS Database, and “LWSPRE” for the LWS Database.

LIS is hiring

LIS is currently seeking applications for a Data Scientist / Programmer. The position involves joining the LIS team to be in charge of the development and maintenance of the tools underlying the entire data production process and other data applications, support the Data Team in the work of microdata harmonisation, taking over some data management tasks., and support LIS' remote-execution system (LISSY). The position foresees a full-time contract (40 weekly hours) for an initial period of 2 years, with a view to transform it into a permanent position.

Applicant profile

- The successful candidate will have a Master degree in a data-related science.
- Advanced knowledge of R is required; knowledge of Stata is an asset; work experience in the field of data for social sciences analysis is appreciated.
- Advanced knowledge of SQL language, ideally some experience with MySql server.
- Proficiency in English, and an intermediate command of French are required (*The working language in the office and among the team is mostly English. However, French is as well used with externals.*)
- Be autonomous as well as be able to work closely within a team in a cooperative way

Applications will be considered until the position is filled.

Interested? See more information on how to apply.

Upcoming New Complementary Database: Objective Inequality Aversion

In the upcoming weeks, LIS will add to its ‘complementary databases’ section a new dataset that provides a measure of objective inequality aversion for over 50 countries across a time period spanning the mid-1960s to the present day. Using this measure for each country, the specific inequality aversion parameter ε, the Atkinson index as well as the ethical upper limit of the poverty line is provided. The data are compiled by Stanislaw Maciej Kot from Gdansk University of Technology (GUT) and Piotr Paradowski (LIS & GUT). The authors exploit a feature of the generalized beta distribution of the second kind (GB2) to estimate objective inequality aversion using household disposable income from over 350 datasets available from the LIS Database. The data will be accompanied by a LIS Working Paper that explains in detail the methodology and provides the empirical analysis of estimated inequality aversion alongside several applications. It is the authors' hope that combining the objective estimates of a society's inequality aversion with the GB2 parameters for all LIS datasets into a single source will facilitate and promote their usage by the scientific community in studies of economic inequality and poverty.

2019 ALDI Award winner

This year's winners of the LIS Aldi Award are Sam van Noort , and Matthijs Rooduijn for the paper Radical Right Populism and the Role of Positional Deprivation and Inequality (LIS Working Paper No.733 also co-authored with Brian Burgoon, and Geoffrey Underhill). The paper was selected from 26 eligible papers, and the evaluation committee included members from different disciplines (public policy, economics, sociology, and political science). Sam presented the paper during the 2019 LIS Summer Workshop, see the presentation here. The paper was recently published as “Positional deprivation and support for radical right and radical left parties,” Economic Policy, 34, no. 97 (2019): 49–93. https://doi.org/10.1093/epolic/eiy017.

Synopsis of the LIS Summer Workshop 2019

This year, we welcomed 31 participants to our annual Summer Workshop; that took place between 8-12 July at the University of Luxembourg, Belval Campus. In 2019, for the first time, LIS, the *University of Luxembourg* and *LISER* jointly organized and contributed to the workshop, which has been newly named the Summer Workshop on Inequality and Poverty Measurement.

The participants of the workshop joined from 9 countries around the world. They had different research interests and different academic backgrounds; including: Economics, Sociology, Statistics, Social Science, Political Science, and Social Work.

The workshop consisted of five days; divided between morning lectures and afternoon hands-on lab sessions. The first 2 days were dedicated to the introduction to the LIS & LWS Databases and the lectures were given by the LIS team. The following three days covered advanced methods and techniques, by Professor Philippe van Kerm (LISER & University of Luxembourg), and Professor Louis Chauvel (the University of Luxembourg).

During the lab sessions, participants were introduced to the LISSY system interface and its coding best practices; gradually they were trained on how to apply more advanced techniques on LIS/LWS Databases.
The workshop entailed two social events; on Monday evening, LIS organized a cocktail dinner following its traditional Summer Lecture;

More information on the LIS Summer Workshop can be found here.

LIS Summer Lecture

In 2009, LIS launched its annual Summer Lecture series. It usually takes place during the LIS Summer Workshop and designated for public audiences. Gero Carletto, the Manager of the Data Production and Methods Unit in the Development Data Group (DECDG) at the World Bank presented the **2019 LIS Summer Lecture** titled: *A Thing of the Past? Household Surveys in the New Global Data Landscape.*

More information on the LIS Summer Lecture series can be found here.

Visiting scholars

During this quarter, LIS welcomed four visiting scholar who came to work onsite with the LIS Databases in the framework of the InGRID2 project, namely Luca Giangregorio, Rosa Mulè, Nora Waitkus, and Lela Jamagidze.

i) Luca Giangregorio is a PhD candidate in Social Sciences at the Pompeu Fabra University in Barcelona. During his stay, Luca was using the LIS Database to observe the redistributive capacity of a sample of countries over time. This assessment is a necessary step for the development of the PhD thesis aimed to quantify the effect of the type of welfare regimes (liberal, social-democratic, continental and Southern-Europe) on the redistributive capacity over time. ii) Rosa Mulè is a political economist who works at the Department of Political and Social Sciences at Bologna University, Italy. Rosa came to work on her project Globalization States and Markets to understand the drivers of within and between group inequality in welfare capitalisms, with a special focus on gender. Rosa also worked on learning and developing teaching tools for her LIS teaching labs at Bologna University. iii) Nora Waitkus who is PhD-fellow at BIGSSS at the University of Bremen, had previously visited the LIS office last year and returned to continue working on her collaborative project with Fabian Pfeffer (University of Michigan). Pfeffer and Waitkus are collaborating to better understand wealth inequality in comparative perspective. The primary focus of Nora's data-work during her visit was to understand the relationship between wealth and income inequality across countries, and what explains cross-national variation in wealth inequality. iv) Lela Jamagidze, an Assistant professor, Faculty of Economics and Business, Ivane Javakhishvili Tbilisi State University (Georgia). Her area of specialization is International Economics. During her stay at LIS, Lela was using the LWS Database to examine cross-country heterogeneity of household borrowing, underlying motivations and loan usage preferences. She worked on the identification of possible linkages between debt-related indicators and socio-cultural characteristics of households in Georgia and selected European countries by putting them in comparative perspective.

LIS Workshop Session held at the 2019 Annual Meeting of the American Sociological Association (ASA)

On 11 August 2019, Janet Gornick – Director of the US Office of LIS and of the Stone Center – led a Policy and Research Workshop at the 2019 Annual Meeting of the American Sociological Association (ASA), in New York City. The workshop was titled: "Introduction to LIS: Cross-National Data Center in Luxembourg: A Resource for Cross-National Research on Poverty, Inequality, Employment, and Wealth."
Janet opened the workshop with a 50-minute overview of LIS – describing what LIS is, reviewing the types of research that can be carried out, and explaining how to access the data.
Her introduction was followed by three brief presentations:

Sarah Kostecki -"Analyzing Inequality across Households in High-Income Countries: How do the Value of Unpaid Work and Non-Cash Government Transfers Change the Picture?"
Laurie Maldonado and Ive Marx -"Family Policies and Single-Parent Poverty in OECD Countries"
Zachary Parolin -"Inclusive Growth among Households with Children in the US, UK, Canada, and Australia: A Decomposition Analysis".

The LIS session closed with an audience Q&A and discussion. Long-time LIS user Lane Kenworthy was in the audience and helped to make the discussion lively and informative.

Stone Center will co-host two book launch events at the CUNY Graduate Center in the autumn of 2019

• On 23 October 2019, at 6:30pm (EST), the Stone Center will co-host a large public program, at the CUNY Graduate Center, titled "The Triumph of Injustice". The event will launch a new book, The Triumph of Injustice: How the Rich Dodge Taxes and *How to Make Them Pay*, by Emmanuel Saez and Gabriel Zucman. The book will be published by Norton on the prior day.

The event will be live-streamed.

• On 10 December 2019, at 6:30pm (EST), the Stone Center will co-host a second large public program, at the CUNY Graduate Center, titled "The Future of Global Capitalism: Branko Milanovic in Conversation". The event will launch Branko Milanovic's new book, *Capitalism, Alone: The Future of the System That Rules the World,* to be published by Harvard University Press in late September.

The event will be live-streamed.

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