Inequality Matters

Quarterly updates on inequality research, LIS micro data releases,
and other developments at LIS

MESSAGE FROM THE EDITOR

Dear readers,

Our databases are further growing! In order to enlarge the availability of long annual time series besides Germany and the United States in the LIS Database, we are in the process of harmonising an annual series for the United Kingdom. With this release, we add a first series of the latest 20 consecutive years (UK99-UK18); more data points will be released in March 2021. The Belgian data series BE03-BE17 has also been annualised. Additional data points were added for Estonia and South Korea. We are equally excited to release five more datasets for the LWS Database: AT17, LU18, UK13, UK15, and UK17. We are grateful for our data providers' efforts!

In the *Inequality Matters* contributions Maximilian Longmuir (Freie Universität Berlin), Carsten Schroeder (Freie Universität Berlin and Socio-Economic Panel (SOEP) at DIW Berlin), and Matteo Targa (Socio-Economic Panel (SOEP) at DIW Berlin) provide novel evidence for two highly debated questions in the literature, i.e. whether job polarization is a local or global phenomenon and whether it entails distributional effects. Bilyana Petrova (Stone Center on Socio-Economic Inequality, GC, CUNY and Max Weber Programme at the European University Institute) discusses how globalisation is shaping economic redistribution in Central and Eastern Europe thirty years after the start of the post-communist transition. By using Theil indices, Manuel Schechtl (Humboldt University Berlin) examines income inequality between the six most prevalent family types before and after income taxation across welfare states. Petra Sauer (LISER / LIS / Vienna University of Economics and Business) and Philippe Van Kerm (LISER and University of Luxembourg) provide a synopsis of the various papers presented during the virtual (LIS)²ER workshop on "The Distributional Effects of Higher Education Expansion".

Our online tutorial series has been extended lately by new contributions by Professor Louis Chauvel (University of Luxembourg). In these video tutorials, Chauvel explains step by step the replication of various cross-national inequality charts.

Please note LIS has currently two vacancies. We are looking forward to your applications!

Enjoy reading! *Jörg Neugschwender*

IN THIS ISSUE

De-routinization of Jobs and Polarization of Earnings – Evidence from 35 Countries

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Background

A large portion of the recent labor market literature has focused on the dynamics of labor demand and supply at the occupational level. It documents simultaneous growth in the employment of high-skill/high-wage occupations and low-skill/low-wage occupations, with consequent deterioration of jobs in the middle of the distribution. The literature defines this U-shaped pattern of employment growth along the wage/skill distribution as "job polarization".

A most influential explanation for job polarization has been proposed by Autor et al. (2003) and is commonly known as the Routine-Biased Technological Change (RBTC) hypothesis. The RBTC hypothesis relates employment polarization to the rapid improvements in information and communications technologies. In particular, technological progress, in the form of computerization and automatization of labor inputs, is a substitute for workers performing routine tasks. This automation of routine tasks raises the relative demand for workers who can perform complementary non-routine tasks that cannot be easily automatized (i.e. problem-solving, creativity, situational adaptability and in-person interactions). While routine tasks are typically characteristic of middle-skilled jobs (production, clerical and sales occupations), non-routine activities are mostly concentrated at both tails of the wage/skill distribution: managerial, professional and technical occupations at the top; personal service occupations at the bottom. According to the RBTC hypothesis, the decreasing costs of technology over the last decades have exogenously driven the adoption of technological devices that replace middle-wage/routinized occupations and increase labor demand for non-routine occupations at the tails of the distribution, leading to polarization of the workforce with potential relevant implications for the evolution of overall inequality.

Research Question and Methodology

We contribute novel evidence for two highly debated questions in the literature, i.e. whether job polarization is a local or global phenomenon and whether it entails distributional effects. Our paper (Longmuir et al., 2020), therefore, tests two hypotheses in the RBTC framework:

- Job Polarization Hypothesis (H-JP): In the last decades, countries experienced decreasing employment shares in routine-intensive occupations and increasing shares in non-routine-intensive ones.

- Earnings Polarization Hypothesis (H-EP): Job polarization implies rising earnings shares for the lower and upper earnings class, while the earnings share of the middle class hollows out.

Our analysis focuses on 35 LIS-ERF countries characterized by different economic and political systems: Austria, Belgium, Brazil, Canada, Chile, Colombia, Czech Republic, Denmark, Estonia, Egypt, Finland, France, Georgia, Germany, Greece, Guatemala, Iceland, India, Ireland, Israel, Jordan, Luxembourg, Mexico, Netherlands, Panama, Peru, Poland,

Russia, Serbia, Slovakia, Slovenia, Spain, Switzerland, US, and Uruguay. This database represents the largest available harmonized micro-database providing detailed income and socio-demographic information at the individual level.

We analyze H-JP by calculating the change of employment- and earnings shares for different occupational groups over time. For H-EP, we apply decomposition methods developed by Firpo et al. (2009) based on re-centered influence functions (RIF).

This paper contributes to the literature by providing a comprehensive international test of the employment and earnings polarization hypotheses as well as an assessment of their relevance for inequality dynamics. Unlike previous research, we investigate the unconditional distributional effects of job polarization, overcoming the limitations of an occupation-based approach and accounting for both *between* and *within*- occupational classes determinants of inequality, claiming that both dimensions must be considered in distributional analysis.
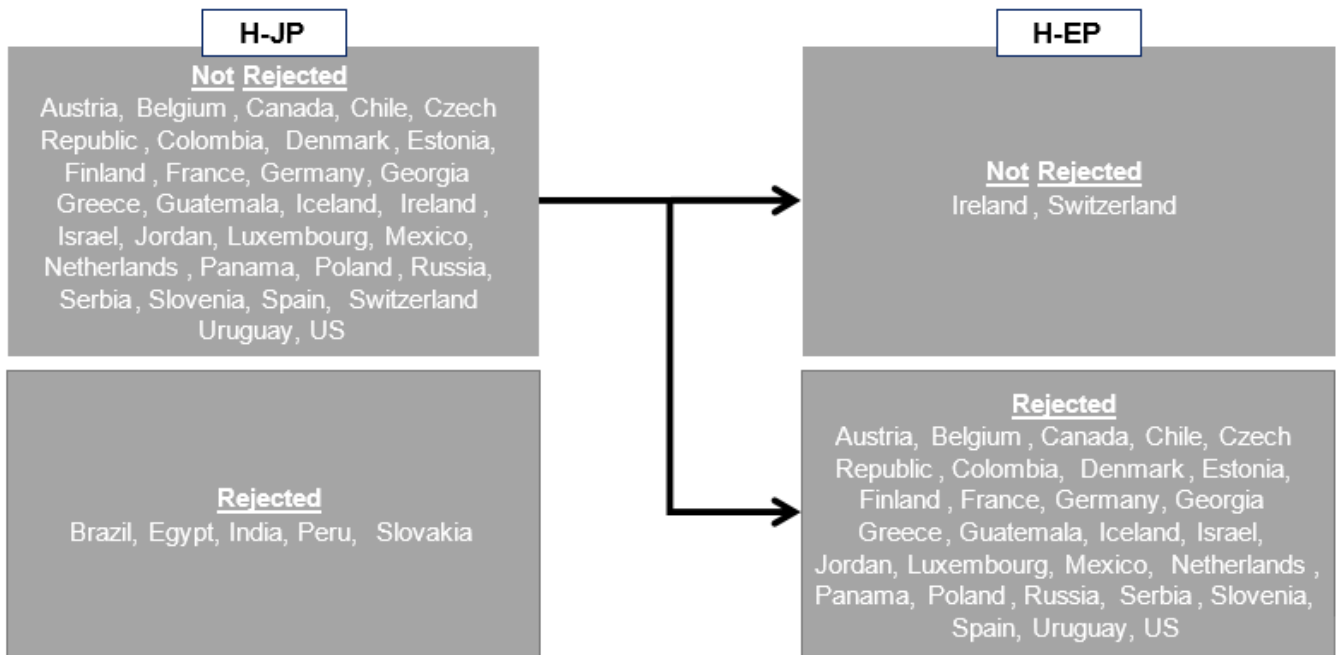
Results

We do not reject H-JP, as we find decreasing employment and earnings shares in routine occupations in 30 out of 35 analyzed countries consistent with the RBTC framework. The right panel of Figure 1 lists the result of our descriptive analysis. We reject H-JP only for Brazil, Egypt, India, Peru, and Slovakia. Therefore, we conclude that the RBTC hypothesis constitutes an important theoretical framework appropriate for studying the evolution of the composition of the employed workforce internationally.

We reject H-EP, because our analysis does not suggest a close link between employment and earnings polarization in 33 out of the 35 analyzed countries, confirming the overall weak predictive power of the RBTC hypotheses for distributional analysis. The left panel of Figure 1 lists the result for H-EP, which cannot be rejected for Ireland and Switzerland. Our estimates suggest that the increased (decreased) demand for non-routine service (routine) occupations does not coincide with increasing (decreasing) returns in bottom (middle) quantiles.

Figure 2 provides a graphical overview of earning inequality patterns. We find overall employment *and* earnings polarization in a restricted subset of countries: Belgium, Canada, Ireland, Jordan, Switzerland, and the United States. However, only in Ireland and Switzerland, does our analysis suggest that U-shaped effects of job de-routinization drive the polarization of the earnings distribution. In Belgium, Jordan, and the United States, job polarization implies increasing inequality, suggesting that employment de-routinization *per se* cannot explain the observed polarization and that other factors have driven the growth of bottom-tail earnings. In almost all European countries under analysis, i.e. Austria, Czech Republic, Denmark, Estonia, Finland France, Germany, Netherlands, Poland, Slovenia, Slovakia and Spain, as well as in Mexico and India, we observe increasing earnings inequality. In Georgia, Jordan, Russia, and in countries in Central and South America, i.e. Brazil, Chile, Colombia, Guatemala, Panama, Peru,

Figure 1. Results: H-JP and H-EP

H-JP

Not Rejected
Austria, Belgium , Canada, Chile, Czech Republic , Colombia, Denmark , Estonia, Finland , France, Germany, Georgia Greece, Guatemala, Iceland, Ireland , Israel, Jordan, Luxembourg, Mexico, Netherlands , Panama, Poland , Russia, Serbia, Slovenia, Spain, Switzerland Uruguay, US

Rejected
Brazil, Egypt, India, Peru, Slovakia

H-EP

Not Rejected
Ireland , Switzerland

Rejected
Austria, Belgium , Canada, Chile, Czech Republic , Colombia, Denmark , Estonia, Finland , France, Germany, Georgia Greece, Guatemala, Iceland, Israel, Jordan, Luxembourg, Mexico, Netherlands , Panama, Poland , Russia, Serbia , Slovenia, Spain, Uruguay, US

Notes. Summary of the results of our analysis considering the job- and earnings polarization hypothesis.

Figure 2. Inequality patterns in 35 countries
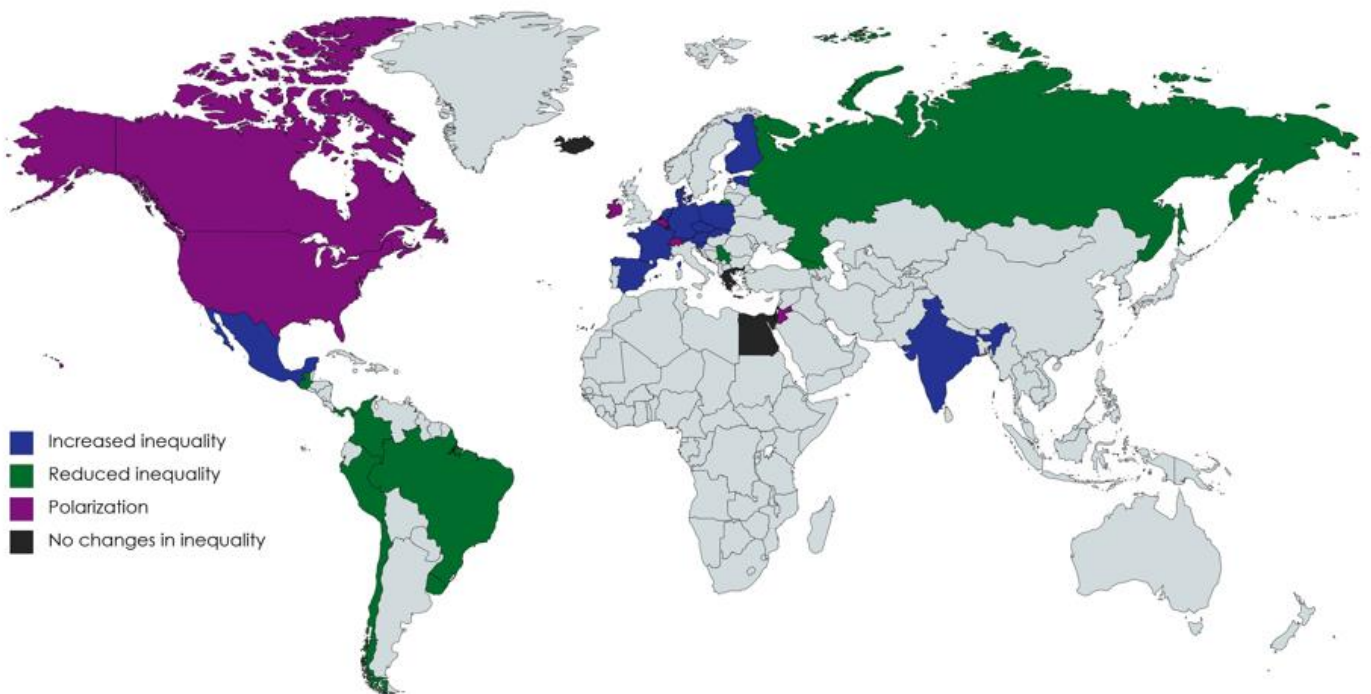
Notes. Results by country, based on our analysis. Blue indicates increased inequality, green represents reduced inequality, purple indicates polarization, and black indicates no changes in inequality.

and Uruguay, we identify decreasing inequality. Inequality patterns in Egypt, Greece, Iceland, Israel, and Luxembourg are rather stable over the time span considered. De-routinization effects, *ceteris-paribus*, are extremely heterogeneous and, in general, do not predict overall quantiles growth patterns.

In a last step, we descriptively scrutinize how changes in the employment structure correlate with changes in inequality between and within occupational classes separately. Consequently, we link H-JP and H-EP results in order to understand why earnings prove to be unresponsive to changes in employment composition. Two major findings result: first, we do not find any significant reduction (increase) in inequality *between* service (abstract) and routine workers. Such results corroborate the RIF decomposition results explained above: changing returns between occupations mitigate the composition effects of job polarization and are key determinants for overall earnings growth. Second, *within* occupations dynamics seem to play the major role for the distributional analysis, although it is typically neglected in RBTC literature.

Our analysis strongly supports the findings by Goos and Manning (2007), Böhm *et al*. (2019), and Hunt and Nunn (2019), questioning the earnings polarization hypothesis and, ultimately, raising concerns about the importance of RBTC for earnings inequality. Our results may corroborate the hypothesis that labor market institutions, such as unions, the minimum wage, and contracts conditions, to some extent alleviate externalities resulting from the increase in job polarization. We urge future research to deepen the understanding behind the interrelation between exogenous de-routinization forces and (endogenous) political control of labor market policies.

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Globalization and Economic Redistribution in Central and Eastern Europe Thirty Years after the Transition

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Last year marked the 30th anniversary of the fall of Communism in Central and Eastern Europe (CEE). Three decades ago, the countries in the region embarked on a journey to fundamentally reshape their domestic institutions and establish fully functioning market economies. This transition brought about tremendous challenges as governments sought to overhaul existing structures and insert themselves into the global economy.

Opening up to international trade and foreign capital exposed societies to heightened risks. As domestic enterprises collapsed under the burden of obsolete technology, inefficient production practices, and intense foreign competition, unemployment soared. The decline of entire sectors forced many workers into early retirement. Multiplying bankruptcies and falling wages doomed many to poverty. Inequality rose rapidly as industries stagnated and productivity differentials widened.

National welfare states were thus more important than ever. As they navigated problems that they had not experienced in decades, policy-makers had to re-build their countries' social protection systems and revamp existing institutions. While doing so, they had to navigate the complexities of the global economy. Two influential strands of academic literature anticipate that the process of economic integration might have had meaningful implications for the nascent welfare states in the region. The race-to-the-bottom hypothesis posits that intensifying globalization forces states to lower taxes and cut social spending in order to create a favourable economic environment and lure foreign direct investment. In contrast, the compensation hypothesis predicts that countries expand their welfare state in order to shield their population from the economic disruptions induced by foreign competition.

How do globalization pressures shape welfare state dynamics today, thirty years after the start of the transition? Does insertion into the global economy induce national governments to limit economic redistribution, or the extent to which government taxes and transfers reduce economic inequality, in an attempt to attract foreign capital? Or does it incentivize them to protect their societies from heightened risk? Do domestic institutions mediate this relationship, or is the effect of economic integration independent of political factors?

To answer these questions, I examine the drivers of economic redistribution in Central and Eastern Europe between 2004 and 2018. State-sponsored redistribution reflects the generosity of a country's welfare state and the progressivity of its taxation system. Taking the value of 0 (no redistribution) to 1 (perfect redistribution), it is calculated as the difference between the market and the disposable income GINI coefficients expressed as a share of the former. While market income is defined as income from salaries, self-employment, rental property, land, interest, dividends, profit from capital, and pensions from individual private plans, disposable income subtracts taxes paid and adds social exclusion transfers, unemployment, old-age, survivor, and disability benefits, and housing, family, and child and education-related allowances. Data is available through the European Union Statistics on Income and Living Conditions (EU-SILC) database, which provides detailed harmonized information on different income categories for representative national samples of 32 European countries.

In this article, I focus on the eleven countries that joined the European Union in the 2004, 2007, and 2013 accession waves - Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia - between 2004 and 2018.

Figure 1. Relative redistribution in 11 Central and Eastern European countries (2005 – 2017)
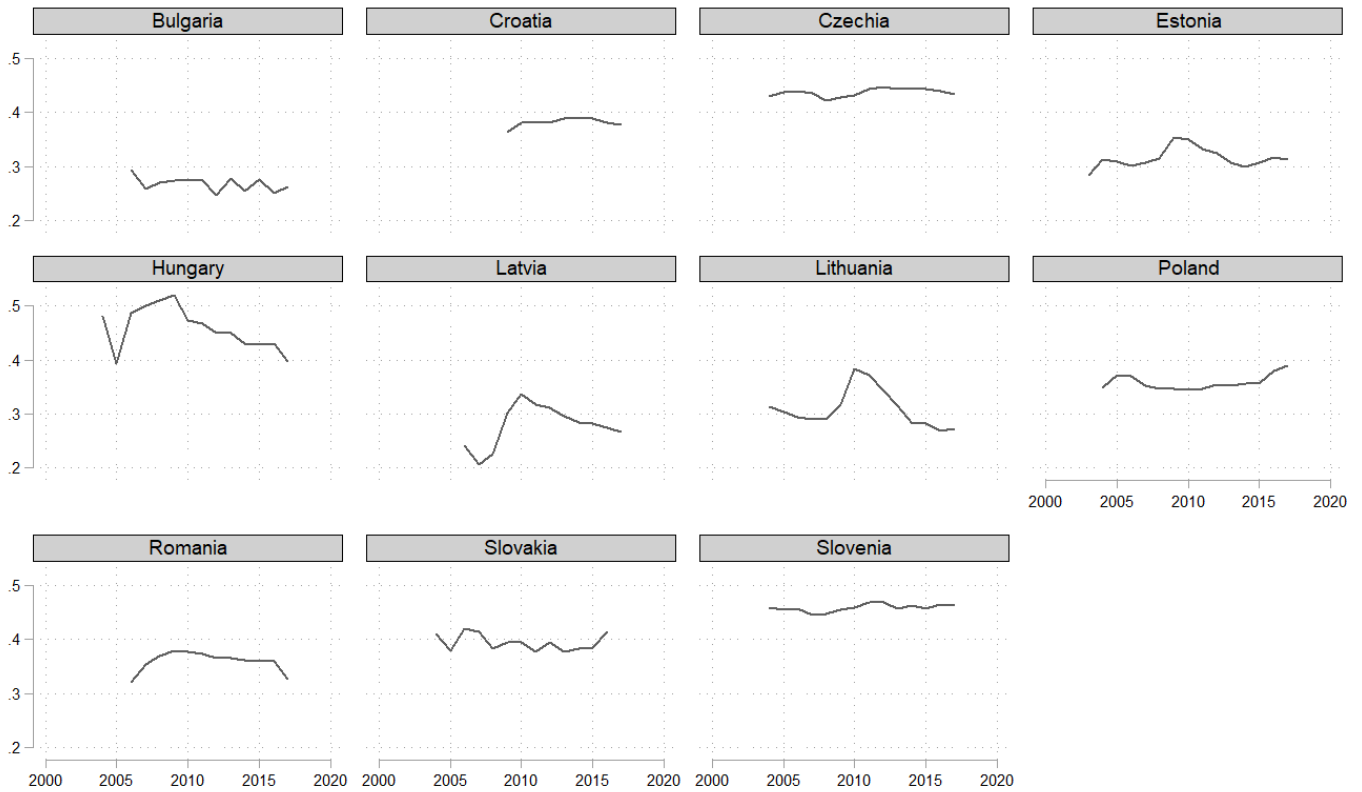
Source: EU-SILC.

Figure 1 shows the level of economic redistribution in this sample. The plot reveals considerable variation over time and across space: while redistribution exceeded 40% in Czechia, Hungary, and Slovenia, it barely reached 30% in Bulgaria and Latvia. Furthermore, the early 2010s witnessed noticeable increases while the late 2010s brought about steep falls in redistribution in Hungary, Latvia, Lithuania, and Estonia. On average, governments in Central and Eastern Europe reduced income differences by approximately 38% in 2010 and 35% in 2018.

Did globalization influence these dynamics? A series of statistical models reveals that, *ceteris paribus*, economic integration emerges as a meaningful predictor of economic redistribution. Globalization is captured through measures of openness to trade (exports and imports as a share of GDP), foreign direct investment (FDI) inflows, and capital account openness. Focusing exclusively on temporal variation and controlling for a number of political, economic, and demographic factors,[1] fixed effects models indicate that integration into the world economy is correlated with greater efforts to alleviate income differentials in Central and Eastern Europe during the 2000s and the 2010s. In line with the compensation hypothesis, globalization is linked to a more active role for the state in socio-economic affairs. This effect is not negligible in size - a one-standard-deviation change in capital openness, FDI inflows, and trade is related to a 0.554, 0.030, and 0.268 standard-deviation change in redistribution, respectively.

In a second step, I explore whether domestic institutions mediate the impact of economic globalization on state-sponsored redistribution. Institutions structure the political process; they determine the incentives and constraints that policy-makers face, shape agenda-setting, and affect the ease with which new policies are adopted and

implemented (Immergut 1992, Huber, Ragin, and Stephens 1993). Existing work has shown that institutions can facilitate far-reaching reforms or promote policy drift (Enns *et al.* 2014); that they can perpetuate inequalities or ensure a more equitable distribution of resources among different constituencies. They can therefore condition the development of the welfare state.

Two specific types of institutions are especially relevant: accountability before voters and the disproportionality of the electoral system. Vertical accountability explicitly measures the electorate's capacity to hold the government accountable. It reflects citizens' ability to freely organize in political parties and participate in free and fair elections. Data is available through the Varieties of Democracy project (Coppedge *et al.* 2020). Higher disproportionality, on the other hand, enables political parties to gain higher/lower representation in the national legislature than their vote share warrants. This weakens the connection between representatives and their constituency. It also alleviates the pressure on elected legislators to respond to the electorate's demands as it undermines voters' ability to punish officeholders for failing to deliver on their promises. The commonly used Gallagher index measures disproportionality (Armingeon *et al.* 2020).

To assess whether institutions condition the effect of globalization on economic redistribution, I re-run my models including an interaction term between trade, FDI inflows, and capital account openness on the one hand, and disproportionality and vertical accountability on the other. Figure 2 plots the marginal effect of globalization over the range of institutions. The shaded areas present 95% confidence intervals while the gray bars at the bottom show the distribution of the two political variables. As before, the models include fixed effects.

Figure 2. Average marginal effects of globalization on relative redistribution over the range of electoral disproportionality and vertical accountability
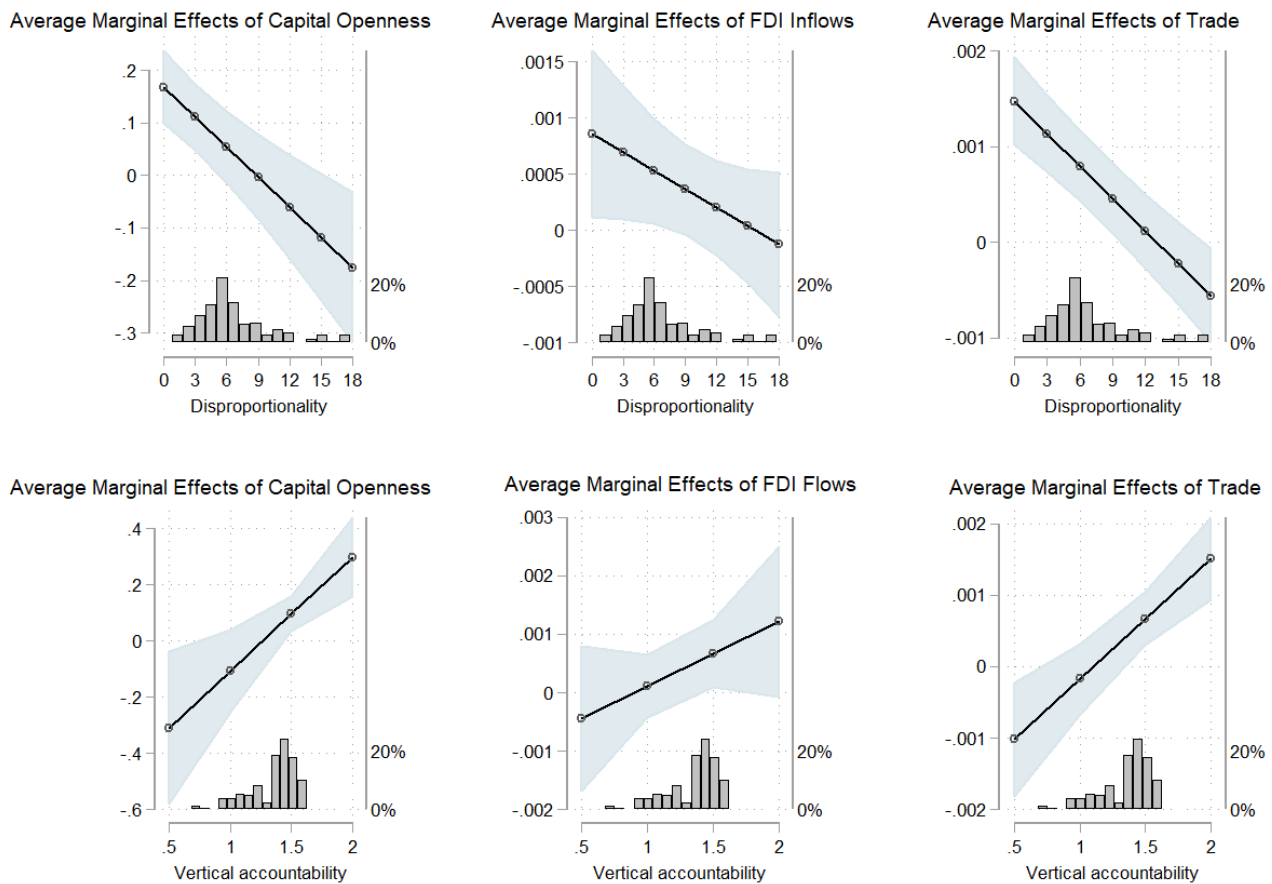
Source: EU-SILC.

Figure 2 shows that trade and capital account openness are associated with lower redistribution at very low levels of vertical accountability. When governments are not accountable to the electorate, incumbents seem to lack incentives to use social benefits to reduce income differentials. Nevertheless, when accountability exceeds a threshold of 1 (for capital openness) and 1.5 (for trade), the effect of globalization becomes positive: office-holders do in fact rely on redistribution to alleviate inequality. This suggests that, by themselves, the pressures of economic openness are not enough to induce a more active role for the state in socio-economic affairs. It is only when voters have the capacity to effectively punish governing parties that the latter engage in redistribution in response to external shocks.

The models with disproportionality lead to similar conclusions. The impact of trade and capital account openness is positive at low and medium levels of disproportionality, but turns negative once votes are decoupled from parliamentary seats. In this sense, when political parties' representation within national assemblies is tightly tied to their electoral performance, political elites are more likely to attempt to address any disruptions brought about by globalization with social transfers. In contrast, when the link between votes and seats is weakened, attributing responsibility becomes more challenging, and punishing incumbents is not always effective, incumbents are less likely to redistribute income in response to external pressures.

These findings suggest that political elites – even those of countries outside of the wealthiest capitalist democracies of Western Europe and North America - do not always opt for lower redistribution in an attempt to create a business-friendly climate and attract foreign direct investment. In fact, higher openness to the global economy is associated with a more pronounced role for the government in reducing income differentials in Central and Eastern Europe. This might be because support for state-sponsored redistribution, which has traditionally been high in the region (Pop-Eleches and Tucker 2017), remains significant. According to the European Social Survey, large majorities, approaching 90% in Croatia, Bulgaria, and Hungary agreed with the statement that the government should reduce differences in income levels in 2018 (the only exception was the Czech Republic, where only 49% of respondents supported redistribution). Welfare state retrenchment might therefore be perceived as politically costly by incumbents and policy-makers might be motivated to redistribute more in order to shield the most vulnerable from the risks that globalization brings.

This is most likely to occur where institutions promote accountability and responsiveness. It is mainly in those contexts that democratic elites respond more strongly to external pressures. This implies that a country's institutional set-up has important repercussions for the way in which its insertion into the global economy shapes domestic inequality and redistribution. Indeed, improving vertical accountability and reducing electoral disproportionality could lead to more generous welfare states.

1 The fixed effect models explore the drivers of change over time and account for time-invariant country characteristics. The full model specification controls for economic growth, GDP per capita, market income inequality, government partisanship, veto points, voter turnout, disproportionality, unemployment, the age dependency ratio, fiscal constraints, membership of the European Monetary Union, and the global economic crisis of the late 2000s.

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Taxation of Families and 'Families of Taxation'? Inequality Modification Between Family Types Across Welfare States

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Introduction

Rising inequality has become a major feature of scientific and public debates. In the light of the crisis, many scholars have called for the state to intervene by increasing transfers or cutting taxes. However, welfare states do not solely shape redistribution by setting the tax rate and deciding on the amount of benefits. The design of tax breaks and the definition of the tax unit are equally important. For instance, different family types may be treated differently because tax systems provide family type-dependent benefits, including child allowances, marriage premiums or preferential tax schedules.

These policies of tax design, however, may encourage either *de-familialization,* by enhancing individual autonomy (for instance, single-parent allowances), or promote *familialization* through strengthening individual dependency on the family (for instance, joint taxation). Furthermore, these policies might thwart the redistributional goals of social policy. It is, therefore, pivotal to scrutinize family-related tax benefits when interested in income inequality between types of families.

In a recent paper (Schechtl 2020), I examine income inequality between the six most prevalent family types (married without children, married with children, unmarried without children, unmarried with children, single parent, single) of non-retiree households before and after income taxation across welfare states. To this end, I draw on harmonized income, transfer and taxation data from 30 countries in the Luxembourg Income Study (LIS) Database and estimate between-family-type Theil indices as measures of inequality before and after fiscal intervention. In order to assess how welfare states' tax policies structure income inequality between family types, I empirically identify family-related tax policies and evaluate their impacts using linear regression.

Background

In general, familialistic policies emphasize and enforce the caretaking responsibility of the family, whereas de-familialistic policies advocate the welfare state's responsibility to do so. However, both concepts should be understood as extremes on a continuum. Hence, the concept of familialization stresses the institutionally driven dependency of individuals on their family context, which is particularly interesting when scrutinizing income inequality between family types (Sainsbury 1999). For example, policies promoting familialization may be defined as promoting a single-breadwinner model with a stay-at-home spouse (Rastrigina and Verashchagina 2015; Leitner 2003).

Nevertheless, how are patterns of tax policy associated with the modification of income inequality between types of families? To scrutinize these structures, the specific design of a welfare state's tax system is pivotal.

First, the overall *level (1)* of taxation indicates the distributional power: if there is no noteworthy income tax, redistribution may be insignificant. Second, the overall *progressivity (2)* of the tax structure may hint at its capacity to reduce market income inequality. However, there are at least four different aspects within the income tax code that are tied to the marital status and the household composition. First, countries differ in the income *tax filing unit (3)*, which most commonly is the individual or the married couple. The joint filing of married couples assumes that income and consumption are shared within the household and, in effect, means that the marginal income tax rate is dependent on the spouse's earnings. Therefore, joint filing has been criticized as a strong familialization policy that leads to persistent gender inequalities (McCaffery 2009). Applying individual filing means that all individuals are treated separately regardless of their marital status when assessing the income tax. This is usually understood as a de-familialization policy design in the tax code because it assumes the complete independence of individuals within households (Sainsbury 1999).

Second, *income splitting (4)* aggregates the spouses' income and calculates the tax burden on the combined income. Therefore, this is in fact a particularly strong version of joint filing. In most countries, married couples benefit from income splitting if they have unequal incomes (e.g. US and Germany). Therefore, strong incentives for the weak labor market attachment of secondary earners are commonly assumed (Rastrigina and Verashchagina 2015; Alm and Melnik 2004).

The significant implications for gender inequality and individual autonomy have been widely discussed (McCaffery 1999).

Although most welfare states apply individual filing, this does not mean that the tax rates of spouses are independent from each other, nor does it mean that family-oriented mechanisms are absent in the tax code. Many countries with individual filing at least offer some kind of special *dependent spouse allowances (5)* for the breadwinner (Rastrigina and Verashchagina 2015). This mechanism reduces the taxable income of the main earner if his or her spouse has no or low income and hence promotes the dependencies of non-earner or stay-at-home spouses. Consequently, these tax characteristics are best described as familialization tax policies.

On the other hand, special *single-parent allowances (6)* reduce the tax burden for single parents. In contrast to the tax mechanisms mentioned above, such allowances are designed to secure a single parent's autonomy instead of binding it to the ex-spouse's alimony. Hence, it represents a de-familialization tax policy.

Taken together, the country-specific design of *joint filing*, the specific case of *income splitting* and the offer of *dependent spouse allowances* are implicit indicators of the degree of familialization in a welfare state's income tax system. Although in many countries there are additional characteristics that can be used to evaluate familialization in the tax code (e.g. the degree of transferability of basic allowances between spouses), the six aspects described above should be key determinants.

These specific family-related aspects in the tax code should therefore influence inequality between types of families. In particular, married couples and couples with children are expected to benefit from familialization policies when compared to other family types. Usually these family types have higher equalized market household incomes than unmarried or single people or single parents. In general, high tax levels and substantial progressivity should significantly reduce income inequality between these family types. However, if family-related aspects in the tax code systematically benefit those family types that have a higher mean income (e.g. married couples) compared to those with a lower mean income (e.g. single parents), then the reduction in income inequality between these family types may be lower than expected.

Discussion

As Figure 1 indicates, income splitting and joint filing are negatively associated with the reduction in income inequality between types of families. This confirms the expected pattern of familialization policies thwarting the redistributional goals of social policy. Estimates for dependent spouse allowance and single parent allowance are, however, inconclusive.

Joint filing and income splitting could particularly benefit married couples. Hence, the association of family-related tax benefits and income inequality between married couples only and all other family types combined should provide further insights. Figure 2 indicates the associations of tax policy dummies and the change in income inequality between married couples and all other family types. Interestingly, the income splitting coefficient is substantial and significant while the joint filing coefficient is less pronounced. This hints at the fact that unmarried couples in many countries can file jointly. Income splitting, however, seems to be exclusively designed for married couples.

Figure 1: Tax induced change in between family type income inequality
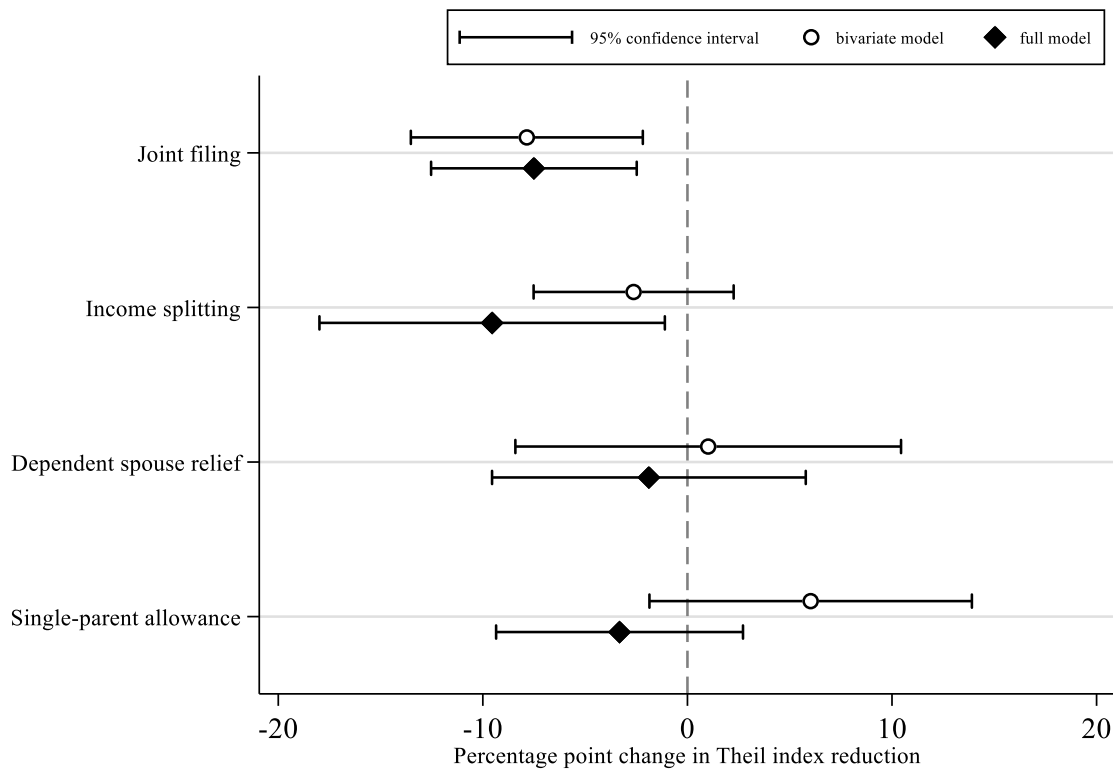
Note: 'full model' includes the suits index and the tax rate

Figure 2: Tax induced change in between family type income inequality (married vs. others)

Percentage point change in Theil index reduction

Note: 'full model' includes the suits index and the tax rate
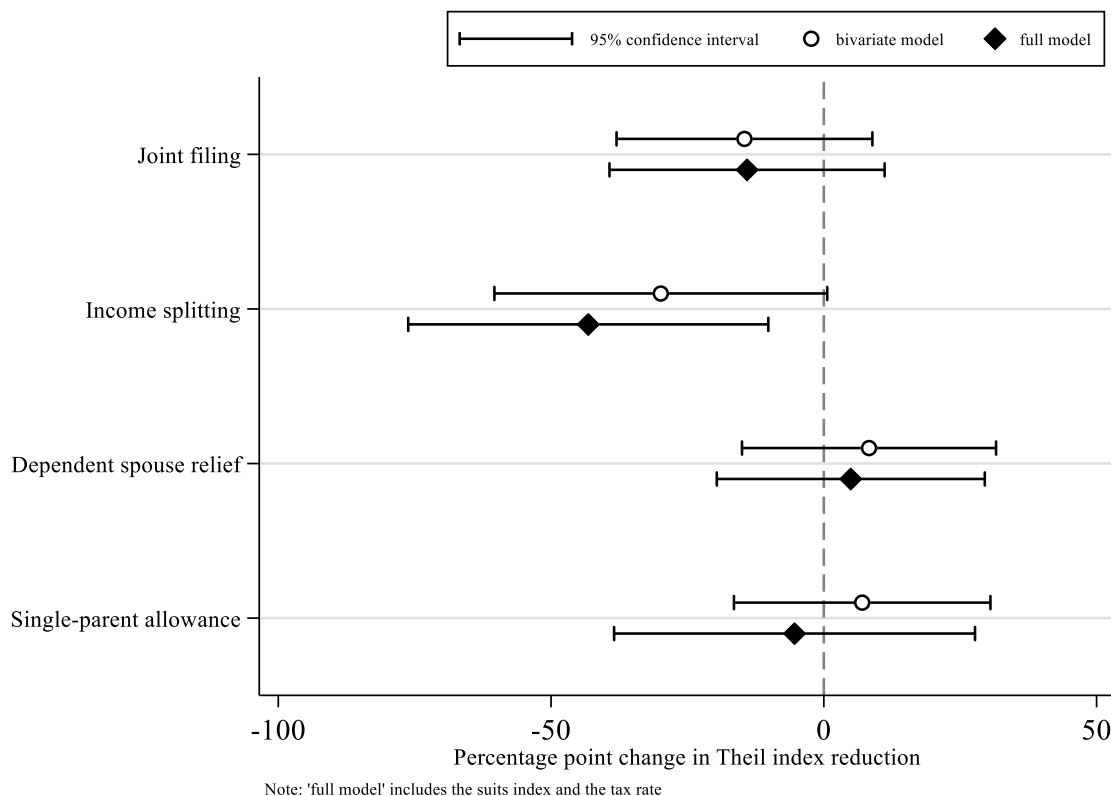
These findings relate to previous research in two ways. First, it seems that familialization policies in general not only hinder individual autonomy and gender equality (Orloff 1993; Saraceno 2016), but that in the case of taxation, these policies may create inequalities between types of families at the same time. Welfare states without joint filing not only have significantly higher levels of between-family-type inequality reduction but greater individual autonomy due to individual filing as a critical de-familialization policy. At the country level, this interpretation may imply a lose-lose situation of family dependency and income inequality. In this context, the individual is thus confronted with economically beneficial family dependency at the cost of a loss of individual autonomy. As familialization policies provide additional benefits for breadwinners with dependents, they discourage more autonomous individual arrangements.

Second, and as widely discussed within the economic literature on labor market incentives for secondary earners, familialization policies in the tax code potentially hinder female labor market participation. The tax code promotes a strong breadwinner model in most countries with joint filing and progressive income taxation due to lower marginal tax rates for the primary earner. Again, while this is widely known to exacerbate gender inequality (Sainsbury 1999; McCaffery 2009), as the study at hand indicates, it is also associated with greater income inequality between family types at the macro level.

The social and political implications are, however, manifold. In the light of rising inequality and escalating public debt, it is debatable whether these tax expenditures are desirable or affordable. For the public budget, tax benefits essentially represent a loss of revenue. In the German case, abolishing income splitting and introducing individual filing would lead to an estimated increase in income tax revenue of more than 1.1 per cent of GDP, which is more than 10 per cent of the

total income tax revenue (Bach *et al*. 2011). Female labor market participation is expected to rise substantially, which may reduce the substantial gender pay gap. Furthermore, the additional tax revenue may be used for social transfers to the poor. In other words, politically these familialization tax policies seem to cut public revenue and foster inequality, while socially they appear to promote family dependency and a traditional division of labor.

This study contributes to our understanding of the consequences of institutionalized differences in the tax treatment of family types. It sheds light on the pivotal yet largely overlooked role of taxation when scrutinizing horizontal inequality between family types. Focusing on (de-)familialization tax policies with different consequences for inequality, this study emphasizes the role of family tax policy as a form of social policy.

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(LIS)²ER workshop: "The Distributional Effects of Higher-Education Expansion"

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November 12-13 2020

Since the end of the 1980s, education has been rapidly expanding around the globe, and particularly in affluent countries. In OECD countries, on average 74% of the population at secondary-school-leaving age has been enrolled in tertiary education in 2018, and in 28 out of the 37 member countries half of the young population aged 25-34 attains a higher education degree.

The first (LIS)²ER workshop has aimed to expand and deepen the understanding of the implications of the mass expansion of higher education for inequality. Six presentations of comparative as well as country-specific studies from different fields in the social sciences dealt with the societal, economic and political causes and consequences of higher education expansion. By discussing how it affects educational and labour market outcomes as well as social mobility, the contributions provided insights on the role of education in fighting (or spurring) inequality.

The workshop was kicked off with Petra Sauer (LIS, LISER) presenting research which is conducted within the (LIS)²ER initiative, and which inspired the topic of the workshop. Based on a comparative study of 25 OECD countries, she showed that the majority of countries has expanded higher education by increasing the share of the population obtaining a Bachelor degree. Since Master and PhD levels have remained relatively exclusive, the implications for inequality in the distribution of labour income are more pronounced at these levels. Moreover, higher education expansion is driven by female education while male attainment has been stable recently. Women thus attain higher education levels then men in all affluent countries, and distributive effects are reverse: higher attainment of females contributes to a more equal distribution of labour income; higher attainment of males exerts disequalizing effects.

Based on the same source of harmonized micro-data from the Luxembourg Income Study (LIS), Louis Chauvel and Emily Murphy (University of Luxembourg) investigated the global relation between education and monetary gains at the macro and the micro level. For 44 high- and low-income countries they added empirical evidence to the stylized facts that first, countries with more educated populations are richer countries, and second, that within each country, individuals with the highest levels of education have greater incomes. Yet, they note the relevance of exemptions to general rules: Russia and Georgia are highly educated, but poorer than expected; conversely, Luxembourg's income level exceeds its educational achievement. Moreover, in richer countries the gap in the educational premium for secondary and tertiary education has been increasing, what might have contributed to exacerbate inequality.

The third comparative study, presented by Krzystof Czarnecki (Poznan University), provided an explanation for cross-country differences in educational inequalities based on variations in higher education systems being embedded in institutional configurations of modern welfare states and linked to partisan politics. Using the novel Student Support and Fees Dataset provided within the Social Policy Indicators (SPIN) (Nelson *et al.* 2020), he revealed diversity in student funding across 32 affluent countries that can be traced back to the long-term cumulative power of four political-party families: Christian democratic and left-wing parties aim at making studying unconditional on student household's labour market participation. But while Christian Democrats foster decommodification via family support measures, left-wing parties seek to ensure students' independent transition to adulthood via direct payments. Commodification, e.g. via tuition fees, mostly results from a conservative rule, while both Conservatives' and Liberals' student funding schemes tend to be means-tested and targeted to students from low-income households.

The three comparative analyses were enriched by three country-specific studies which provided nuanced insights into the underlying mechanisms which shape the distributional effects of higher education expansion.

Jo Blanden (University of Surrey) looked at educational inequality by family background in the UK. The British experience of educational expansion has been characterized by several changes in higher education policy between 1980 and 2015 – introduction and increase of university tuition fees from 1000 to 9000 Pounds, increasing availability, generosity and targeting of student funding and phasing out of student number caps - which have, however, not reduced the extend of vertical stratification of UK's higher education. Thus, even if reforms at the secondary level which substantially reduced achievement gaps between children from privileged and disadvantaged backgrounds and contributed to enlarge the student population, this has not fully translated into reducing educational inequality. The share of students from disadvantaged groups who acquire a tertiary degree at age 23 has more than doubled between cohorts born in the 1950s and in the 1980s. But students from privileged groups are still overrepresented in "Russell Group Universities" as well as at the postgraduate level; they thus continue to distinguish themselves via high prestige qualifications which offer large labour market returns. Yet, the use of school-based assessments instead of exams as defining component in the university application process is able to put more emphasis on access on the basis of qualification and might contribute to level the playing field.

Inequalities in higher education not only arise from differing labour-market opportunities based on type, quality and prestige of the degree-providing University, but also from the inclination and ability to study

abroad differing by students' socio-economic background. In their presentation, Irina Gewinner and Frederik de Moll (University of Luxembourg) tackled the topic of international student mobility, which has accelerated simultaneously with education expansion. Based on an investigation of the student population in Luxembourg in 2019, they provided insights into the social, economic and psychological factors affecting students' decisions to study abroad. International students are drawn to Luxembourg either because they value uniqueness, prestigiousness and language variety of the program, or because they have obtained a scholarship. Those students tend to come from the Greater Region, predominantly study at the Master or PhD level, and have a high-education parental background. In contrast, students who decide to remain in Luxembourg for their studies consider affordability, living conditions or personal reasons, tend to study at the Bachelor level and are from low-to-medium educated background.

Besides being determined by educational inequalities, the overall implications of higher education expansion for inequality also depend on labour demand: How many University graduates are required to perform high-skilled tasks? Golo Henseke (University College London, Institute of Education) provided answers to this question by analyzing the British labour market between 1997 and 2017. Over this time span, the graduate labour force more than doubled, and job task profiles changed, particularly demanding more specialist knowledge and IT skills. But this *task-warranted* upskilling of jobs only took place before 2006, thereafter, the expansion of jobs that required degree-level qualifications became decoupled from changes in the task content of jobs. This raises the question of why employers are willing to pay higher wages for graduates even if their technical skills are not entirely necessary to perform their work. Golo Henseke showed that higher

educational attainment reduces on-the-job learning and training time and argued that employers might seek `job ready' candidates for otherwise unchanged jobs. Rising degree requirements have, however, implications for inequality if they redistribute access to `top jobs' away from non-graduates.

The inspiring exchange of different perspectives from sociology, economics and education shaped the workshop's interdisciplinary nature. In his welcome address, LIS director Daniele Checchi noted that the "… topic is particularly `fit' for such an approach, because no one can claim that the relation between inequality in education and inequality in income belongs to one particular field. Merging the different perspectives is a way to have a more realistic and more complete view on the topic." Taken together, the insights of the workshop revealed that the mass expansion of higher education has greatly enlarged the student population and provided new opportunities for students hitherto from disadvantaged socio-economic backgrounds. However, (new) lines of differentiation along degree levels, degree providers, fields of study and international mobility have become more relevant and can contribute to spur inequality. The extent to which this is the case differs across countries and is related to institutional configurations of modern welfare states. This highlights the mediating role of policy which can be applied to secure that higher education expansion exerts its equalizing potential.

This workshop was the first international workshop in the realm of the *(LIS)²ER* initiative, an institutional collaboration between two actors in Luxembourg's research landscape, facilitated by the Luxembourg Ministry of Higher Education and Research.

Organising committee: Daniele Checchi (LIS), Petra Sauer (LIS and LISER), Philippe Van Kerm (LISER and University of Luxembourg)

Data News / Data Release Schedule

LIS is happy to announce the following data updates:

Austria – Addition of one data point **AT17** to the **LWS** Database (1 new)

Belgium – Annualisation of the country series from 2003-17 for the **LIS** Database (10 new datasets and 11 revised)

Estonia – EE16 added to the **LIS** Database (1 new dataset and 5 revised)

Luxembourg – Addition of one data point **LU18** to the **LWS** Database (1 new)

South Korea – KR14 and **KR16** have been added to the **LIS** Database (2 new datasets and 4 revised)

United Kingdom – Annualisation of the country series from 1999-2018 for the **LIS** Database (14 new datasets and 6 revised)

United Kingdom – Addition of three new data points **UK13**, **UK15**, **UK17** to the **LWS** Database (3 new datasets and 3 revised)

General database rerun LIS and LWS Databases

Data Releases– Luxembourg Income Study (LIS)

Belgium

Ten new datasets have been added to the *LIS Database* (**BE03**, **BE05** **BE06**, **BE08**, **BE09**, **BE11**, **BE12**, **BE14**, **BE15**, **BE17**). The datasets are based on the Survey on Income and Living Conditions (SILC) data from Statistics Belgium (StatBel). Pre-existing datasets from the SILC series (**BE04**, **BE07**, **BE10**, **BE13**, **BE16**) were also slightly adjusted due to newly received variables by StatBel during the harmonisation of the annual data.

Earlier datasets of the Belgian data series (**BE85**, **BE88**, **BE92**, **BE95**, **BE97**, **BE00**) were revised for consistency with the later SILC series; adjustments concern mostly the section of education variables.

Estonia

One new dataset from Estonia, **EE16** (Wave X), has been added to the *LIS Database*. The dataset is from the Estonian Social Survey (ESS) / EU-SILC (Survey on Income and Living Conditions) provided by Statistics Estonia. Earlier datasets of the Estonian series (**EE00**, **EE04**, **EE07**, **EE10**, **EE13**) were revised for consistency. Variable *educ_c* (country-specific information on highest education level) contains now more detail which allowed for a more precise creation of the standardised education variables.

South Korea

Two new datasets from South Korea, **KR14** (Wave IX) and **KR16** (Wave X), have been added to the *LIS Database*. The datasets are based on the Household Income and Expenditure Survey (HIES) and Farm Household Income and Expenditure Survey (FHES) provided by Statistics Korea (KOSTAT). All datasets, including the pre-existing datasets **KR06**, **KR08**, **KR10**, **KR12**, were revised to adjust the sample in the consumption variables, which are only available for the urban subsample (HIES); observations from the rural subsample (FHES) are set to missing value.

United Kingdom

14 new datasets covering the period 1999-2018 (**UK99**-**UK18**) have been added to the British series; thus the series in the *LIS Database* provides now annual data for 20 consecutive years. For this update, the latest version of the Family Resources Survey (FRS) provided by

Department for Work and Pensions (DWP) and Office for National Statistics (ONS) was used; the pre-existing six datasets were entirely re-harmonised to guarantee consistent harmonization outcomes. This update entails a major update in the calculation of social contributions and taxes, including council taxes. The new version directly takes the calculated variable by the data provider, which ensures now a higher consistency over time, as compared to the previous recreation of social contributions and taxes from the surveyed information.

Please note highest education level is not consistently collected in the FRS data; thus only from **UK14** onwards a precise mapping to the standardised education variables is possible. There are two break in series in **UK12** and **UK14**; we advise users to carefully analyse the available information in *educ_c* (country-specific information on highest education level) and how it was regrouped in the standardised education variables.

Data Releases – Luxembourg Wealth Study (LWS)

Austria

One new dataset, **AT17** (Wave X), has been added to the *LWS Database*. The dataset is based on the Austrian Household Finance and Consumption Survey (HFCS) provided by Austrian Central Bank of Austria (Österreichische Nationalbank - OeNB).

Luxembourg

One new dataset, **LU18** (Wave XI), has been added to the *LWS Database*. The dataset is based on the Luxembourg Household Finance and Consumption Survey (HFCS) acquired from Banque Centrale du Luxembourg (BCL) / Luxembourg Institute of Socio-Economic Research (LISER).

United Kingdom

Three new datasets (**UK13**, **UK15**, **UK17**) were added to the *LWS Database.* The data are from the Wealth and Assets Survey (WAS) provided by Office for National Statistics (ONS). The three WAS datasets from earlier years (**UK07**, **UK09**, **UK11**) underwent consistency revisions, particularly in the blocks of income (only **UK11**) and wealth-related and behavioural variables.

## General database rerun LIS and LWS Databases

LIS carried out an entire database rerun to incorporate latest adjustments of the data production template for all datasets. This update concerns mostly:

- Inclusion of indistinguishable labour income in the variable *pitotal* (total individual income). This has a minor impact on most of the concerned datasets, except in Germany (**DE84**-**DE16**), where imputed labour income was reassigned to *pi11* (wage income).

- Reallocation of property taxes from *hxotax* (other direct taxes) to *hxptax* (property taxes); this treatment means that those amounts are considered as well in *hhouscost* (housing costs) when applicable.

- *Relation* is consistently split in 2100 (spouse) and 2200 (cohabiting partner) following marital status.

- Restriction of labour market variables to currently employed persons.

LIS/LWS Data Release Schedule

	Spring 2021	Summer 2021
LIS Database		
Australia		AU16/18
Egypt		EG18
Germany		DE17/18
Iceland	Annual data IS03/IS17	
Israel	Annual data IL02-IL18	
Latvia	Annual data LV13-LV18	
Luxembourg		LU16
Mali	ML11/13/14/15/16/17/18	
Netherlands	NL15/NL16	
Norway	NO16	
Slovakia		SK14/15/16/17
Vietnam		VN93/98/02/04/06/08/10
United Kingdom	Annual data UK93-UK98	
Uruguay		Annual data
LWS Database		
Chile		CL07/12/14/17
Norway	NO16	
United States	US19	

Working Papers & Publications
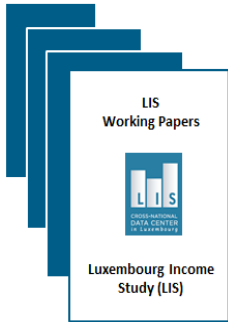
Focus on Capitalist Systems and Income Inequality 🔗 **LIS WP No.803 by Marco Ranaldi** ✉ **and Branko Milanovic** ✉ **(Stone Center on Socio-Economic Inequality, The Graduate Center, CUNY)**

The paper investigates the relationship between capitalism systems and their levels of income and compositional inequality (how the composition of income between capital and labor varies along income distribution). Capitalism may be seen to range between Classical Capitalism, where the rich have only capital income, and the rest have only labor income, and Liberal Capitalism, where many people receive both capital and labor incomes. Using a new methodology and data from 47 countries over the past 25 years, Ranaldi and Milanovic show that higher compositional inequality is associated with higher inter-personal inequality. Nordic countries are exceptional because they combine high compositional inequality with low inter-personal inequality. The authors speculate on the emergence of homoploutic societies where income composition may be the same for all, but Gini inequality nonetheless high, and introduce a new taxonomy of capitalist societies.

LIS working papers series

LIS working papers series - No. 802 🔗
Pathways toward Inclusive Income Growth: A Comparative Decomposition of National Growth Profiles
by Zachary Parolin, Janet Gornick

LIS working papers series - No. 803 🔗
Capitalist Systems and Income Inequality
by Marco Ranaldi, Branko Milanovic

LIS working papers series - No. 804 🔗
Estimation of Income Inequality from Grouped Data
by Vanesa Jordá, José María Sarabia, Markus Jäntti

LIS working papers series - No. 805 🔗
Drawing a Line: Comparing the Estimation of Top Incomes Between Tax Data and Household Survey Data
by Nishant Yonzan, Branko Milanovic, Salvatore Morelli, Janet Gornick

LWS working papers series

LWS working papers series - No. 32 🔗
Inheritances and Wealth Inequality: a Machine Learning Approach
by Pedro Salas-Rojo, Juan Gabriel Rodríguez

LWS working papers series - No. 33 🔗
The Wealth Inequality of Nations
by Nora Waitkus, Fabian T. Pfeffer

News, Events and Updates

LIS is Hiring!

LIS Cross-National Data Center in Luxembourg seeks applications for two Microdata Experts. The first position is to join the LIS data team in producing harmonised datasets. This includes evaluating the original datasets structure and quality (possibly working with data providers), harmonising original variables, documenting harmonisation methods and dataset specificities, assisting and instructing users. The second position is to join the National Statistical Office of Luxembourg (STATEC) in the production of the national EU-SILC data as well as methodological work for other STATEC surveys. For more information on these positions and the application procedures, please check the job postings here.

LIS Cross-National Data Center in Luxembourg and LISER convened a workshop on "The Distributional Effects of Higher Education Expansion"

Six presentations by Jo Blanden (University of Surrey), Louis Chauvel (University of Luxembourg), Emily Murphy (University of Luxembourg), Golo Henseke (UCL), Irina Gewinner (University of Luxembourg), Krzysztof Czarnecki (Poznan University) and Petra Sauer (LISER and LIS) presented research on the role of education in fighting (or spurring) inequality by gathering insights from different fields in the social sciences dealing with the societal, economic and political causes and consequences of higher education expansion, and how it affects social mobility and socio-economic inequality. The workshop took place virtually from Thursday November 12th Friday November 13th.

This is the first international workshop in the realm of the (LIS)[2]ER initiative, an institutional collaboration between two actors in Luxembourg's research landscape, facilitated by the Luxembourg Ministry of Higher Education and Research.

Please find the abstract of the presented papers here.

LIS Virtual workshops

During the past month, LIS has held two interactive virtual workshops for the National Institute of Statistics of Mali (INSTAT) and the Lao Statistics Bureau (LSB). The first workshop was realized thanks to the second cooperation between LIS and the Agence Française de Développement (AFD). The second workshop was made possible through a cooperation with the National Institute of Statistics and Economic Studies of Luxembourg (STATEC) and GOPA Consulting Group. The two workshops aimed to support the capacity building of the statistical offices staff in the field of data processing, analysis and reporting of the household surveys. Different topics were covered during the workshops, mainly on the analysis of poverty and inequality.

New addition to the LIS Online Tutorial Series!

LIS is happy to announce the addition of four new videos to its online tutorial series. These new video tutorials are presented by Professor Louis Chauvel (University of Luxembourg). In these video tutorials, Professor Louis Chauvel is replicating the graphs of Janet C. Gornick's Stone Center/GC-CUNY presentation "LIS Data: A Resource for Inequality Research" also presented in: *Income Inequality in Rich Countries: Examining Changes in Economic Disparities* by Janet Gornick and Nathaniel Johnson, 2020).

The new addition includes the following videos:

- Introduction to Graphs Replication using the LISSY system
- Country comparisons: Pre- & post-tax Gini
- Countries dynamics comparisons: Pre-post tax Gini 1985-2018
- Countries dynamic comparisons of income classes: The middle class between 1985-2018

To view the LIS Online Tutorial Series, please follow this link.

LIS team participation in conferences

Teresa Munzi presented the LWS experience in the field of international comparison of wealth inequalities at the panel "*Mesure-ton bien l'inégalité du patrimoine*" organised within the 2020 French Days of Economics (*"Journées de l Économie – JECO")* - 18 November 2020.

Teresa Munzi, Jörg Neugschwender and Heba Omar presented some preliminary results on urban versus rural inequality trends at the 2020 UNECE Online Meeting on Measuring Poverty and Inequality - 4 December 2020.