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**In Search of the Roots of American Inequality Exceptionalism:**

**An Analysis Based on Luxembourg Income Study (LIS) Data**

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**Abstract**

Earlier work has established that the US has exceptionally high inequality of disposable household income (i.e., income after accounting for taxes and transfers). There is a debate whether it is due to an unusually high inequality of market (pre-tax-pre-transfer) income or to weak redistribution. In this paper, we look more deeply at market income inequality, focusing on its main component – labor income – across a group of 24 OECD countries. We disaggregate the working-age population into household types, defined by the number and gender of the household’s earners and the partnership and parenting status of its members. We conclude that within-group inequality of labor incomes in the US is, in almost all groups, high by OECD standards. The roots of US inequality exceptionalism are not to be found in an unusual demographic composition, nor in unusually high or low mean incomes of some demographic groups, but in pervasive high inequality within each of these groups.

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## 1. Introduction

### *Background*

It has been known for at least two decades that disposable household income – income after accounting for transfers and taxes – is more unequally distributed in the United States than in comparable high-income economies (see, e.g., Brandolini and Smeeding 2006; Piketty and Saez 2006; OECD 2009; 2011; Gornick and Jäntti 2013). Broadly speaking, there are two possible underlying explanations. First, market income inequality (i.e., income before direct taxes and transfers are taken into account) may be similar in the US as elsewhere, but US taxes and transfers are less redistributive, either because the overall size of the welfare state is smaller or because the redistribution is less progressive. Second, market income inequality may itself be higher in the US than in many other countries, and thus driving up the high level of inequality even after redistribution is taken into account. The first explanation has generally held sway because US market income inequality calculated across households – importantly, households of all ages – is not especially exceptional, across the OECD countries, while disposable income inequality is substantially greater.

Recent work, however, by Gornick and Milanovic (2015) shifted that conclusion about the market income inequality in the US, in comparative perspective. They began with the insight that market income inequality, when calculated across households of all ages, may be depressed – especially relative to many European countries – because Americans tend to stay in the labor market until later in life, compared with their counterparts elsewhere. Because the market income in pensioners' households is often very small or zero, the existence of a developed system of social protection paradoxically exaggerates *market* income inequality (among older households) in other OECD countries and brings the overall market income inequality in line with that reported in the US. Thus, the comparatively high level of US market income inequality – net of older households – is obscured. Gornick and Milanovic's main conclusion was that, for persons under 60 years of age, weaker US redistribution is not the main cause of greater inequality at the disposable income stage. The "problem" is that the distribution of "original" labor and capital incomes is substantially more unequal in the US than elsewhere, and government redistribution, at the average OECD level, does not compensate for the inequality generated in the market.

Gornick and Milanovic's (2015) analysis had precursors in the work of scholars of earnings distributions, who argued that weaker redistribution in the US could not alone explain the entire disposable income inequality gap between the US and the rest of the OECD countries. Mishel (2015), for example, argued that the underlying market income distribution, most importantly the earnings distribution, in the US, is highly unequal in cross-national terms. He and others pointed to, on the bottom end of the earnings distribution, the low US minimum wage and the high prevalence of low-paid jobs (Lucifora and Salverda 2009; Gautié and Schmitt 2009), and, on the upper end, the extremely high earnings of managers, doctors, lawyers, CEOs and the financial sector (Gabaix and Landler 2008). The exceptionally large gap between CEOs' salaries in the US and in the rest of OECD countries is well-documented (see Piketty, 2014; Mishel and Davies 2015). Indeed, the findings in Gornick and Milanovic (2015) confirm that market income inequality is a major explanation for comparatively high levels of disposable income inequality in the US, among working-age households.

## *Objective*

The objective of this paper is to further investigate the nature of the high level of market income inequality found among US working-age households, compared to their counterparts in several other affluent countries. Because the major component of market income is labor income, we focus exclusively on it – disregarding income from capital, which is a relatively minor component in the market income package of working-age households in these countries.<sup>1</sup>

Our main strategy is to disaggregate working-age households – in the US and in the comparison countries – into household subgroups. These subgroups are distinguished by the number and gender of earners in the household, and (subsequently) by the partnership and parenting status of the household. Clearly, a household’s labor income is shaped by the number of earners present. The logic of further disaggregating by gender, partnership, and parenting is rooted in the labor economics literature, which has long established that individuals’ earnings (gross and net of other worker- and job-level characteristics) are affected by their gender, and whether they have partners and/or children (for a review, see Blau and Winkler 2017).

We assess inequality that exists both within and between various household types and we compare the results for the US with those in other OECD countries. Our objective is to establish whether the greater underlying US market income inequality is the result of (a) higher earnings inequality within each of the relevant groups, (b) an unusual composition (for example, a high share of groups where earnings inequality is high), or (c) large gaps between groups in mean earnings.<sup>2</sup>

A substantial prior literature on economic inequality in the US addresses the question of the levels, and/or drivers, of within-group versus between-group inequality. Much of this literature focuses on earnings, and most of it locates the question of within-versus-between in the context of change over time.

Two decades ago, McCall (2000) observed that most research on (earnings) inequality in the US was concerned with growing gaps between groups – with workers differentiated by race, age, education, and income. She noted that, in fact, a large share of rising inequality had occurred within these groups. Her own study assessed variation in within-group inequality across 500 local labor markets. Western, Bloome, and Percheski (2008) assessed rising income inequality among US families, between 1975 and 2005. They concluded that most of the increase in family income inequality during that period was driven by rising within-group inequality; their disaggregation combined family type and educational attainment.

Introducing his own study of the drivers of within-group inequality between 1970 and 2001, VanHeuvelen (2018:1-65) summarized the literature as follows: “[A]n increasing number of studies have begun to note that within-group inequality – or the inequality that remains after accounting for average

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<sup>1</sup> Among the working-age population, and in the countries included here, income from labor accounts for 97 percent of total market income, on average. In no country is the labor income share of market income less than 93 percent.

<sup>2</sup> In this paper, we use the terms “labor income”, “earnings”, and “wages” interchangeably.

between-group pay differences ... such as human capital, occupational characteristics, sex, socio-demographics, and household composition – is of growing importance for overall inequality“.

While these and other earlier studies influenced our analytic strategy, our study is a departure. First, no earlier research disaggregates household types as we do. Our typology includes unusually finely-drawn categories; our groups are defined by the number and gender of a household’s earners, further disaggregated by partnership and parenting status.

Second, we depart from earlier research with respect to our income measure and unit of analysis. Most existing within-versus-between research assesses either earnings at the individual level, or post-tax-post-transfer income at the household (or family) level. In contrast, we focus on earnings (what we call market income) at the household level. Our framework allows us to place our work in the large cross-national literature, much of it using the same data that we use, concerned with the extent to which inequality in disposable household income is driven by inequality in household-level market income.

### *Analytic strategy*

To carry out our analyses, we use microdata, drawn from household surveys, contained in the Luxembourg Income Study (LIS) Database Wave VIII, which is centered on the year 2010.<sup>3</sup> We include 24 OECD countries<sup>4</sup>: Australia, Canada, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Iceland, Ireland, Israel, Italy, Luxembourg, Netherlands, Norway, Poland, Russia, Slovakia, Slovenia, Spain, the UK, and the US.<sup>5</sup> In all cases, but one, the data are from the year 2010; the exception is Hungary, for which we have 2009 data. Annex 1 reports the list of countries and datasets used.

Our analysis is conducted across households whose members are all below age 60 *and* which have at least one member reporting labor income. To assess labor income, we use LIS’ harmonized variable *hil* (that is, household income from labor). This variable includes: (1) cash wage and salary income, and the value of non-monetary goods and services received as a substitute for cash; (2) monetary supplements to the basic wage and the value of non-monetary supplements; (3) cash wage and salary income, and the value of non-monetary goods and services, received by directors of own enterprise; (4) monetary payments and the value of non-monetary goods and services received from casual/irregular/occasional dependent employment; and (5) profits/losses from self-employment activities.

Because one of our motivating interests is the relationship, at the household-level, between earnings inequality and disposable income inequality, our unit of observation is not an individual worker (earner) but the household. Total household earnings are adjusted for household size, using the well-known “square-root adjustment”. In other words, total household earnings are divided by the square root of

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<sup>3</sup> This means that the datasets report income earned in the year 2010; the surveys may have been fielded in the subsequent year.

<sup>4</sup> Russia is not officially an OECD member state, but a “roadmap to accession” has been approved. For convenience, when we use the term “OECD countries” in this paper, we include Russia.

<sup>5</sup> The LIS data are available from LIS, the cross-national data center in Luxembourg. Extensive documentation is available on the website: [www.lisdatacenter.org](http://www.lisdatacenter.org).

the number of household members.<sup>6</sup> Thus, we arrive at a variable that measures potential individual welfare (assuming equal division of earnings within the households) derived from labor income.

As our measure of inequality, we mainly use the Gini coefficient. The Gini is preferred largely because it enables us to easily relate our results about inequality within different demographic subgroups to the well-known Gini values of market and disposable income inequality seen in the US and elsewhere. In one part of our analysis, we use two Theil indices.

## **2. Labor income inequality across various household types**

In Figure 1, we report inequality, across households, of labor incomes. The four countries with the most unequal earnings distributions (at the household level) are Israel and three Anglophone countries; the US is ranked second highest. These labor income Ginis range from between 0.277-0.311 for the highly egalitarian Slovakia and Slovenia, respectively, to 0.436-.442 in the US and Israel. The median and mean labor income Gini is about 0.36. Thus, we establish immediately that labor income inequality in the US is, relative to other OECD countries, on the high end.

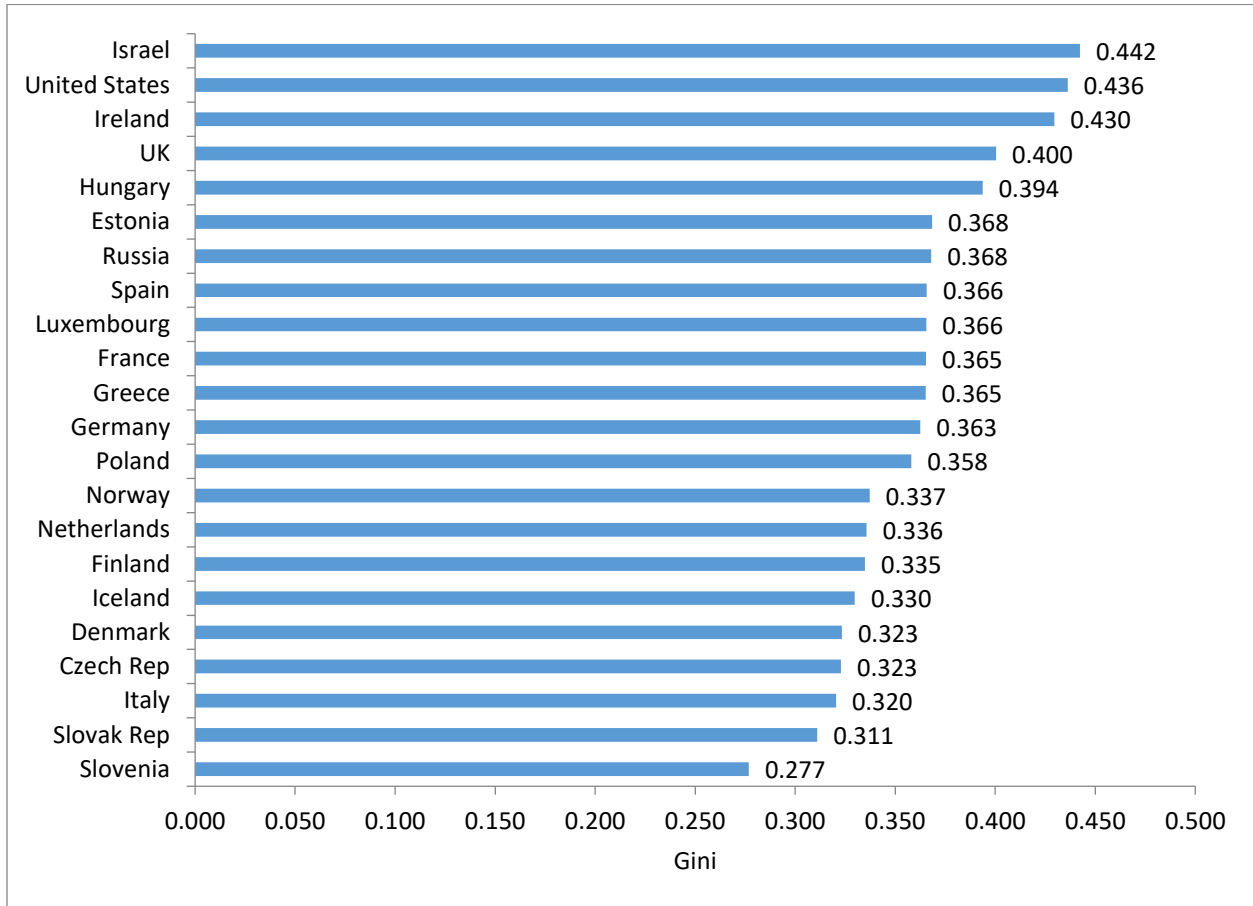
What lies behind this comparatively high level of earnings inequality among US households? Our approach, as already mentioned, is to disaggregate working-age households into several demographic groups (defined below) and to assess labor income inequality within each of them.

The Gini decomposition when the population is divided into different groups is composed of three terms: a weighted-sum of within-group inequalities (narrowly-defined within inequality), inequality that is the result of differences in mean incomes between the groups, and an overlap (residual) terms that reflects the homogeneity of the underlying populations. To understand the meaning of the latter, note that when incomes of the groups into which we have divided the population are so different that there is absolutely no overlap (e.g., all individuals from a mean-richer group have higher incomes than all individuals from a mean-poorer group), the overlap term becomes zero. It increases as there is more overlap between the incomes of individuals belonging to different groups. The overlap terms move together with the narrowly defined within-inequality, and we shall treat them together.

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<sup>6</sup> This assumes economies of scale midway between perfect economies of scale (parameter = 0) and no economies of scale (parameter = 1).

Figure 1. Inequality of labor income across working-age households, in 24 OECD countries



Note: Ginis based on equivalized labor income.

We can write the Gini decomposition across recipients belonging to groups  $i$  (1, 2,... $r$ ) as

$$G = \frac{1}{\mu} \sum_{i=1}^r \sum_{j>i}^r (\bar{y}_j - \bar{y}_i) p_i p_j + \sum_{i=1}^r p_i s_i G_i + L \quad (1)$$

where  $\mu$  = overall mean income,  $\bar{y}_i$  = mean income of  $i$ -th group,  $p_i$  = population share of  $i$ -th group,  $s_i$  = share of  $i$ -th group in total income,  $G_i$  = Gini of  $i$ -th group, and  $L$  = the overlap term. The first term in (1) is the between-group inequality, the second term, the narrowly-defined within-group inequality, the third, the overlap term. The second and third terms are in the further text considered as “within-group inequality”.

We can now see that higher overall US labor income Gini ( $G$ ) may be the result of greater group Ginis ( $G_i$ ), or greater share ( $s_i$ ) of groups that have higher inequality of earnings, or finally, may be due to large mean income gaps between the groups (that is, to the between-component).

### *Disaggregating into household types – based on the number and gender of earners*

In all countries, we first divide the population into six main groups, based on the number and the gender of the earners in these households: households that contain (1) one female earner, (2) one male earner, (3) one male and one female earner, (4) two female earners, (5) two male earners and, finally, (6) three or more earners. Later in the paper, Groups (1), (2), and (3) will be further subdivided into demographic groups, based on partnership and parenting status. Throughout this paper, results are presented at the person level – albeit drawing on their household characteristics. When we refer to various household types, either their prevalence or their outcomes, we are reporting results about the persons who live in those household types.

Diagram 1 summarizes our typology of households. Earners are defined as people who report having received non-zero labor income during the survey’s reference period. Table 1 reports the composition of the working-age population, across the six household types, in these study countries.<sup>7</sup>

As can be expected, three household types dominate to the extent that they include more than 80 percent of all persons in all countries – except for Hungary, Ireland and Russia.<sup>8</sup> The three dominant groups are: the “traditional”<sup>9</sup> two-earner households composed of one female and one male earner (with a cross-country average share of 46 percent), one-male-earner households with an average share of 21 percent, and households with three or more earners, with 16 percent. The other three groups are less prevalent, although households with only one female earner (cross-country average share of 12 percent) do play, as we shall see below, an important role.

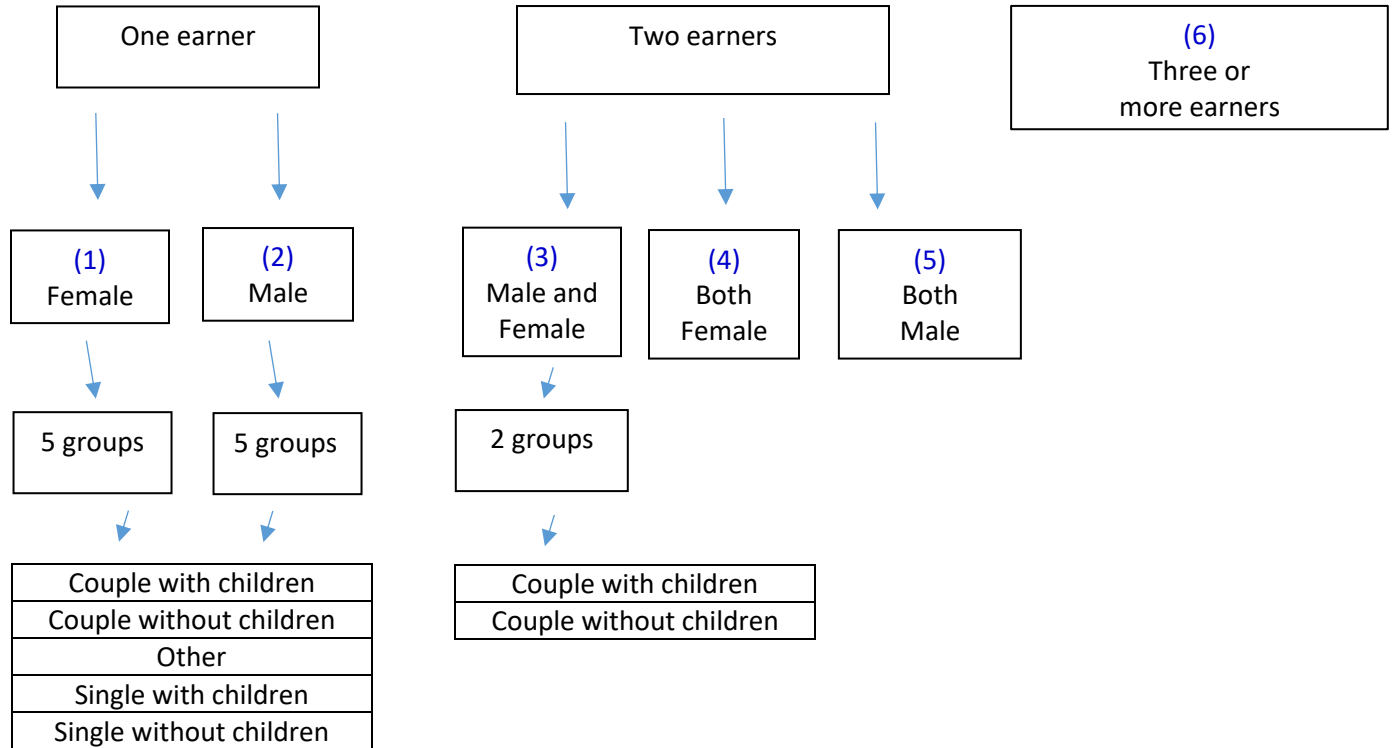
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<sup>7</sup> It should be kept in mind that the typology presented in Table 1 takes no account of partnership status. For example, in households with a one female earner those female earners may or may not have partners. Later in the paper, we will integrate partnership and parenting status.

<sup>8</sup> In all three countries, the reason is a relatively high presence of one-female-earner households (17-18 percent).

<sup>9</sup> When referring to two-earner households, we use the term “traditional” to denote that one of these earners is male and one is female (as opposed to two earners of the same gender).

Diagram 1. Typology of household types based on number and gender of earners, further disaggregated by demographic groups based on partnership and parenting status



Note. The six main types of households are indicated by numbers 1 to 6.

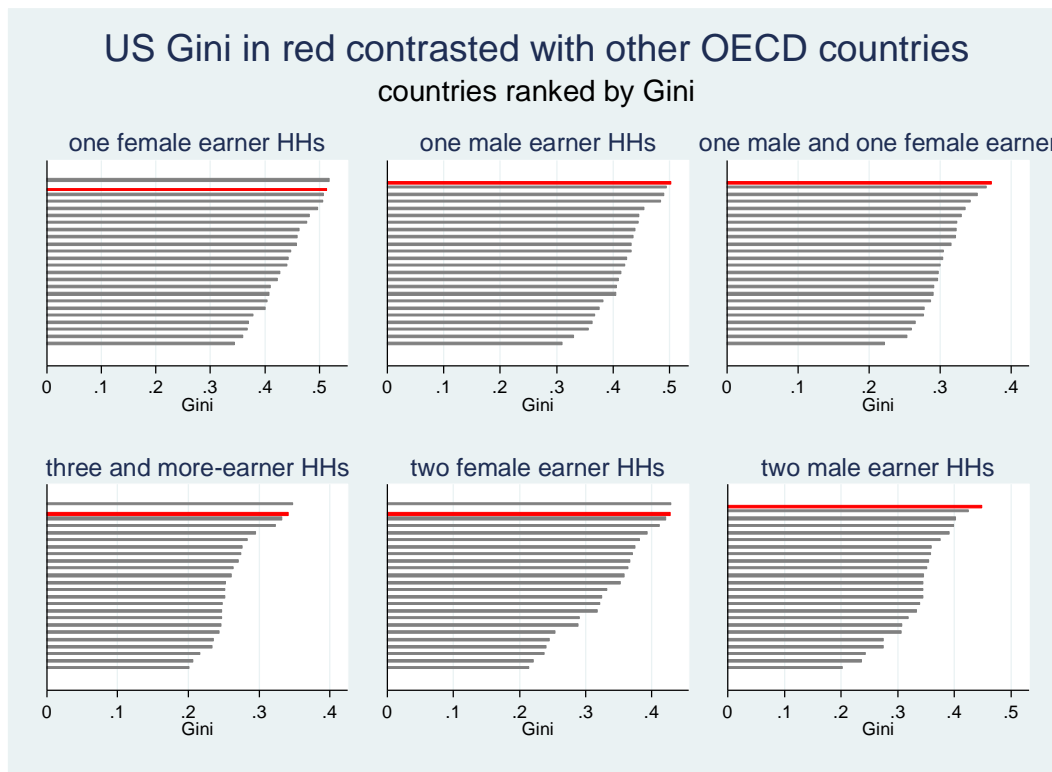


Table 1. Composition of working-age population, across six main household types  
(where household types are based on the number and gender of earners)

	1	2	3	4	5	6	7
Country\Group	1 Female Earner	1 Male Earner	1 Male, 1 Female Earner	2 Female Earners	2 Male Earners	3+ Earners	Sum of columns 2+3+6
Australia	9.2	21.6	39.7	2.3	3.6	22.7	83.9
Canada	9.5	14.7	43.5	2.5	3.2	25.5	83.8
Czech Republic	8.6	23.3	47.7	1.5	2.2	16.8	87.7
Denmark	11.8	13.4	47.8	2.1	2.1	22.1	83.3
Estonia	16.0	20.3	47.4	2.7	1.3	12.3	79.9
Finland	12.0	15.5	53.1	1.4	0.7	17.2	85.8
France	14.7	19.7	55.8	1.1	1.4	6.8	82.3
Germany	14.0	19.7	48.6	1.0	1.7	15.0	83.3
Greece	8.2	30.9	48.6	0.9	2.3	7.3	86.8
Hungary	17.6	24.7	39.6	1.6	0.7	9.1	73.4
Iceland	10.1	11.1	45.3	2.1	1.0	30.4	86.8
Ireland	18.2	23.6	41.1	2.2	3.9	11.0	75.7
Israel	10.7	24.1	40.8	1.9	3.1	19.2	84.1
Italy	10.1	34.0	44.8	0.8	4.0	6.3	85.1
Luxembourg	10.7	25.0	51.5	0.7	2.3	9.7	86.2
Netherlands	9.3	15.6	51.7	1.3	2.2	18.8	86.1
Norway	12.0	15.0	48.3	1.4	1.5	20.2	83.5
Poland	14.0	28.7	42.3	1.5	3.3	10.2	81.2
Russia	16.9	17.3	39.6	2.9	2.6	20.7	77.6
Slovak Republic	8.3	14.4	43.4	1.4	1.9	30.5	88.3
Slovenia	9.3	15.8	50.6	1.4	1.9	21.1	87.4
Spain	10.8	25.7	46.6	1.5	2.9	10.0	82.3
United Kingdom	13.2	21.2	46.6	1.8	2.2	14.7	82.5
United States	14.8	22.1	42.2	2.3	3.0	15.3	79.6
<i>Unweighted means</i>	<i>12.1</i>	<i>20.7</i>	<i>46.1</i>	<i>1.7</i>	<i>2.3</i>	<i>16.4</i>	<i>83.2</i>

In Figure 2, we take a first look at US labor income inequality within each of these household types in comparative context. For each type, the figure indicates the position of the US Gini (in red) compared to the other 23 countries. For three household types (one-male-earner, one male and one female earner, and two male earners), the US has the most unequal distribution of all countries; for the other three household types, the US distribution is the second most unequal.<sup>10</sup> In no case, is the US Gini even close to the median Gini for a given household type, much less lower than it.

Figure 2. Inequality in six main household types,  
(where household types are based on the number and gender of earners)



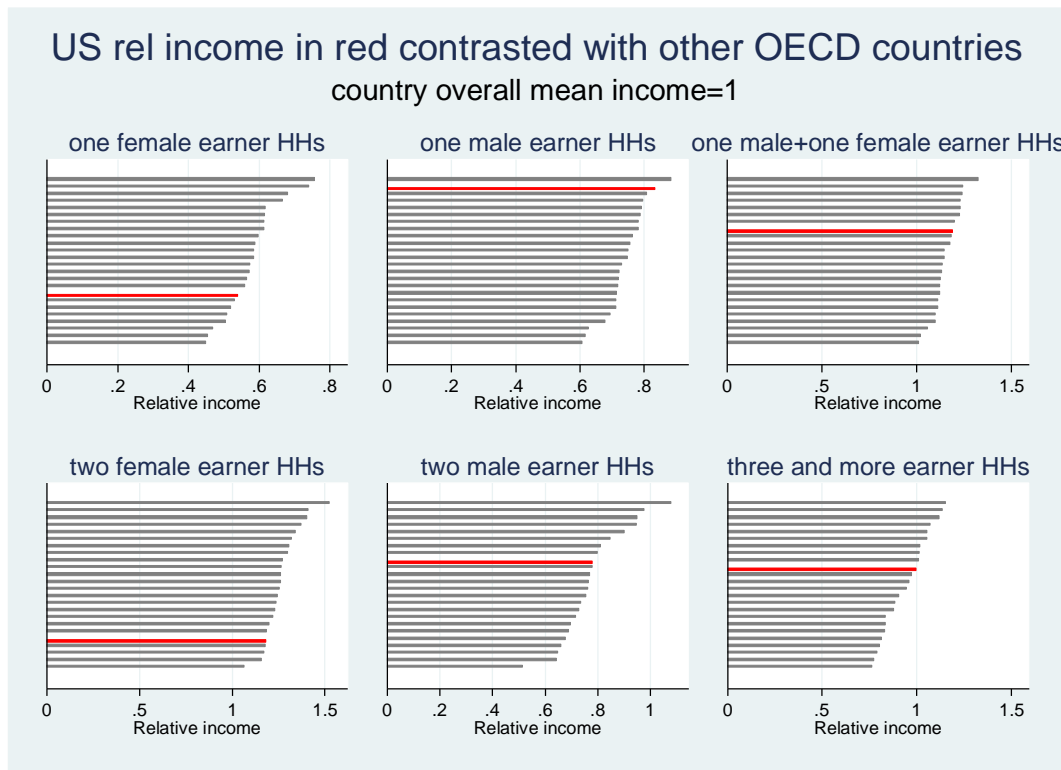
Note: Each bar shows the Gini of a given group and country. The US Gini is colored red. Ginis are ordered from the highest to the lowest.

Therefore, breaking the overall labor earnings distribution into household types reinforces our previous finding: US labor income is very unequally distributed, not only in the aggregate, but *within* each household type.

<sup>10</sup> Note that the Ginis of these various household types differ substantially in countries considered here. Labor income inequality among “traditional” two-earner households is within a rather narrow range between 0.22 and 0.36 whereas, for example, one-female-earner and one-male-earner households display much greater ranges of inequality. However, this is not the topic with which we are concerned here. Our objective here is to find the sources of differences between the US and comparable countries.

We need to also look at *between*-group inequality (that is, between the six household types). Consider now Figure 3 which is constructed similarly to Figure 2 but where we look at relative earning levels of household types. For example, the one-female-earner households' mean earnings<sup>11</sup> are in relative terms the lowest in Israel (only 45 percent of the country mean) and the highest in Hungary (75 percent of the country mean). The US at 54 percent is somewhat below the median for OECD countries included here. A look at Figure 3 shows that the US position, with the exception of the two-female-earner households (relatively low) and the one-male-earner households (relatively high) is not exceptional. In other words, when it comes to the relative earnings of various demographic groups, the US is far from being a cross-national outlier: groups' relative earning levels track closely other high-income countries' relative earnings levels. This, in turn, implies that the origin of high labor income inequality in the US is not to be found in unusually high earnings of some demographic groups, and unusually low earnings of others, but in systematically high earnings inequalities *within* each individual household type.

Figure 3. Relative income of six main household types



Note: Each bar shows mean income of a group compared to the mean income of the country. The US values are colored red. Values are ordered from the highest to the lowest.

We confirm this conclusion by looking at the results of the decomposition exercise using equation (1). Each country's overall inequality is broken into between- and within-inequalities (vis-à-vis the six groups). The US within-inequality Gini (shown in Table 2, column 3) is 0.311. This means that if the mean earnings of the six household types were exactly equal, the overall labor income inequality would be 0.311, which is by far the highest value among the countries considered here. Canada, which has the second highest within-inequality has a Gini of 0.282, some 10 percent lower than the US. When we look

<sup>11</sup> Note that this is household-size-adjusted (equivalent) labor income.

at the between-inequality, however, the US is far from exceptional: its between-group inequality of 0.125 is almost exactly the same as the mean for the 24 countries. In contrast, US within-inequality is 34 percent higher than the mean of the other 23 countries; the between-inequality is practically the same as the mean for other countries.

Table 2. Decomposition: between-group and within-group components  
(for six household types)

	(1) Overall labor Gini	(2) Between Gini component	(3) Within Gini component
Australia	0.357	0.119	0.238
Canada	0.394	0.112	0.282
Czech Republic	0.323	0.129	0.193
Denmark	0.323	0.112	0.211
Estonia	0.368	0.124	0.245
Finland	0.335	0.103	0.232
France	0.365	0.114	0.251
Germany	0.363	0.109	0.254
Greece	0.365	0.127	0.238
Hungary	0.394	0.149	0.245
Iceland	0.330	0.127	0.202
Ireland	0.430	0.186	0.243
Israel	0.442	0.184	0.258
Italy	0.320	0.149	0.171
Luxembourg	0.366	0.084	0.282
Netherlands	0.336	0.100	0.236
Norway	0.337	0.119	0.218
Poland	0.358	0.135	0.223
Russia	0.368	0.156	0.212
Slovakia	0.311	0.136	0.175
Slovenia	0.277	0.128	0.149
Spain	0.366	0.136	0.230
UK	0.400	0.124	0.277
<b>US</b>	<b>0.436</b>	<b>0.125</b>	<b>0.311</b>
<i>Non-US mean</i>	<i>0.358</i>	<i>0.129</i>	<i>0.229</i>
<b><i>US/non-US mean</i></b>	<b><i>1.21</i></b>	<b><i>0.97</i></b>	<b><i>1.34</i></b>

Note: Within-inequality includes the narrowly defined within-inequality and the overlap component; see equation (1).

Finally, we can look at the issue by using the Theil index instead of the Gini. The advantage of the Theil, in this particular case, is that it is exactly decomposable between different components.

Table 3 reports the results of two Theil decompositions, for the US case. The first column presents the Theil T – or the GE(1) – where the weights are income shares. The second column presents the Theil L, or the GE(0) – the mean log deviation – where the weights are population shares.

When we assume that the US has both the same demographic structure and the same relative group incomes as the average of the other 23 OECD countries, the Theil index, in its two variants, is reduced by either 3 or 6 percent. The changes seem minimal and reinforce our view that the dominant factor explaining high market income inequality in the US is high inequality within each demographic group.<sup>12</sup>

Table 3. Theil counterfactual:  
US inequality with OECD average demographic structure and relative mean group incomes

	Theil T – GE(1)	Theil L – GE(0)
Actual US inequality	0.342	0.380
US inequality if demographic structure were as OECD average (% change)	0.364 (+6%)	0.334 (-12%)
US inequality if relative group incomes were as OECD average (% change)	0.312 (-9%)	0.334 (+6%)
<i>US inequality if both demographic structure and relative group incomes were as OECD average (% change)</i>	<i>0.333 (-3%)</i>	<i>0.360 (-6%)</i>

We have thus established that US labor income inequality is, together with Israel’s, the highest among all of the OECD countries included here, and that the source of that inequality is not to be found in vastly different mean labor incomes across different household types, but in the consistently higher inequality with which labor incomes are distributed within each household type. We now continue by looking in greater detail into three prevalent household types: one-female-earner households, one-male-earner households, and two-earner “traditional” households (which contain one female and one male earner).

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<sup>12</sup> The two Theil indexes, because of their different weighting structures, give different answers as to the relative importance of demographics versus relative group incomes. According to Theil L, US demographic structure (in the sense that it is different from the OECD average) contributes more to high US inequality. According to Theil T, the divergence of US relative group incomes from the OECD average pattern is more important.

### **3. Earnings inequality within one-earner and “traditional” households: Further disaggregation by partnership and parenting status**

#### *One-female-earner households*

We begin by looking at households that contain only one earner – one who is female. The prevalence of these households across the countries included here is very uneven: at the low end are Greece, Slovakia, and the Czech Republic where fewer than 9 percent of households contain only one earner, who is female. At the other end are Estonia and (as mentioned earlier) Hungary, Ireland, and Russia, which each contain more than 16 percent of households of this type. The US falls in the upper range, with the share of one-female-earner households being 15 percent.

In our next analysis, we divide one-female-earner households into five demographic subgroups, corresponding to the households in which they live: couple-headed households with one or more children, couple-headed households without children, single-headed<sup>13</sup> households with children, single-headed household without children, and others.<sup>14</sup> As we did before for all households, here we look first at inequality levels within each household type and then at the relative incomes of each type. The most common type among one-female-earner households in the US, and across these 24 countries, is a household headed by a single woman with children. The next most prevalent types are couple-headed households with children (where, by definition, a female is the only earner), and single-female-headed households without children. In the US, these three household types comprise over 80 percent one-female-earner households.

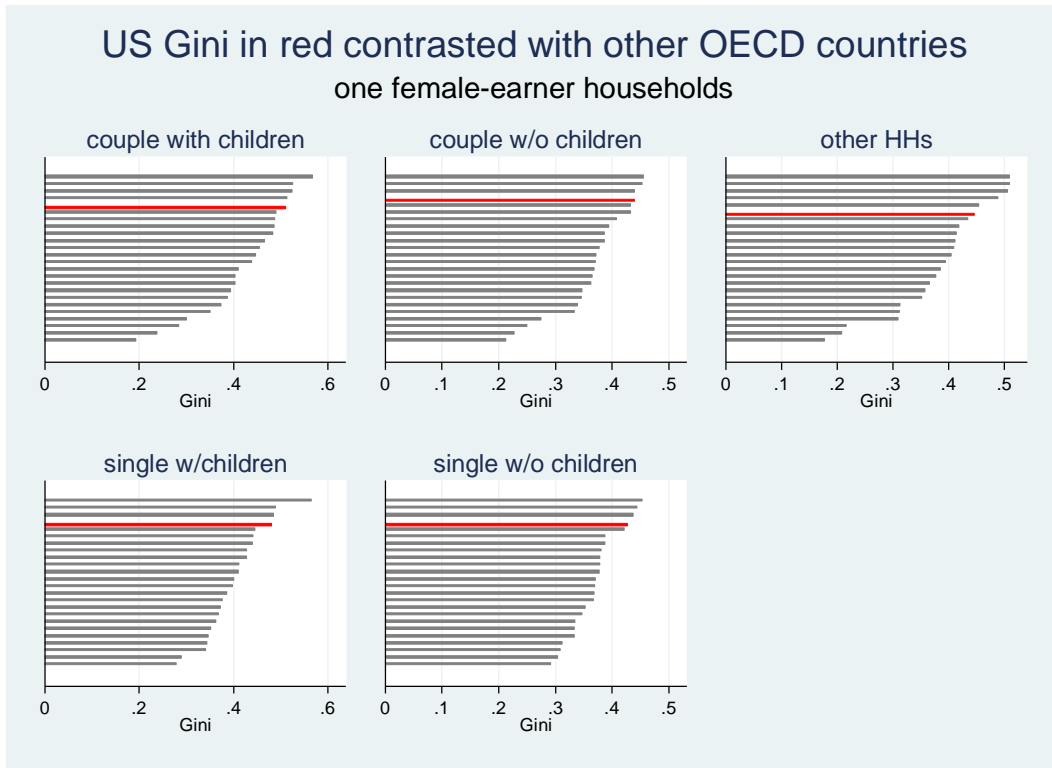
But is the distribution of labor income in such American households more unequal than in the other countries? Figure 4, with the same interpretation as Figure 2, provides an answer. In all cases, US inequality is greater than the median inequality among 24 countries, and is always ranked either the fourth or the fifth from the top. Particularly interesting is the situation of single-headed one-female-earner households with children where the US Gini is (a high) 0.48 while the mean Gini for this type of household, is 0.40.

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<sup>13</sup> We use the word “single” to mean, exclusively, a person who is not married/partnered. We do not use it to refer to the number of earners or persons in a household.

<sup>14</sup> Throughout the paper, households are defined as “coupled” if the head reports having a partner in the household and there are no other adults in the household. Households are further coded as having “children” if they contain children (under age 18) who are the children of the household head. Households are classified as “other” if the household – with or without children – contains adults who are not the head or the head's partner (for example, the head's parent or sibling, or a roommate).

Figure 4. Inequality of five subgroups among one-female-earner households

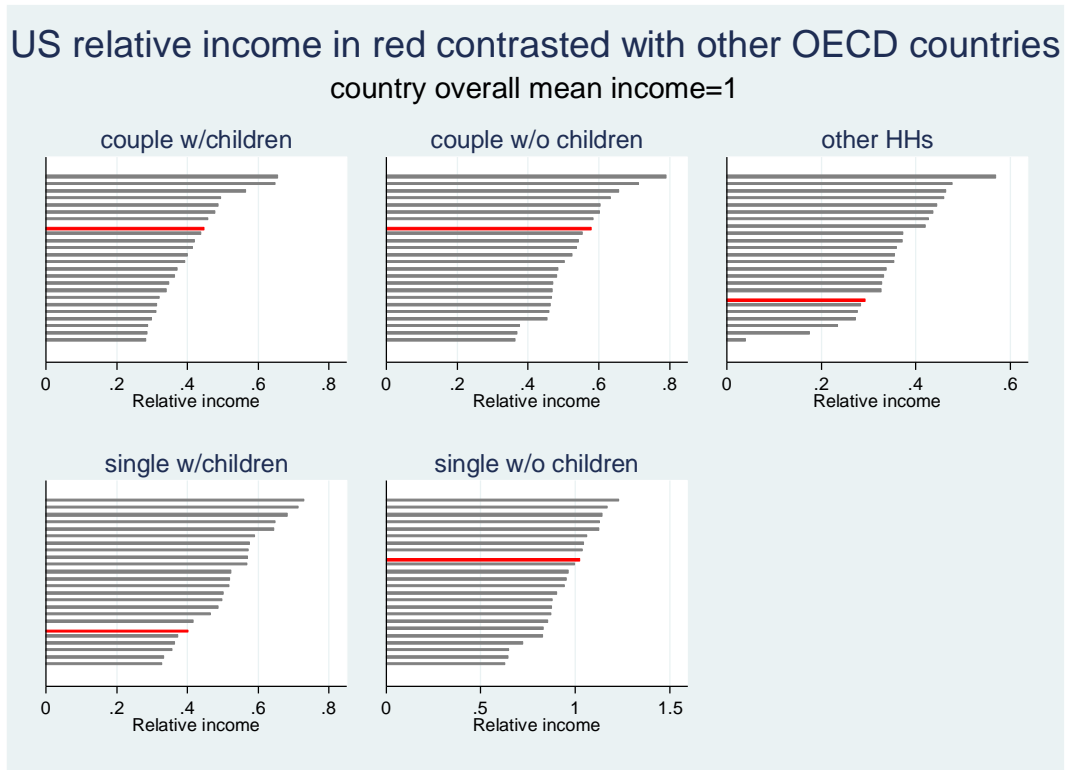


Note: Each bar shows the Gini of a given group and country. The US Ginis are colored red. Ginis are ordered from the highest to the lowest.

Very high inequality among single-headed one-female-earner households, both with and without children, in the US, clearly implies that they are economically and socially diverse. We shall find similar high heterogeneity among single one-male-earner households without children.

Next, we look at relative incomes (see Figure 5). The situation here is familiar: US relative subgroup mean relative incomes are not dissimilar from the median relative incomes across the 24 countries. The differences are minimal (e.g., for a couple with a child, the average labor income is 41 percent of US overall mean vs. 45 percent across the 24 countries). The exception is the low income level of one-female-earner households with children (that is, single mothers): their relative income in the US is 40 percent of the overall mean while the countries' average is 50 percent. An ethnic/racial component may be important here, as we find (not reported here) that these households, when headed by Hispanics and African-Americans, have mean labor incomes that are only about 30 percent of the overall US mean.

Figure 5. Relative income of five subgroups among one-female-earner households



Note: Each bar shows mean income of a group compared to the mean income of the country. The US values are colored red. Values are ordered from the highest to the lowest.

### *One-male-earner households*

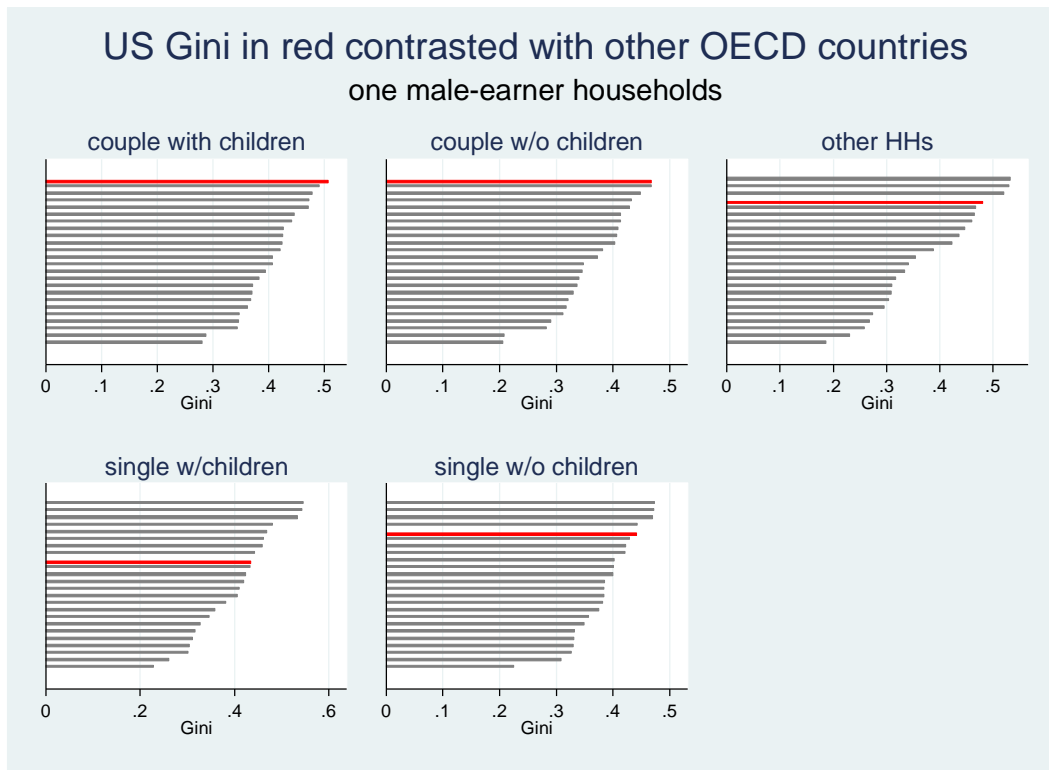
We now move to one-male-earner households, where we keep the same household classification as for one-female-earner households. The prevalence of these households varies markedly across countries. At the low end, in Iceland, Denmark, Canada, and Slovakia, their share is less than 15 percent. But at the high end, Italy and Greece – with comparatively low levels of female employment – have more than 30 percent of one-male-earner households. The US result (22 percent) falls near the cross-national mean (21 percent).<sup>15</sup>

The results for inequality are familiar (see Figure 6): US households have a much greater labor income inequality than the rest of the countries, and for two groups in particular (couple-headed households with and without children) US inequality is the highest of all. But it is among the highest in the other three types of one-male-earner households as well.

<sup>15</sup> Note that the share of one-female-earner households across these OECD countries ranges from 8 to 18 percent. The share of one-male-earner households varies from 11 to 31 percent. The corresponding US values are 15 and 22 percent. Thus, neither US value is exceptional.



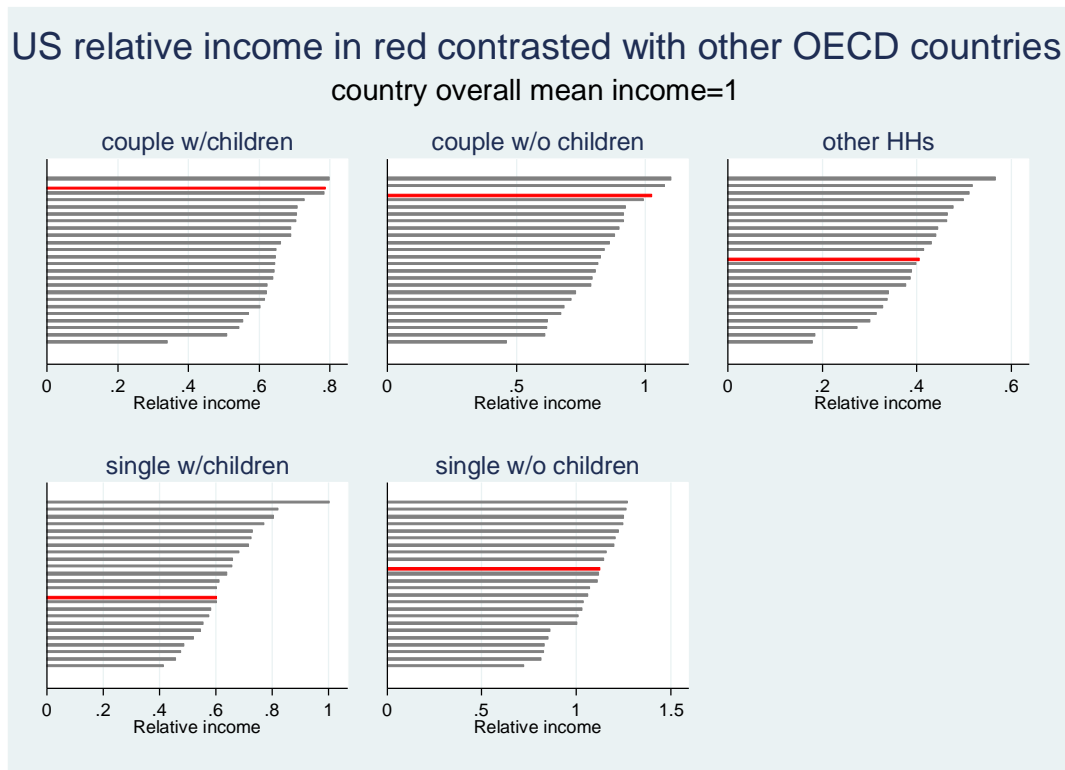
Figure 6 Inequality of five subgroups among one-male-earner households



Note: Each bar shows the Gini of a given group and country. The US Ginis are colored red. Ginis are ordered from the highest to the lowest.

Figure 7 shows the results for the relative income of single one-male-earner households. In three out of five types here, US relative mean income is around the cross-country median. The exceptions are one-male-earner households (couples with or without children) whose relative income is among the highest. These two groups are interesting because they display unusually high relative mean incomes with similarly unusually high inequality.

Figure 7. Relative income of five subgroups among one-male-earner households



Note: Each bar shows mean income of a group compared to the mean income of the country. The US values are colored red. Values are ordered from the highest to the lowest.

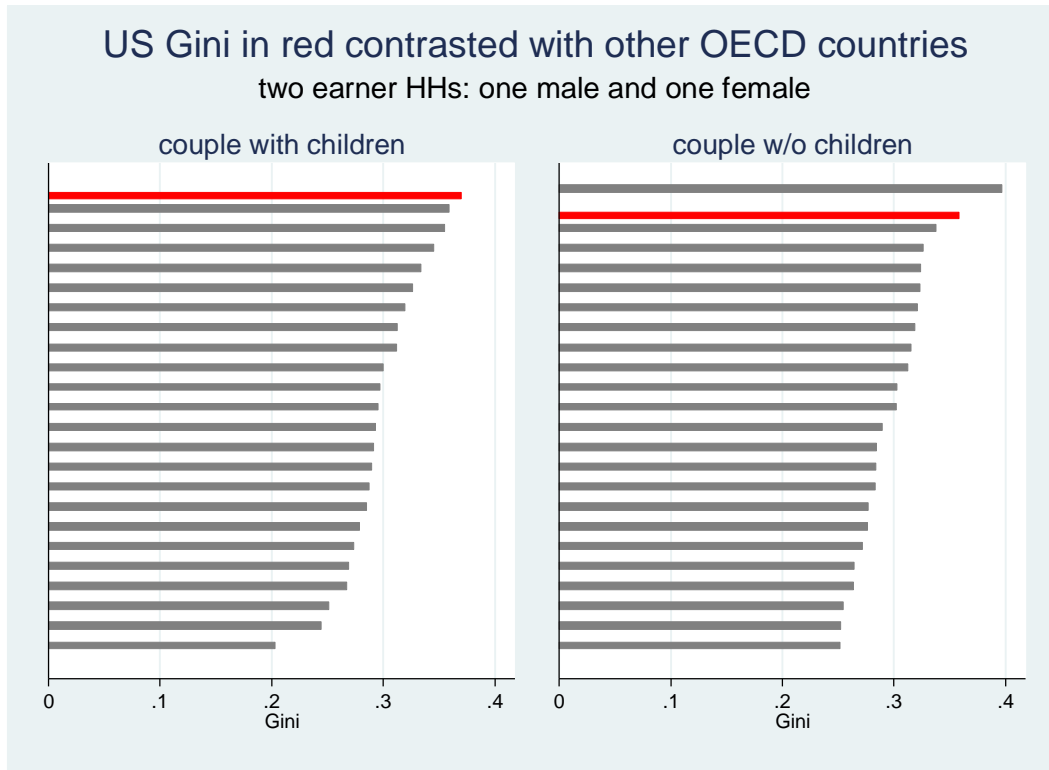
*“Traditional households”*

“Traditional” (one male earner and one female earner) households comprise the largest share of all households, from just under 40 percent in Australia, Hungary, and Russia to 56 percent in France. (The US with 42 percent is on the low side, modestly below the unweighted mean of 46 percent). Here, we look at only two subgroups: “traditional” households with, and without, children.

US inequality is again very high (see Figure 8). US inequality is the highest of all countries, among these two-earner couples with children – with a Gini of 0.37 compared to the cross-country median Gini of just less than 0.30. US inequality is second highest, among two-earner couples without children.

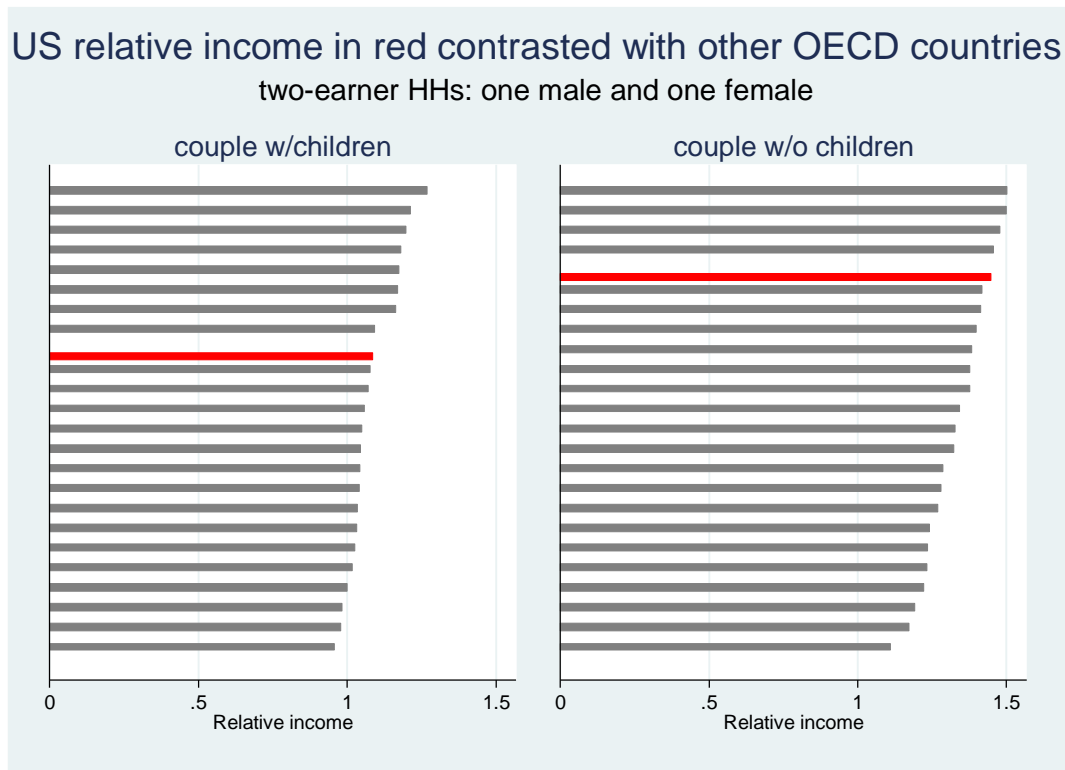
When it comes to relative incomes (see Figure 9), US relative labor income for two-earner households with children is very close to the median for the 24 countries; it is higher than the cross-country median, however, for two-earner couples without children.

Figure 8. Inequality of two subgroups of “traditional” households



Note: Each bar shows the Gini of a given group and country. The US Ginis are colored red. Ginis are ordered from the highest to the lowest.

Figure 9. Relative income of two subgroups of “traditional” households



Note: Each bar shows mean income of a group compared to the mean income of the country. The US values are colored red. Values are ordered from the highest to the lowest.

### Regression analysis

To tease out the specificity of US inequality, we estimate regressions where the Gini coefficient for each country/group is regressed on groups' relative mean income (i.e., relative to the mean of that country) and dummy variables for the subgroups (N=15) and countries (N=24). The omitted household type is one-male-one-female-earner with children and the omitted country is Denmark (with low inequality).

We use two specifications of the regression: an unweighted one, and a weighted regression where each group is weighted by its share in the population of a given country. The latter adjusts for variation in household compositions across countries. We are, of course, interested in the coefficient on the dummy variable for the US. The results are reported in Table 4.

Compared to the omitted country (Denmark), the coefficient on the US dummy is 0.069 in the unweighted formulation, and 0.101 in the weighted formulation. It is statistically significant at less than 0.01 in both cases. This means that, on average (whatever demographic group we take), US inequality is between 6.9 and 10.1 Gini points greater than Denmark's. Perhaps more revealing is the fact that in both formulations, the US coefficient is the largest of all country dummies. The next largest positive coefficient in the unweighted formulation is Canada's (5.4 Gini points more unequal than Denmark) and, in the weighted formulation, Israel's (8.2 Gini points more unequal than Denmark). So, in terms of within-group inequalities, the US is, on average, more unequal than the second most unequal OECD country by between 1.5 and 1.9 Gini points.

Table 4. US income inequality exceptionalism  
(dependent variable: Gini coefficient of household type/country)

Variable		Coefficient (p value)	
		Unweighted regression	Population-share weighted regression
		* = significance < 0.05 ** = significance < 0.01	
Relative group mean		-0.036 (0.20)	-0.003 (0.89)
Three or more earners		-0.028 (0.09)	-0.034** (0.00)
Two earners	Female	0.022 (0.23)	0.035* (0.02)
	Male	0.034* (0.04)	0.033** (0.01)
One female earner	Couple with children	0.099** (0.00)	0.136** (0.00)
	Couple without children	0.048* (0.03)	0.065** (0.00)
	Other	0.057* (0.03)	0.081** (0.00)
	Single with children	0.082** (0.00)	0.098** (0.00)
	Single without children	0.066** (0.00)	0.078** (0.00)
One male earner	Couple with children	0.089** (0.00)	0.097** (0.00)
	Couple without children	0.054** (0.00)	0.067** (0.00)
	Other	0.049* (0.05)	0.074** (0.00)
	Single with children	0.086** (0.00)	0.117** (0.00)
	Single without children	0.087** (0.00)	0.094** (0.00)
One male one female earner	Couple without children	0.104 (0.54)	0.002 (0.80)
US dummy		0.069** (0.00)	0.101** (0.00)
Adjusted R <sup>2</sup> (F)		0.59 (12.3)	0.82 (38.9)
Number of observations		360	360

Note: The regression is based on 360 observations, i.e., 24 countries x 15 subgroups. The omitted household type is one-male-one-female-earner with children, and the omitted country is Denmark. Coefficients on dummy variables for countries other than the US are not shown.

### *Robustness of the results*

There are two possible limitations of our results that need to be addressed. The first refers to the composition of the population (i.e., shares of different demographic groups); the second to the year of study (2010) selected here.

Consider group composition first. Earlier in this paper, we noted that the higher overall labor income Gini in the US, compared to other relatively similar countries, could be the result of

- a) greater group Ginis (the “within” component);
- b) larger mean income gaps between the groups (the “between” component); and/or
- c) greater shares of groups that have higher level of inequality.

Throughout this paper, we formally assessed the contributions of the first two of these three factors – the “within” and “between” components of inequality – but we did not present a detailed look at the third. The regression analysis, however, shows that the introduction of the demographic composition does not affect the results; it rather makes them stronger because the US dummy variable in the population-weighted regression is greater than in the unweighted formulation. So, if anything, the US has a “favorable” demographic composition.

In Table 5 we show the share of each subgroup in the US, and the unweighted average shares, of the same subgroups, across the 23 comparator countries. The US shares diverge by more than 2 percentage points in only two cases. The first case is the one-male-one-female-earner couple with children: about 30 percent of the US population is living in such households versus 33 percent, on average, in the rest of these OECD countries. The second case is one-female-earner households where that earner is single with children; in that case, about 6.5 percent of the US population lives in that type of household but only 4 percent (on average) in the other OECD countries. (In common parlance, the US is slightly low on “traditional” households and slightly high vis-à-vis single mothers). In short and even leaving the regression results aside, we note that the US family composition is very similar to that of other countries. Thus, a unique compositional structure does not explain the high level of overall earnings inequality reported in the US.

Table 5.  
Population shares of household types

Type of household	(1) Share in the US  (percent)	(2) Average share in other 23 countries  (percent)	(3) = (1) - (2)  Difference between US share and average share in other countries  (percentage points)
One-female-earner			
Couple w/children	2.3	3.5	-1.2
Couple w/o children	1.0	0.9	0.1
Other	1.8	0.6	1.1
Single w/children	6.5	4.1	2.4
Single w/o children	3.2	3.2	0.0
One-male-earner			
Couple w/children	13.1	13.0	0.1
Couple w/o children	2.2	1.7	0.5
Other	1.5	0.8	0.7
Single w/children	1.2	1.0	0.2
Single w/o children	4.0	4.3	-0.3
“Traditional”			
w/children	29.6	32.9	-3.3
w/o children	12.6	13.4	-0.8
Two female earners	2.3	1.7	0.6
Two male earners	3.0	2.3	0.7
Three + earners	15.3	16.4	-1.1

Second, is the “story” that we report here stable over time, or is there something unusual about the year that we chose (2010)?

Table 6 provides a window onto the answer to that question. It shows, for each subgroup, how US inequality (captured by the Gini) is ranked with respect to the 24 countries in our study at two points in time, 1995 (Wave IV)<sup>16</sup> and 2010 (Wave VIII). This is not, of course, a huge sweep of time but it is the longest interval for which we had data on all 24 countries; and 13 years (including the onset of the global financial crisis) is not a trivial passage of time.

Consider the five most prevalent subgroups – shaded in gray. These groups constitute over 75 percent of the US population. In each of these five subgroups, the US rank (within the 24 countries) is exactly the same at both time points. Across all 15 subgroups, the average change in rank, over this 13-year period,

<sup>16</sup> LIS’ Wave IV is centered on 1995, but the precise years vary between 1992 and 1997. The Wave IV US dataset is from 1997.

is 0.8, from 2.3 to 3.1 – that is, less than one rank position. Thus, we conclude, our results are sustainable over time. The main year of this study – 2010 – does not appear to be unique, as least not with the respect to the past two decades.

Table 6. US inequality rankings among 24 OECD countries  
(1 = highest; 24 = lowest)

Type of household	Subgroup share (US, 2010)	Ranks		Difference in US rank between two time points
		1995	2010	
One-female-earner				
Couple w/children	2.3	2	5	-3
Couple w/o children	1.0	6	4	2
Other	1.8	2	6	-4
Single w/children	6.5	3	3	0
Single w/o children	3.2	1	3	-2
One-male-earner				
Couple w/children	13.1	1	1	0
Couple w/o children	2.2	1	1	0
Other	1.5	2	3	-1
Single w/children	1.2	5	8	-3
Single w/o children	4.0	2	4	-2
“Traditional”				
w/children	29.6	1	1	0
w/o children	12.6	2	2	0
Two female earners	2.3	3	2	1
Two male earners	3.0	1	1	0
Three + earners	15.3	2	2	0
<i>Unweighted mean rank</i>		2.3	3.1	

Notes: The five rows shaded in gray account for more than 75 percent of persons in the US.



#### 4. Conclusions and Directions for Future Research

We began by noting that prior literature establishes that the high level of inequality in US disposable household income, calculated across working-age households, is not only the product of modest redistribution in the US as compared with similar OECD countries; it is also the result of a comparatively high level of inequality in the underlying market income. Furthermore, the primary component of market income is income from labor. In this paper, we have shown that equivalized labor income across households is indeed more unequally distributed in the US than in all (but one) of 24 OECD countries included in this study.

We were also interested in assessing whether labor income inequality is pervasive, across household types and demographic subgroups, or whether it may be due to either exceptionally high or exceptionally low average labor incomes received by some groups. We conclude that within-group inequality of labor incomes in the US is, in almost all cases, high by OECD standards. So, it is neither an unusual household composition, nor unusually high mean labor incomes of some demographic groups that explain high US earnings inequality, but simply the fact that high and low labor incomes are widely spread across all of our household/demographic categories.

We have seen that, in 2010, when we look at 15 (mutually-exclusive) demographic groups, the US' inequality rankings are consistently high. In 10 out of 15 groups, (within-group) inequality places the US among the three most unequal countries out of 24; in three more cases, the US falls among the five most unequal countries. Our overall conclusion, clearly, is that the US' high level of market income inequality, in cross-national perspective, is found across diverse subgroups.

A detailed policy analysis is beyond the goals and scope of this paper, but we offer a few final comments about research that would extend what we have reported here.

The large cross-national literature on policies and institutions that shape economic inequality can be divided, in general, into two bodies of work: comparative research on the determinants of earnings inequality, and comparative studies on income redistribution. The former literature mainly focuses on regulations and other tools that set floors under earnings (mainly minimum wages) and institutions that shape workers' bargaining power (mainly unions); these public interventions are increasingly referred to as instruments of "predistribution" (Hacker 2011, Chwalisz and Diamond 2015).<sup>17</sup> The latter literature focuses on the design, mix, and effectiveness of the classic tools of redistribution – public income transfers and households' direct taxes (see Gornick and Smeeding 2018 for a review).

The study that we report in this paper turns our attention to the instruments of predistribution. Institutions that affect earnings inequality have received heightened attention in recent years among economists studying income inequality (see the influential policy proposals in Atkinson 2015; see also OECD 2008, 2011, 2015). They have also attracted attention among political scientists, sociologists, labor scholars, and legal analysts (e.g., Alderson and Nielsen 2002, Alexander et al 2015, Anker and Anker 2017, Golden and Wallerstein 2011, Kenworthy 2001).

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<sup>17</sup> Hacker (2011) is widely credited with coining the term "predistribution," referring to institutions that prevent or reduce market-driven inequalities. The term is intentionally contrasted with redistribution, specifically with the classic redistributive instruments – transfers and taxes – that reshape inequalities produced by markets.

A substantial strand in that literature focuses on how, and the extent to which, policies and institutions vary across high-income countries (e.g., Blau and Kahn 2002, Salverda and Checchi 2015). As is well-known by now, many studies have indicated that, in the US, minimum wages are low and unions are weak, relative to other high-income countries, especially among OECD countries (see OECD 2015). Furthermore, several studies have concluded that the low minimum wages and weak collective bargaining in the US do, in fact, explain a substantial share of the US' higher level of earnings inequality (see Gornick and Smeeding 2018 for a review).

Future work that builds on this paper might address two issues/questions:

1) Public policies and institutions that shape earnings distributions – e.g., minimum wages, structures of collective bargaining, and other mechanisms for wage-setting, including on the high end – are understood to affect the distribution of individuals' earnings. Our work focuses on *households'* earnings; those are clearly shaped by the earnings of individual household members but also by the ways in which households are formed, vis-à-vis combinations of earners. Little if any research assesses the extent to which these earnings-related policies and institutions shape *households'* earnings – either directly or indirectly (by influencing household-level employment behavior or even household formation).<sup>18</sup>

2) The extensive cross-national literature on the major tools of “predistribution” has not, thus far, focused on their varied effects across subgroups of workers, differentiated by “bundles” of characteristics – much less subgroups of households. Little if any research assesses whether (or how or why) earnings-related policies differentially affect *households*, when those households are distinguished by their earners' gender, partnership, and/or parenting status.

A rich and growing supply of institutional databases in combination with high-quality microdata (such as the LIS data) – both available across countries and over time – offers the basis for future studies that might tackle these questions.

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<sup>18</sup> We are certainly not the first to note this lacuna in the inequality literature. Salverda and Checchi's (2015:1537) review of labor market institutions and wage dispersion begins by observing that there are two massive literatures – one on wage dispersion and one on income inequality – and that “the two strands of study are . . . miles apart”. Salverda and Checchi lament that split because income from labor is the largest component of working-age households' income. They attribute the lack of integration of the two literatures to the complexity of their interaction.

Annex 1.  
LIS datasets used

	Name of survey	Year
Australia	Household Expenditure Survey (HES) and Survey of Income and Housing (SIH)	2010
Canada	Survey of Labour and Income Dynamics (SLID)	2010
Czech Republic	Survey of income and living Conditions / EU-SILC	2010
Denmark	Statistics Denmark: Law Model	2010
Estonia	Estonian Social Survey (ESS) / EU-SILC (Survey on Income and Living Conditions)	2010
Finland	Survey of Income and Living Conditions (SILC), formerly known as Income Distribution Survey (IDS)	2010
France	Family Budget Survey (BdF)	2010
Germany	German Social Economic Panel Study (GSOEP)	2010
Greece	Survey of Income and Living Conditions / EU- SILC 2011 survey	2010
Hungary	Household Monitor Survey	2009
Iceland	Survey of Income and Living Conditions (EU-SILC)	2010
Ireland	Survey of Income and Living Conditions / EU-SILC	2010
Israel	Household Expenditure Survey	2010
Italy	Survey of Household Income and Wealth (SHIW)	2010
Luxembourg	Panel socio-économique "Liewen zu Letzebuerg" (PSELL III) / Survey of Income and Living Conditions (EU-SILC)	2010
Netherlands	Survey of Income and Living Conditions (EU-SILC)	2010
Norway	Household Income Statistics (formerly based on the Income Distribution Survey)	2010
Poland	Household Budget Survey	2010
Russia	Russia Longitudinal Monitoring Survey-Higher School of Economics (RLMS-HSE)	2010
Slovakia	Survey of Income and Living Conditions (EU SILC 2011)	2010
Slovenia	Household Budget Survey	2010
Spain	Encuesta de Condiciones de Vida (ECV) / Survey of Income and Living Condition (EU- SILC) 2010 survey	2010
UK	Family Resources Survey (FRS)	2010
US	Current Population Survey – ASEC (Annual Social and Economic Supplement)	2010

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