Demographic Behaviour and Earnings Inequality across OECD Countries

Authors: Leo Azzollini[abc], Richard Breen[ac], Brian Nolan[bc]

Institutional Affiliations: [a] University of Oxford, Leverhulme Centre for Demographic Science – Department of Sociology; [b] Institute for New Economic Thinking – Department of Social Policy and Intervention; [c] Nuffield College, University of Oxford

Corresponding author: Leo Azzollini, University of Oxford, Institute for New Economic Thinking - Department of Social Policy and Intervention, Manor Road, OX1 3UQ, Oxford, United Kingdom. Email: leo.azzollini@spi.ox.ac.uk

Abstract

Many studies have focused on how demographic dynamics, such as changes in marriage patterns and the increasing share of households headed by a single person, may contribute to rising earnings inequality. Here we instead ask how demographic differences between countries may underpin differences in household earnings inequality between them, concentrating on economic homogamy and the proportion of households headed by a single woman and by a single man. We use data on 28 OECD countries from the 2016 wave of the Luxembourg Income Study, and develop a new inequality decomposition approach based on half the squared coefficient of variation (HSCV). We find that variation between countries in the specified demographic factors can account for just under 30% of the variation between countries in inequality in labour earnings, with the proportion of households headed by a single woman playing the largest role. The associations between labour earnings inequality and these demographic components are consistent across countries, with little variation in how each is related to overall inequality. Although by far the largest driver of cross-national inequality is the variation in earnings among married men, counterfactual analysis suggests that relatively small changes in these demographic variables can indeed affect inequality.

Keywords: Earnings Inequality, Economic homogamy, Household structure, Inequality decompositions, OECD countries

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1. Introduction

In recent decades, a substantial literature has examined how two key aspects of demographic behaviour reflected in how households are structured affect earnings inequality: the growing proportion of households headed by a single adult and increased assortative mating. For the most part this has focused on how demographic behaviour affect changes in earnings inequality over time, typically employing a decomposition method to address a counterfactual question such as "what would be the level of income inequality in the United States today if economic homogamy were at the same level as in 1979, *ceteris paribus?"* (Burtless 1999; Cancian and Reed 1998; Hyslop 2001; Breen and Salazar 2011). A few studies have extended this approach to trends in more than one country, but there is little research focusing on the related but different question of how these two demographic factors may contribute to differences in the level of earnings inequality across countries; that is the question addressed in this paper.

We first examine the extent of variation across rich countries in the degree of earnings homogamy between partners and in the proportion of households headed by a single man and a single woman, using data from the 2016 wave of the Luxembourg Income Study (LIS) covering 28 OECD countries. We then employ a new decomposition approach based on half the squared coefficient of variation (HSCV), the summary inequality measure commonly known as Generalised Entropy GE (2), which can be decomposed into 11 parameters, including economic homogamy and the proportions of households headed by a single man and by a single woman. We find that the proportion of households headed by a single woman has the strongest association with household earnings inequality, with which economic homogamy is less strongly associated and the share of single-male headed households is not associated. Counterfactuals that set these demographic components to the same

values in all countries bring out how much they could potentially account for differences in inequality levels. Counterfactuals that instead reduce the observed levels of economic homogamy and proportions of households headed by a single woman and a single man in each country by only 10% are still seen to produce a substantial reduction in inequality, averaging 8% across the countries studied.

Previous research is briefly surveyed in the next section and against that background the analytical approach to be adopted here is set out. Section 3 describes the data employed. Section 4 sets out the decomposition of the HSCV summary measure on which our analysis then relies. Section 5 Section 6. Section 7.

2. Background and Analytical Approach

With teasing out the forces underpinning rising household earnings inequality a central preoccupation, the role that changing household structures may play in that respect has received a good deal of attention from researchers in economics, demography and sociology. Homogamy (marriage/partnership between individuals with a similar level of education or earnings) and the extent to which households are 'headed' by a couple versus a single adult have been a particular focus in research on rising inequality in the US in particular. As far as homogamy is concerned, if individuals increasingly match with others who are similar in their incomes or in their income potential then that may lead inequality between households to increase (Gronau 1982). Growing similarity in earnings between partners is considered as a key driver of the rise in income inequality, (Cancian, Danziger, and Gottschalk 1993; Reed and Cancian 2009; Schwartz 2010). Some US-focused studies showed a strong, positive relationship between increasing homogamy and inequality in the 1980s and 1990s, accounting for a substantial proportion of the rise of income inequality there (Cancian, Gottschalk, and Danziger 1993; Burtless 1995; Cancian and Reed 2009; Schwarz 2010). Esping-Andersen (2007) reported that increasing economic homogamy contributed to rising

inequality in Germany, Italy, and Spain in the 1990s. However, more recent studies find a much more limited role for economic homogamy in increasing household-level inequality in earnings or income, both in the US (Larrimore 2014; Greenwood *et al.* 2015) and comparatively (Chen, Forster, and Llena-Nozal, 2014; Nieuwenhuis, Van Der Kolk, and Need, 2017). This literature has brought out in particular the centrality not just of 'who partners with whom' but of labour supply decisions by partners and trends in women's labour force participation and hours of work in particular (see for example Harkness, 2013). Hrysko *et al.* (2017) find for the US that while wives' earnings played an important role in dampening the rise in inequality at the family level, marital sorting played little role. Yonzan (2020) finds positive sorting over labor earnings did play a role in increasing labor earnings inequality among couples in the US between 1970 and 1990 but not over the 1990-2018 period; this variation across time may help to explain the conflicting results in the US-focused literature.

The growing proportion of households headed by a single person has also been postulated as a potentially powerful driver of income inequality in a US context and more broadly (Karoly and Burtless, 1995; Lerman, 1996; Martin, 2006). Looked at comparatively, Chen *et al.* (2014) assessed the role of both increasing proportions of single-headed households and increased earnings correlation among partners in couples for the evolution of household earnings inequality for 23 OECD countries from the mid-1980s to the mid-2000s. Their results suggest that marital sorting and household structure changes contributed, albeit moderately, to increasing household earnings inequality, while rising women's employment exerted a sizable equalising effect. The rising proportion of households with children headed by a single woman in particular has also received considerable attention in research on changes in the level and composition of poverty for households and children.

Here our concern is not with the contribution of the demographic factors highlighted here to how inequality among households has been changing over time; we focus instead on the role they may

play in the variation across rich countries in the level of inequality at a point in time. This variation is more usually discussed primarily in terms of economic structures and institutional settings relating both to market incomes and to the extent and nature of redistribution via taxes and cash transfers, with relevant studies employing a variety of methodological approaches and a narrow or broader comparative range. The recent study by Sologon *et al.* (2021) includes demographic composition alongside labour market structures and returns and tax-benefit systems in seeking to account for differences in disposable income inequality between Ireland and the UK. Their analytical framework integrates micro-econometric and micro-simulation approaches in a decomposition analysis based on the EUROMOD tax-benefit simulation model. This builds on and extends the approach to accounting for differences across countries in household income distributions set out in Bourguignon *et al.* (2008), which developed a combination of parametric and non-parametric procedures for generating counterfactual distributions suitable for comparing full household income distributions (as opposed to wage distributions) bringing changes in household composition into the

Here we employ a more straightforward and limited but still illuminating approach based on decomposition and counterfactual analysis based on a summary inequality measure. For this purpose we use half the squared coefficient of variation (HSCV), one of the Generalised Entropy class of measures and often termed GE(2) (a variant of the coefficient of variation employed by Burtless 1999 and Cancian *et al.* 1993). This measure is decomposable among mutually exclusive and exhaustive groups that are not hierarchically ordered on the basis of earnings and can accommodate zero or negative earnings (due for example to self-employment losses).[1] Here we show how it can be decomposed to distinguish the specific demographic features we wish to study and assess their role in how inequality in earnings/labour income among households varies across rich countries.

[1] This rules out the use of either the Theil index or the Gini coefficient (Cowell, 2000).

We do this by first examining the variation across rich countries in the relevant parameters of this decomposition and how each of these parameters relates to the observed level of inequality in household earnings from labour (employee earnings together with self-employment earnings), the component of total earnings that dominates overall earnings inequality in all rich countries. We then implement a counterfactual analysis setting the relevant parameter for each of these demographic components to a common value in all countries. The the level of inequality in labour earnings across households in each country is then recomputed and we can see how much variation across countries there would be in that instance. Finally, alternative counterfactuals are implemented that instead reduce the observed levels of economic homogamy and the proportions of households headed by a single woman and a single man in each country by 10%. These allow us to show what impact a more modest and realistic change in the demographic variables could have on the variation in inequality across the countries being studied.

Counterfactuals of this kind are staples of the literature on the relationship between demographic structures and income inequality (Fortin, Lemieux, and Firpo 2011), starting from the approach developed by Lerman and Yithzaki (1985), but they are much less commonly used in comparative studies. As with all such analyses, the counterfactuals are artificial, insofar as they only vary some parameters while keeping everything else fixed - a condition that is unlikely to hold in reality. The usefulness of counterfactuals depends on the aim of the exercise, which is why we employ alternative approaches where this is less versus more plausible or realistic.

3. Data and Measures

Here we employ data from the Luxembourg Income Study (LIS), which contains the data required on household and person-level income and earnings as well as socio-demographic information and labour market participation. We focus on 28 OECD countries across North America and Europe, further including Australia, Colombia, and Japan, substantially extending the analysis geographically

beyond the previous literature. We rely on the 2016 wave of the LIS, or on the closest year if 2016 data is not available.[2] We follow common practice in this literature in restricting our analysis to the household 'reference person' and their spouse/partner (if any) in the household (including same-sex partnerships), ignoring the role of other earners. We also restrict the sample to those aged 20 to 65 inclusive.

For each individual, we use the following variables: labour earnings (including from self-employment), marital status, relationship to household reference person (self or spouse/partner), self-reported sex, type of main job (full-time vs. part-time), if any. Labour earnings (LIS variable pilabour) includes "cash payments and services received from dependent employment, as well as profits/losses and value of goods from self-employment, including own consumption." (LIS User Guide 2019, p.10); pilabour is almost always expressed in gross terms, *i.e.* before tax, and we excluded from our sample countries where this is not the case (Chile, Hungary, Slovenia). We transform all earnings to 2017 US$ in terms of Purchasing Power Parity (PPP) using the PPPs provided by the Luxembourg Income Study. We equivalize by dividing the individual earnings by the number of adults in the household. Marital status captures whether the individual is married/in a union/cohabitation or single/ widowed.

4. Decomposition of HSCV

Half the squared coefficient of variation can be decomposed into within and between group inequality as follows. Assume that the population of households is divided into I mutually exclusive and exhaustive groups, denoted $i = 1, \dots, I$. Let π_i be the proportion of households in group i, μ is overall

[2] Countries for which data is not related to 2016 are: Australia (2014), Switzerland (2013), Estonia (2013), France (2010, Ireland (2010), Iceland (2010), Japan (2013), Luxembourg (2013), Netherlands (2013), Norway (2010), Sweden (2005), Slovakia (2013). It should be noted that timing in the case of Sweden is problematic in preceding the global financial crisis.

mean household earnings, μ_i is mean earnings in group i and σ_i^2 is the variance of earnings in group i. Then we have

$$HSCV = \frac{1}{2\mu^2}\sum_i \pi_i\, \sigma_i^2 + \frac{1}{2\mu^2}\sum_i \pi_i\, (\mu_i - \mu)^2 \qquad (2)$$

The first term on the right-hand side is the inequality within groups and the second is the inequality between them. We can decompose the terms in equation (2) in a meaningful way.

Define

π_w = the proportion of women-only headed households

π_m = the proportion of men-only headed households

$\bar{x}_w$= the mean earnings of women in women-only households

$\bar{x}_m$= the mean earnings of men in men-only households

$\bar{x}_{wc}$= the mean earnings of women in couple households

$\bar{x}_{mc}$= the mean earnings of men in couple households

$\bar{x}_c$= the mean earnings in couple households (this is equal to $\bar{x}_{wc} + \bar{x}_{mc}$)

σ_w = the standard deviation of earnings in women-only households

σ_{wm} = the standard deviation of earnings in men-only households

σ_{wc} = the standard deviation of women's earnings in couple households

σ_{mc} = the standard deviation of men's earnings in couple households

σ_c = the standard deviation of earnings in couple households

cor(m,w) = the correlation of women's and men's earnings only in couple households

(Note that the correlation in the earnings of wives and husbands, our measure of economic homogamy, is computed regardless of whether they are bothworking or not.)

We can write:

$$\mu = \pi_m\bar{x}_m + \pi_w\bar{x}_w + (1 - \pi_m - \pi_w)[\bar{x}_{wc} + \bar{x}_{mc}] \quad (3)$$

and HSCV as:

$$\mathrm{HSCV} = \frac{\pi_m\sigma_m^2 + \pi_w\sigma_w^2 + (1-\pi_m-\pi_w)\sigma_c^2}{2\mu^2}$$
$$+ \frac{\pi_m[\bar{x}_m-\mu]^2 + \pi_w[\bar{x}_w-\mu]^2 + (1-\pi_m-\pi_w)[\bar{x}_c-\mu]^2}{2\mu^2} \quad (4)$$

The first term is the within-household type inequality, the second is the between household type inequality.

We can then expand this, using (3):

$$\mathrm{HSCV} = \left[\frac{1}{2(\pi_m\bar{x}_m + \pi_w\bar{x}_w + (1-\pi_m-\pi_w)[\bar{x}_{wc}+\bar{x}_{mc}])^2}\right] \times$$

$$[\pi_m\sigma_m^2 + \pi_w\sigma_w^2 + (1-\pi_m-\pi_w)\sigma_c^2 + \pi_m[\bar{x}_m-\mu]^2 + \pi_w[\bar{x}_w-\mu]^2 + (1-\pi_m-\pi_w)[\bar{x}_c - \mu]^2\ ] \quad (5)$$

Then we can rewrite σ_c^2 in full:

$$\mathrm{HSCV} = \left[\frac{1}{2(\pi_m\bar{x}_m + \pi_w\bar{x}_w + (1-\pi_m-\pi_w)[\bar{x}_{wc}+\bar{x}_{mc}])^2}\right] \times$$

$$[\pi_m\sigma_m^2 + \pi_w\sigma_w^2 + (1-\pi_m-\pi_w)\{\sigma_{mc}^2 + \sigma_{wc}^2 + 2\mathrm{cor}(m,w)\sigma_{mc}\sigma_{wc}\} + \pi_m[\bar{x}_m-\mu]^2 + \pi_w[\bar{x}_w-\mu]^2 + (1-\pi_m-\pi_w)[\bar{x}_c-\mu]^2\ ] \quad (6)$$

From this last equation (6) we can see that HSCV depends on the 11 parameters listed: the proportions of men and women who are the head of single-adult households, the mean earnings of single men and women and of coupled men and women, the corresponding variances, and the correlation between the earnings of men and women in coupled households.

5. The Relationship Between Demographic Behaviour and Cross-national Inequality

The parameters of the HSCV decomposition set out in the previous section for each country are reported in Table 1. We see first that overall inequality in labour earnings among households varies widely across the countries in our sample, with HSCV ranging from 0.16 in Japan to 1.02 in Colombia, with a mean of 0.48, median 0.43, and variance of 0.04. Economic homogamy is measured as the correlation in the earnings of wives and husbands regardless of whether they are working or not. It ranges from -0.27 in Japan to 0.22 in Finland, with a mean of 0.089, median 0.112, variance 0.04. The proportion of households headed by single women ranges from 6.9% in Japan to 20% in Austria, with a mean of 14%, median 13.8%, variance 0.001. The same proportion for single men ranges from 4.8% in to 24.8% in, with a mean of 12.4%, median 11.1%, variance 0.003. The other mean and standard deviation values are expressed in 2017 US$ adjusted for Purchasing Power Parity, relying on the LIS PPP deflators for conversion.

[Table 1 here]

Figures 1 plots each country's HSCV against its economic homogamy, measured as the correlation in the earnings of wives and husbands (regardless of whether they are working or not). The earnings correlation varies from -0.27 in Japan and -0.14 in Switzerland to 0.20 in Spain and 0.22 in Finland. The mean correlation is 0.09 (median 0.12) with a standard deviation of 0.11. Some of the countries in which homogamy is below the average (or even negative), notably Switzerland, the Netherlands, Germany, and Austria, belong to the "one-and-a-half breadwinner" model, with generous tax treatment of part-time workers (McGinnity and McManus 2007).

The regression line shown in Figure 1 suggests a strong relationship, with greater economic homogamy being associated with more inequality. The regression itself is reported in column 1 of

Table 2, showing an estimated and statistically significant coefficient of 0.73. However, as is equally evident from Figure 1, this positive relationship is driven by a small number of countries in which the one-and-a-half breadwinner model is found. If we remove them from the data, there is no significant relationship between inequality and economic homogamy.

[Figure 1 and Table 2 here]

Figure 2 plots inequality against the proportion of households headed by a single woman. On average, 14% of households are headed by a single woman, but this ranges from 7% (Japan) to 20% (Austria). The figure shows a strong relationship with inequality: column 2 of Table 2 reports the estimated regression coefficient of 2.68 (s.e. = 1.07). This contrasts with the results for the proportion of households headed by a single man. On average these households make up 12% of the total, but this varies between 5% in Israel and 25% in Austria. The estimated regression coefficient of -0.338 shown in Table 2 is not statistically significant (at $p < .05$) and Figure 3 shows considerable variation in inequality among countries with roughly the same proportion of households headed by a single man.

[Figures 2 & 3 here]

Column 4 of Table 2 reports the results of regressing HSCV on all three demographic components. The share of households headed by a single man remains non-significant, while the coefficient for economic homogamy is reduced and its t-ratio falls to 1.87, just below the critical value for significance at $p < .05$. The relationship between inequality and the share of households headed by a single woman remains strong. Together the demographic components account for around 30% of the variance in inequality across countries.

In column 5 we regress HSCV on the other eight components of the measure, which we take to be economic as opposed to demographic. The findings are in line with the literature, with inequality being primarily determined by the mean and variance in the earnings of partnered men, and with the adjusted-R^2 being 0.66. To account for possible associations between the Demographic and Economic components, we regress the former on the latter in Appendix Table A1. We show that the key predictors of economic homogamy are the mean earnings of partnered men and women, while the share of single women in the population is not significantly affected by any of the economic components of HSCV. On the other hand, the share of single men in the population is significantly associated with the mean earnings of partnered women, and with the standard deviation in the earnings of partnered men, though this is borderline statistically significant ($p < 0.10$).

6. Demographic Behaviour and the Variation in Inequality Across Countries

How far can the variation in inequality across countries be explained by cross-national variation in demographic behaviour? Drawing on the results in Table 2, the variance in HSCV across countries is 0.042. By taking into account variation in homogamy, we can explain 11% of this (the value of the adjusted-R^2), so reducing the variance in inequality to 0.037. The share of households headed by a single woman accounts for 16% of the variance in HSCV; controlling for this reduces the variance between countries in inequality to 0.035. The share of households headed by a single man has no effect on reducing the variation in inequality. Taken together, these three demographic components account for 29% of the variance in HSCV. Controlling for them all reduces the variance from 0.042 to 0.03. That is to say, if all 28 countries had the same level of economic homogamy, the same share of households headed by a single woman, and the same share of households headed by a single man, cross-national variation in household earnings inequality would be almost 30% lower than it is.

This does not mean that inequality would be 30% lower in all countries, since whether a country's inequality would counterfactually increase or decrease, and by how much, depends on the values at

which we fix the demographic components and the values that exist in each country. We can see this if we engage in a counterfactual exercise in which we calculate each country's hypothetical HSCV using the regression coefficients from model 4 in Table 2. We set the demographic components equal to their mean values (that is, we set homogamy in all countries at .089, the share of households headed by a single woman at 0.14, and the share of households headed by a single man at 0.12) and, using the coefficients from model 4, we calculate the fitted value of HSCV for each country, then add to these the residuals from regression 4. Comparing this counterfactual HSCV with each country's actual HSCV we find that inequality hypothetically declines in 15 out of 28 countries and increases in the remaining 13. The average decline in inequality is 9% while the average increase is 10%. But these figures would differ if we fixed the demographic variables at values other than their means.

It is also helpful to compute the elasticity of HSCV with respect to each of the demographic components. By way of comparison, we also calculated the elasticity for the most important economic predictor of HSCV, the standard deviation of the earnings of men in couples. These are shown in Table 3 and Figure 4, and their average over the 28 countries is also reported. As we should have expected, among the demographic features the elasticity of the share of households headed by a single woman is largest, being almost twice as large as the elasticity for homogamy. All the elasticities are positive with a few exceptions. Economic homogamy is negatively related to inequality in Switzerland, Germany, Japan and the Netherlands, and the proportion of households headed by a single man is negatively related to inequality in Belgium, France, and Luxembourg. With these exceptions, Figure 4 shows a striking lack of cross-country variation in any of the elasticities, but with a very large elasticity for the share of single male-headed households in Denmark. In other words, although countries vary substantially in their inequality levels and their proportions of households headed by a single man or a single woman and in their degree of economic homogamy, all these aspects of demography are related to inequality in very similar ways in all countries. This acts to reinforce the result of our counterfactual reported at the end of the previous section.

Comparing these elasticities with that for the standard deviation of the earnings of men in couples we see that the latter is much larger, by a factor of more than 10, than for all three demographic factors, reflecting the greater importance of the standard deviation of the earnings of men in couples as a driver of inequality.

[Table 3 & Figure 4 here]

Finally, we can ask what might happen to inequality within countries if each of the demographic parameters were to change by a small amount. Setting each of the demographic components to 90% of their observed value and implementing the procedure described in the previous section (using the estimated regression coefficients and residuals), we find that inequality declines in 27 out of 28 countries, by an average of 6% (the range being 2% to 14%). We carried out the same simulation but this time using the regression involving the economic components (reported in column 5 of Table 2) and setting the standard deviation of the earnings of men in couples to 90% of its actual value in each country. This reduces inequality in all 28 countries by 12% on average with a range of 2% to 33%. Figure 5 reports the results for both counterfactuals for each country. It shows the greater impact of the economic factor but nevertheless shows a consistent, and non-negligible, reduction in inequality under the demographic counterfactual.

[Figure 5 here]

As made clear above, counterfactuals of this kind are staples of the literature but subject to the limitation that varying some parameters while keeping others fixed may not be seen as plausible or informative. Hypothetically moving each country's demographic values to the international means, given the small degree of variation in these parameters to begin with, places our counterfactuals at the more plausible end of the range but also makes their impact on each individual country relatively

small, despite the large effect it has on the degree of international variation in inequality. Assuming a small change in each country in these values seems to us to be even more plausible and perhaps provides a better demonstration of the extent to which such changes might influence inequality in practice.

7. Discussion and Conclusions

How much can cross-national differences in demographic behavior potentially account for the variation in levels of inequality across rich countries? By developing a new approach to decompose HSCV into economic and demographic components, and regressing the former on the latter across the 28 countries of the study, we find that the strongest predictor of HSCV is singlehood among women, while male singlehood has little effect. On the other hand, higher levels of economic homogamy tend to be associated with higher inequality, although this is most clear-cut among countries that have a one and a half breadwinner model. These patterns are in line with the literature on singlehood among women (Martin 2006; Breen and Salazar 2011), and mirror the debate on the impact of homogamy on inequality *over time*: powerful (Schwartz 2013) vs. negligible (Western *et al.* 2008; Greenwood *et al.* 2014, 2015 with corrigendum). We find that the relationship between the three demographic components within countries is very similar almost everywhere.

Differences between countries in demographic behaviour account for just under 30% of the variation between them in HSCV, with the proportion of households headed by a single woman being responsible for most of that. This implies that if, counterfactually, all countries had the same levels of economic homogamy, the same proportion of households headed by a single woman and the same proportion of households headed by a single man, country differences in inequality would narrow considerably, though the direction and magnitude of the counterfactual change in inequality in any specific country would depend on the common values of the demographic variables that we picked. Alternatively, if we assumed that the values of each country's demographic variables changed by a small amount, this could have a larger impact on inequality within countries even though it did not have a large effect on the differences between countries. Reducing all the demographic variables' values by 10% brought about a hypothetical (but, we argue, not implausible) reduction in inequality, in all but one country, of around 8%. This is less than the reduction brought about by changing the main economic predictor of HSCV, the standard deviation of the earnings of men in couples: across

countries, the economic factor on average brings about a reduction in inequality that is about 25% larger than that caused by changing demography. But, as Figure 5 shows, this varies between countries: in Spain and France, for example, the demographic and economic counterfactuals produce very similar reductions in inequality, whereas in Switzerland and Japan they are very different.

Regression 5 in Table 2 showed that economic variables can account for around 70% of the cross-national variation in inequality, with the mean and standard deviation of the earnings of partnered men being by far the most important. This is not a surprising result, but it should not detract from the finding that demographic factors, particularly with respect to economic homogamy and single female headed households, have some, albeit limited, potential to mitigate or exacerbate earnings inequality across rich countries, even when economic factors in a given country are held constant. These findings demonstrate the value of a demographic perspective in deepening our understanding of earnings inequality, and, whereas previous research has overwhelmingly taken an over-time perspective, our study is one of very few that explore cross-national differences.

To the extent that reducing either economic homogamy or the share of households headed by a single woman, or both, would bring about some decline in inequality, further research might usefully investigate which labour market characteristics are associated with lower economic homogamy and fewer households headed by a single woman. Focusing on differences in inequality across space from joint demographic and labour market perspectives may illuminate new pathways to address rising inequalities, a central challenge for contemporary societies.

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9. Tables

Table 1 – HSCV Parameters

Country	ρ	Π_M	Π_W	μ_{mc}	σ_{mc}	μ_m	σ_m	μ_{wc}	σ_{wc}	μ_{wc}	σ_w
AT	0.02	0.15	0.20	33840.48	40546.71	37392.74	38446.52	13792.13	15225.97	25047.03	26845.02
AU	0.03	0.10	0.13	34656.91	61513.71	33543.58	40739.50	16915.38	20732.63	22744.42	31387.52
BE	0.07	0.18	0.18	32219.92	45869.73	39082.60	34182.17	18825.96	18158.28	28195.75	30938.54
CA	0.10	0.11	0.13	32171.20	32563.53	34345.19	36103.02	17721.54	20358.38	25786.69	29138.26
CH	-0.14	0.12	0.13	56077.36	43652.33	63358.36	52617.61	20443.14	20756.00	42826.04	33023.43
CO	0.18	0.07	0.17	7040.07	10501.21	9071.89	14968.47	3107.44	7273.85	5967.97	10026.80
CZ	0.12	0.16	0.12	18908.87	15683.43	23091.10	15998.89	9634.96	10994.21	15133.81	15240.52
DE	-0.02	0.11	0.17	37894.41	36417.63	39083.93	43007.25	16867.88	19297.80	27660.58	31081.82
DK	0.16	0.25	0.15	39856.39	41161.27	35473.14	43298.36	24362.58	21505.21	26799.74	31903.80
EE	0.12	0.17	0.17	13052.00	15593.05	20368.66	19483.84	7508.45	8534.44	14478.55	13707.91
ES	0.20	0.08	0.11	22723.49	23038.37	23576.82	28993.91	12706.75	16325.77	20674.92	24871.91
FI	0.22	0.15	0.11	30321.42	29157.49	33188.04	28704.86	21161.09	20555.54	28110.96	25309.10
FR	0.13	0.18	0.19	18399.80	29902.88	21859.16	24429.05	9835.98	13683.24	16091.95	19898.52
GR	0.15	0.09	0.10	14523.85	17838.88	15804.36	20620.48	6691.30	10055.23	11541.58	16549.80
IE	0.10	0.11	0.18	25987.80	31436.62	22044.98	34010.53	13453.18	20442.98	15982.85	24365.86
IL	0.19	0.05	0.10	25315.23	25546.23	27952.48	29925.26	13035.73	15282.16	18678.59	23375.63
IS	0.03	0.14	0.11	32545.72	24475.27	31331.16	28820.69	17733.33	13500.96	24129.55	18937.68
IT	0.12	0.11	0.14	22367.39	32373.58	26401.40	34877.16	9217.55	15477.65	19132.63	21114.50
JP	-0.27	0.08	0.07	31891.17	20720.80	26211.17	19768.33	7562.66	10550.66	21906.51	15932.02
LT	0.16	0.10	0.18	14157.75	14333.86	16718.31	20219.31	9806.70	9995.13	14584.48	14351.94
LU	0.14	0.09	0.12	37552.97	45541.98	55112.52	48969.02	21548.21	25344.38	38545.77	39423.38
NL	-0.05	0.13	0.12	41915.45	38240.21	45477.05	44083.06	18073.65	18169.92	30057.37	26514.16
NO	0.09	0.23	0.18	40456.51	45628.30	40861.50	44068.62	22044.57	20956.02	27901.74	27197.15
PL	0.15	0.08	0.11	9984.13	10097.96	13009.69	12290.41	5347.84	6569.04	9655.37	11242.98
SE	0.11	0.20	0.13	25726.50	34847.53	30885.01	31875.98	14668.00	12978.83	22106.15	19700.44
SK	0.16	0.05	0.14	10758.39	10293.28	13754.61	13871.86	6485.18	8945.82	9273.55	10989.11
UK	0.13	0.09	0.15	28194.42	33938.76	26002.19	49714.90	15014.29	21304.75	17211.75	25128.78
US	0.07	0.12	0.16	48143.61	62357.80	45404.86	73856.36	24193.65	39578.04	31376.10	44143.10

Table 2 – HSCV Regressed on Demographic and Economic Components

	HSCV				
	(1)	(2)	(3)	(4)	(5)
ρ - Econ. Homogamy	0.725			0.584	
	p = 0.046			p = 0.075	
Π_W - % Single Women		2.677		3.092	
		p = 0.019		p = 0.009	
Π_M - % Single Men			−0.338	−1.148	
			p = 0.669	p = 0.119	
μ_{WC} - Mean Earnings, Partnered Women					−0.00001
					p = 0.218
μ_{MC} - Mean Earnings, Partnered Men					−0.00002
					p = 0.026
μ_W - Mean Earnings, Single Women					−0.00001
					p = 0.772
μ_M - Mean Earnings, Single Men					−0.00000
					p = 0.899
σ_{WC} - Sd. Earnings, Partnered Women					0.00000
					p = 0.898
σ_{MC} - Sd. Earnings, Partnered Men					0.00002
					p = 0.002
σ_W - Sd. Earnings, Single Women					−0.00000
					p = 0.943
σ_M - Sd. Earnings, Single Men					0.00001
					p = 0.312
Constant	0.417***	0.105	0.523***	0.137	0.561***
	(0.048)	(0.154)	(0.105)	(0.145)	(0.071)
Observations	28	28	28	28	28
R^2	0.145	0.195	0.007	0.367	0.761
Adjusted R^2	0.112	0.164	−0.031	0.287	0.661
Residual Std. Error	0.192 (df = 26)	0.186 (df = 26)	0.207 (df = 26)	0.172 (df = 24)	0.119 (df = 19)
F Statistic	4.413** (df = 1; 26)	6.307** (df = 1; 26)	0.187 (df = 1; 26)	4.631** (df = 3; 24)	7.583*** (df = 8; 19)

Note: p-values reported

Table 3 - Estimated elasticities of inequality with respect to economic homogamy and the proportion of households headed by single women and single men

Country	Actual HSCV	Elasticity of HSCV to ρ	Elasticity of HSCV to Π_W	Elasticity of HSCV to Π_M
AT	0.49	0.005	0.053	0.017
AU	0.88	0.009	0.034	0.005
BE	0.52	0.19	0.033	-0.011
CA	0.38	0.033	0.052	0.031
CH	0.22	-0.043	0.055	0.043
CO	1.02	0.058	0.038	0.014
CZ	0.28	0.039	0.050	0.002
DE	0.36	-0.005	0.081	0.043
DK	0.44	0.036	0.075	0.114
EE	0.44	0.031	0.019	0.010
ES	0.43	0.067	0.037	0.027
FI	0.33	0.070	0.032	0.029
FR	0.78	0.036	0.020	-0.010
GR	0.59	0.049	0.033	0.021
IE	0.64	0.031	0.084	0.045
IL	0.39	0.064	0.043	0.012
IS	0.21	0.008	0.060	0.073
IT	0.74	0.036	0.012	0.011
JP	0.16	-0.116	0.038	0.034
LT	0.38	0.048	0.052	0.046
LU	0.45	0.046	0.019	-0.004
NL	0.29	-0.017	0.051	0.044
NO	0.45	0.021	0.062	0.060
PL	0.39	0.050	0.037	0.009
SE	0.49	0.025	0.020	0.017
SK	0.41	0.058	0.053	0.009
UK	0.63	0.041	0.072	0.062
US	0.69	0.023	0.061	0.051

10. Figures

Figure 1 – HSCV and Economic Homogamy, across Countries

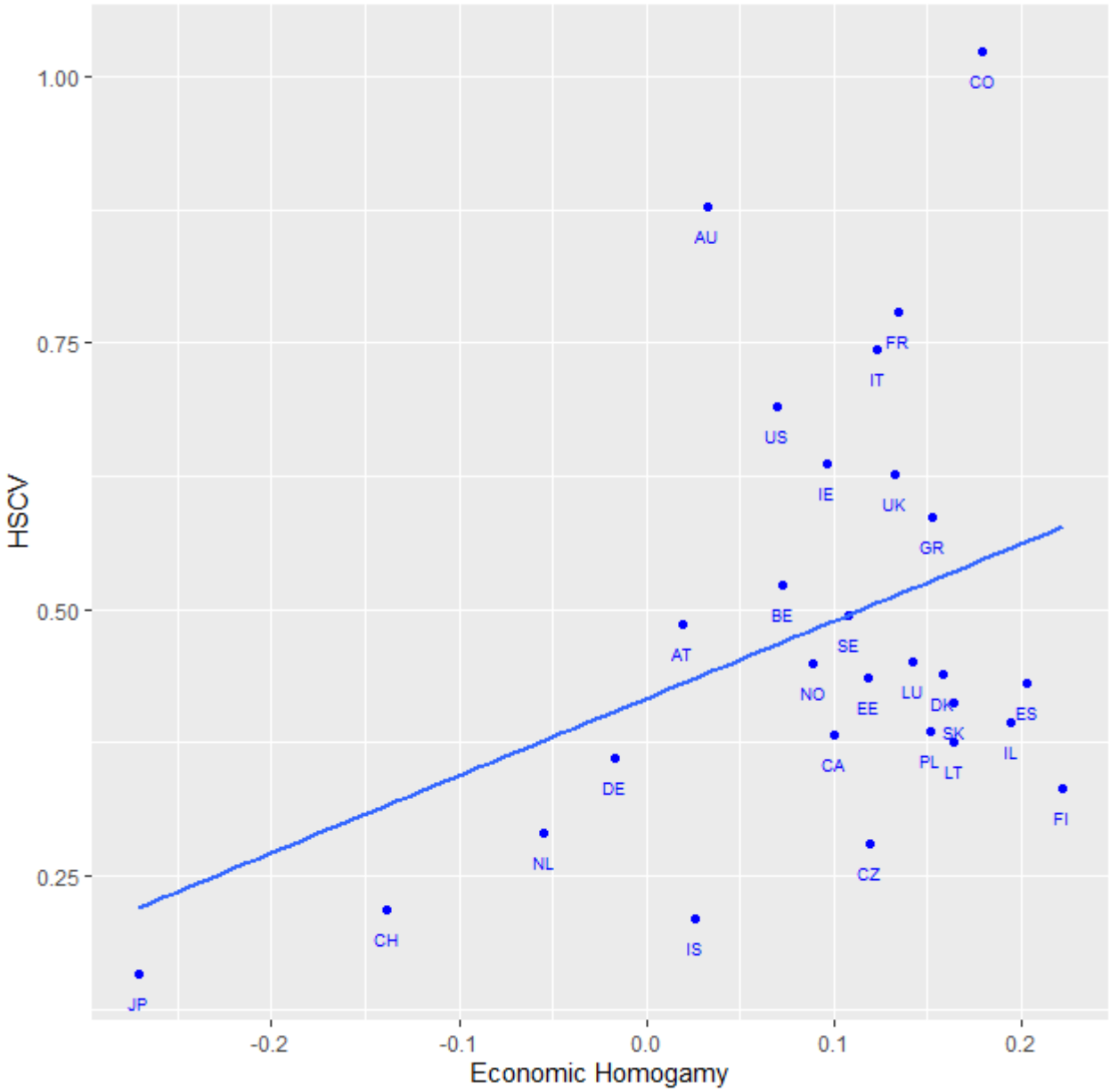


Figure 2 – HSCV and Single Women in the Population, across Countries

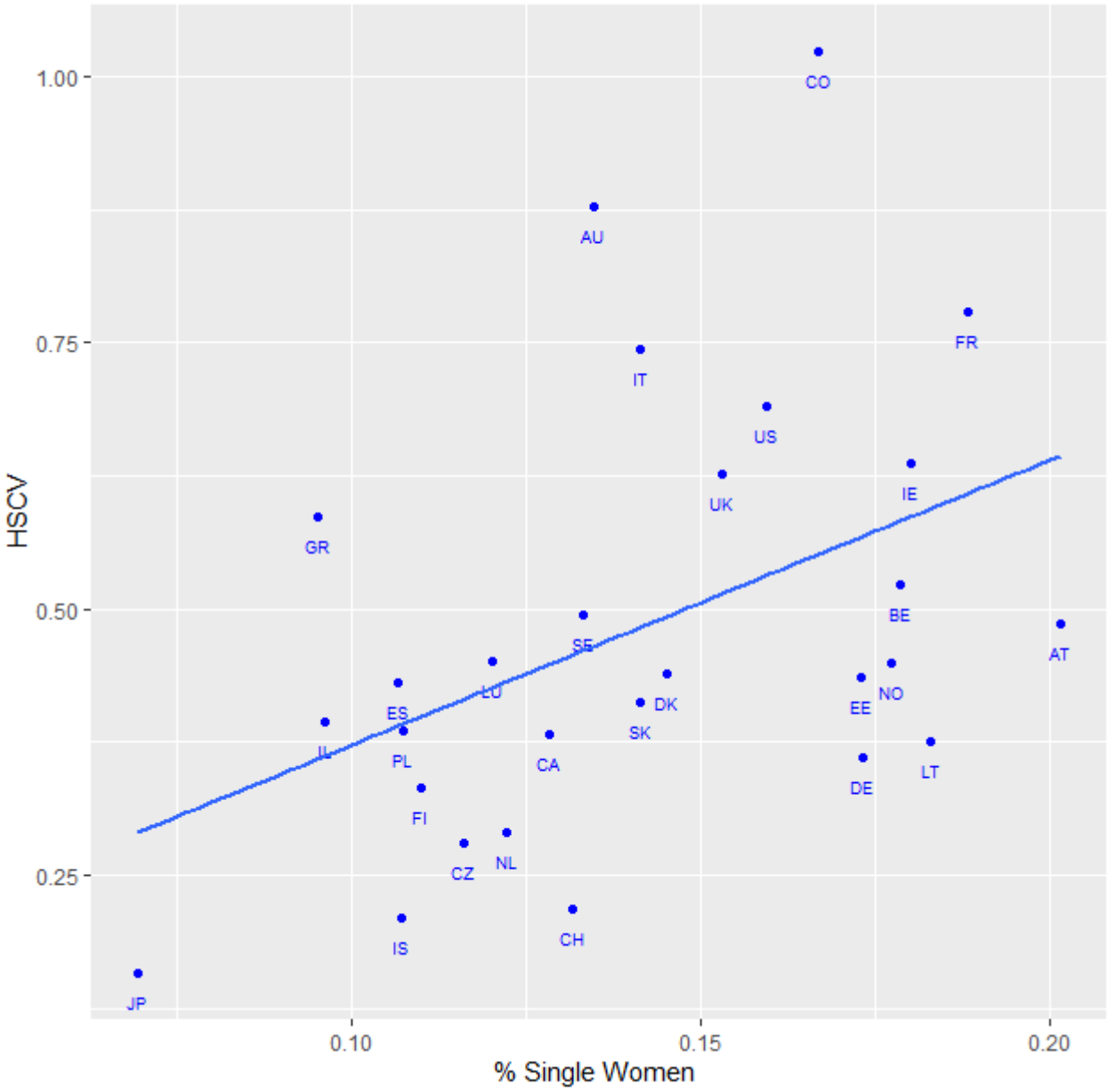


Figure 3 – HSCV and Single Men in the Population, across Countries

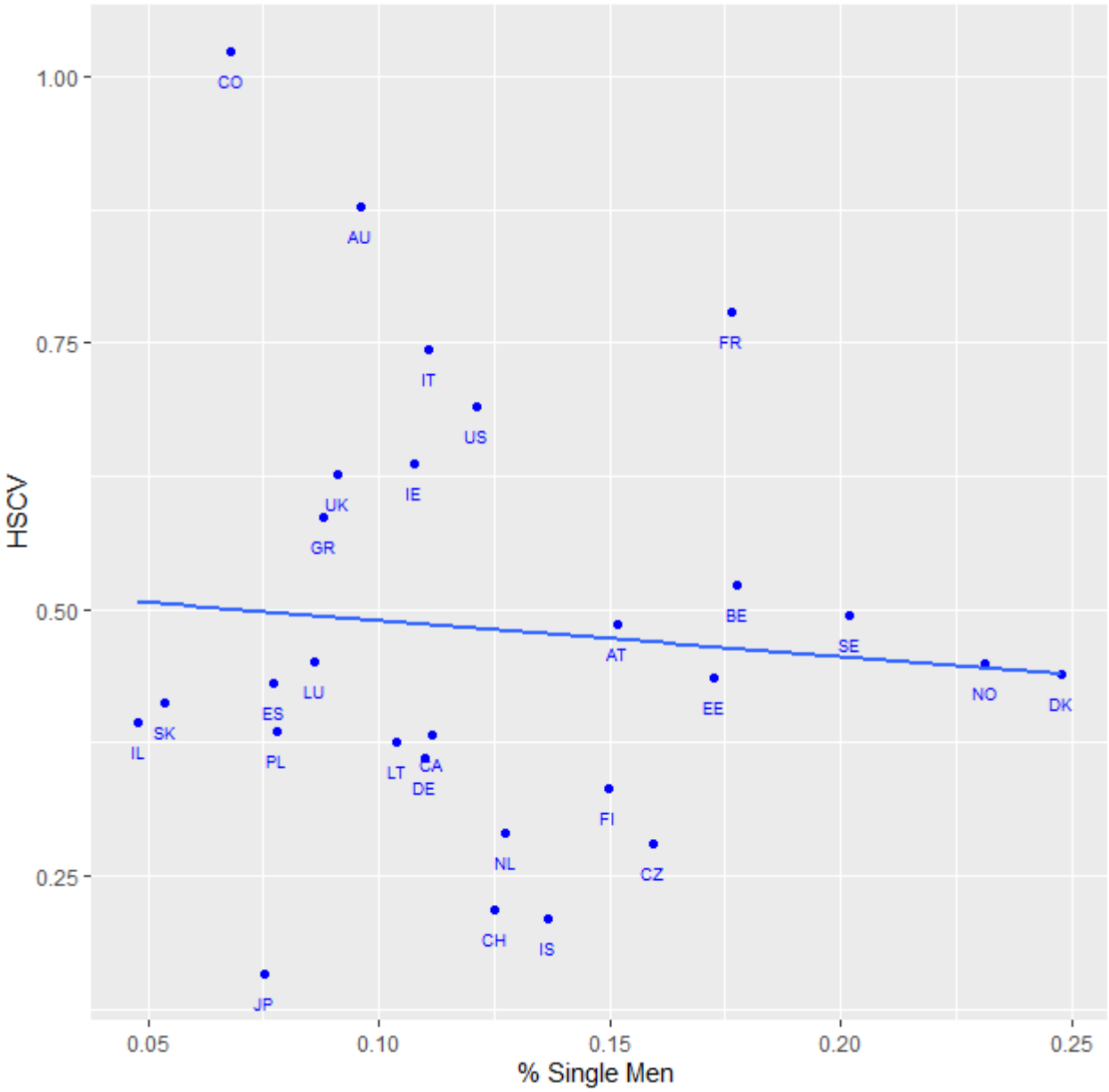


Figure 4 – Elasticity of Inequality to Demographic Components and SD for Partnered Men, by Country

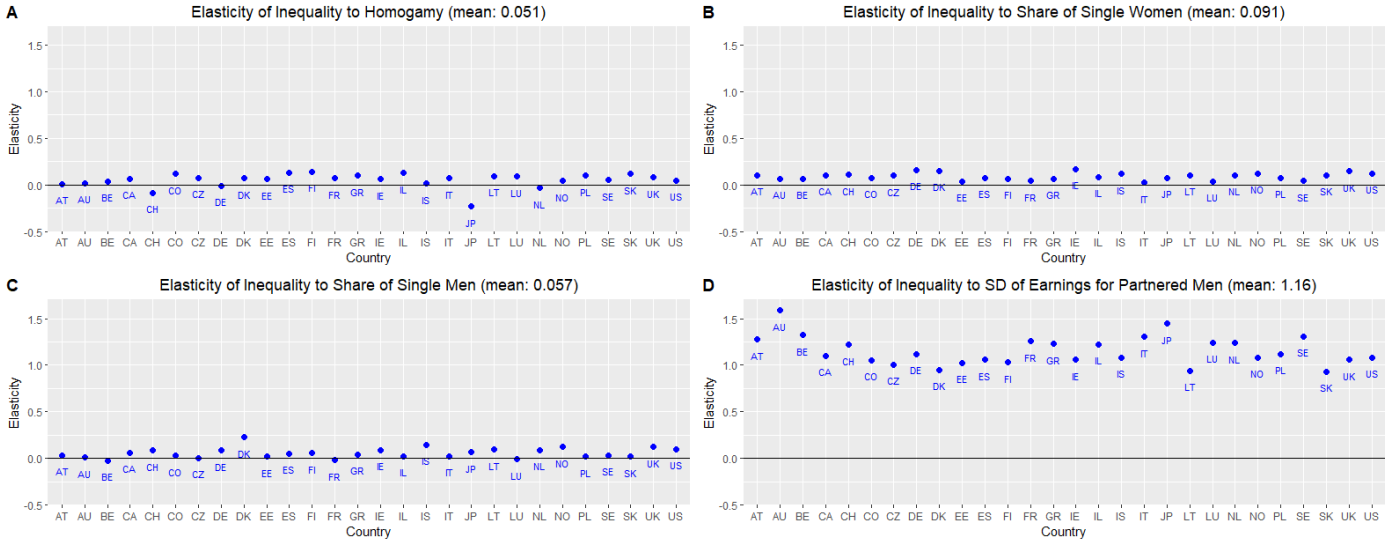
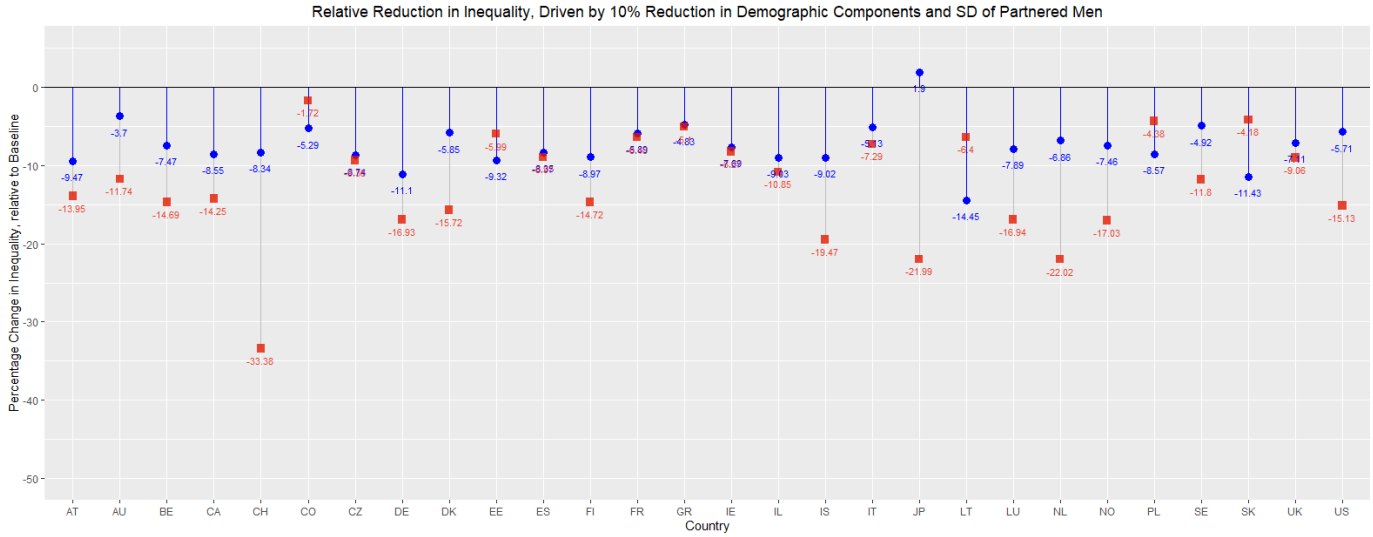


Figure 5 – Relative Change in Inequality, driven by a 10% Reduction in Demographic Components and in the SD (Earnings) of Partnered Men



11. Appendix

Table A1 – Demographic Components of HSCV, regressed on Economic Components

	Dependent variable:		
	ρ	Π_W	Π_M
	Econ. Homogamy	% Single Women	% Single Men
μ_{WC} - Mean Earnings, Partnered Women	0.00002	0.00000	0.00001
	p = 0.00001	p = 0.396	p = 0.004
μ_{MC} - Mean Earnings, Partnered Men	−0.00002	−0.00000	−0.00000
	p = 0.00000	p = 0.208	p = 0.455
μ_W - Mean Earnings, Single Women	−0.00001	−0.00000	0.00000
	p = 0.226	p = 0.627	p = 0.924
μ_W - Mean Earnings, Single Men	0.00001	0.00000	−0.00000
	p = 0.210	p = 0.679	p = 0.959
σ_{WC} - Sd. Earnings, Partnered Women	−0.00000	−0.00000	−0.00000
	p = 0.781	p = 0.425	p = 0.395
σ_{MC} - Sd. Earnings, Partnered Men	−0.00000	0.00000	0.00000
	p = 0.104	p = 0.318	p = 0.084
σ_W - Sd. Earnings, Single Women	0.00001	−0.00000	−0.00001
	p = 0.186	p = 0.918	p = 0.170
σ_M - Sd. Earnings, Single Men	0.00000	0.00000	0.00000
	p = 0.273	p = 0.248	p = 0.735
Constant	0.150	0.140	0.107
	p = 0.00002	p = 0.00001	p = 0.0004
Observations	28	28	28
Adjusted R^2	0.839	−0.001	0.337
Note:		p-values reported	