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"Defamilializing" how women's economic independence is measured

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Abstract

This paper seeks to take the notion of women's economic independence out of the study of income inequalities within couples. The aim is to propose a new definition of women's economic independence, based on the concept of defamilialisation as defined by Lister. The women's economic independence index (WEII) is based on a methodology that looks beyond the boundaries of the household to study women's economic position.

Defamilialisation operates on two levels. Firstly, women's economic independence is measured in terms of the poverty line (60% of median income), in order to determine their ability to meet their primary needs through labour income and social benefits. Secondly, the indicator is based on a method of approximating individual incomes that differs from the method of individualizing incomes found in the literature, as it does not retain the assumption of equal or equitable distribution of certain social benefits, information on which is only available at household level. Instead, social assistance for married women or women in couples is approximated on the basis of available data on single female households, according to income level and number of children.

The results of this indicator show that married or cohabitted women are the least economically independent, which confirms the importance of going beyond the household to also account for the economic situation of women.

Keywords— Women's economic independence, Defamilialisation, Intra-household inequalities, Women poverty, Individualized income

JEL Codes: B54, I32, J12

1 Introduction

Women's economic independence is at the heart of the fight against gender inequality and women's emancipation (de Singly [2005]). Nevertheless, although commonly used in public policy targets, this notion is rarely explicitly defined. What does it mean for a woman to be economically independent? One way to approach this question is through indicators related to women's participation in the labor market. Access to the labor market allows women to earn an income and support themselves financially. For example, Bettio and Ticci [2017] use indicators related to labour market participation to define women's economic independence, in addition to an income approach. Economic independence is also relevant in studies on the welfare state, and has been argued for by various scholars through the concept of "defamilialisation," which refers to the idea of women's independence from their husbands or families and can then be brought closer to the study of intra-household inequalities Pahl [1988], Hobson [1990],Orloff [1996], Bambra [2007], Huber et al. [2009], Alper [2019]),

Hobson [1990] was the first to theorize women's economic dependence, defining it as the share of women's income in household income. She emphasized the importance of focusing on economic independence among women in feminist analyses of the welfare state, an analytical approach that had been largely overlooked at the time. Several scholars subsequently examined this issue (Orloff [1996]; Huber et al. [2009]; Alper [2019]) and explored how social and family policies impact economic independence among women. According to these authors, economic independence remains a crucial issue that should be addressed by the state. As

Hobson [1990] argues, the greater the share of a woman's own income – and therefore her economic independence – the greater her ability to negotiate within the household or to leave it.

This perspective on women's economic independence highlights the presence of power dynamics and inequalities within households, specifically between couples. This contradicts the traditional Beckerian approach to the household that is commonly adopted in economics, which assumes a single economic agent and equal resource access for all members [Becker, 1973]. However, in reality, various scholars have provided evidence of existing inequalities in resource access and utilization within the household (Ponthieux 2012 Bennett, 2013; Cotillon, 2016). Consequently, these disparities gradually accumulate throughout the duration of the household, and divorce or separation brings them to the forefront, underscoring the importance of measuring such inequalities among adult partners in a relationship.

Although Hobson [1990] focuses on the economic independence of married or partnered women, the existing literature does not explicitly address the economic independence of single women. The economic vulnerability of single women, particularly their poverty rates, serves as a measure of their economic situation. Huber et al. [2009] explore this aspect in their article titled "Politics of Women's Economic Independence." While the authors examine the economic independence of married women as proposed by Hobson, they utilize the poverty rate of single mothers. However, the meaningfulness of this distinction is debatable. Furthermore, it raises the question of whether a wife who is economically independent from her husband but faces economic poverty can genuinely be considered independent. One of the paradoxes evident in the literature on women's economic independence is that it emphasizes the significance of studying dynamics within marriages, acknowledging the potential breakdown of these relationships, without simultaneously investigating the situation of these women outside the household.

In this context, the concept of defamilialization, as defined by Lister [1997], offers an interesting parallel to the concept of economic independence. Lister [1997] suggests that defamilialization refers to "the extent to which individual adults can maintain a socially acceptable standard of living, regardless of their family relationships, either through employment or social security benefits." When examining women's economic independence, two key elements emerge. Firstly, it involves the capacity to attain an acceptable standard of living through both social transfers and paid work. Secondly, it emphasizes the notion that this capability is not contingent upon family relationships.

The objective of this article is to introduce a novel method for measuring economic independence. This measure of economic independence will be determined by a ratio between two income levels. However, unlike Hobson's approach, it will not compare women's income to the income of the household or the husband . Instead, it will compare women's income to the income threshold required to avoid falling into poverty, approximated here as 60% of the median income, which serves as the poverty line for a given country. This approach offers two significant advantages. Firstly, it allows for the consideration of the economic situation of all women, regardless of their marital status (married, cohabiting, single, or divorced). Secondly, by comparing women's income to the poverty line specific to their country, it defines economic independence in the context of poverty rather than solely focusing on intra-household bargaining power. This approach proposes a method that does not solely rely on husbands' or household income, but rather emphasizes poverty. Consequently, the indicator of women's economic independence assesses whether women can meet their basic needs solely through income from paid work and social transfers.

The decision to focus on paid work and social transfers as the primary sources of income is supported by evidence indicating that paid work is the most effective means to mitigate the risk of poverty, while social transfers have proven to be impactful in combating poverty (Caminada, 2012). Unlike capital income or inter-household transfers, these two income sources are not directly influenced by family or marital status. The aim of this economic independence indicator is to assess whether women have access to the labor market and receive wages that allow them to live adequately. Additionally, it seeks to determine if they have access to social benefits that can provide economic support, preventing them from falling into poverty when wages alone are insufficient. Furthermore, a comparison will be made between the economic situations of single women and those who are married or cohabiting, in order to examine whether marital status influences access to either of these income sources. In essence, this indicator will quantify a country's ability to "defamiliarize" women's access to income in monetary terms. The greater the disparity in economic situations between women in households and single women, the more significant the role of family relationships, particularly marital status, in determining women's ability to attain a decent income.

The first section of this article will provide a comprehensive literature review that serves as the foundation for the development of this economic independence indicator. Subsequently, the methodology used to construct the Women's Economic Independence Index (WEII) will be presented. Additionally, the article will introduce the database utilized in the study. Finally, the aggregate results of the indicator will be presented for the 17 countries examined over three years. The findings will reveal that countries with the highest levels of women's independence also exhibit significant economic disparities, both in terms of gender and marital status.

2 Literature Background

2.1 Women's economic independence, inequalities within the couple and divorce

Hobson [1990] first conceptualised women's economic dependence in her famous article "No Exit, No Voice". In it, she defines the economic dependence of married women as the difference between the women's share of income and the husbands' share of income in the household. This conceptualisation of economic dependence refers to the notion of bargaining power within the couple: the greater the income gap between the spouses, the less decision-making power a woman would have within the couple. This notion of bargaining power defines, according to Hobson, the economic dependence or independence of women.

While the framework of analysis changes by talking about women's economic dependence, the method of calculation does not differ from that of Moore and Waite [1981] or Spitze and South [1985] who studied the share of wives' income in the household/couple income. These authors studied the rise in wives' incomes and the consequences for divorce. Some family economists showed that with an increase in women's income, the degree of specialisation of spouses was lower and therefore women gained less from marrying or staying married than before (Becker [1973]; Becker et al. [1977]; Espenshade [1985];England).

However, studies on the link between women's household income and marriage dissolution appear in a specific context, that of the increase in divorce observed for several decades at the time. These results can therefore be balanced. Schwartz and Gonalons-Pons [2016] show that increases in the relative income of wives increased the risk of divorce in the 1960s and 1970s, but that this result is no longer significant nowadays. Also, Sayer and Bianchi [2000] show that by adding variables related to the gender ideology within the couple, the income level of women is no longer a determinant of the probability of divorce.

However, looking at women's income within the household is not without interest. Indeed, the couple is an institution that affects the economic situation of women. Taking up the concept of spousal specialisation mentioned earlier, the couple's marital status seems to affect the allocation of time within the household. Thus, married couples appear to be less egalitarian than unmarried couples(Shelton and John [1993]; Domínguez-Folgueras [2013];Davis et al. [2007]) which further penalises women who are predominantly in charge of unpaid work. Moreover, it is the less educated, and therefore more economically vulnerable, individuals who are more likely to get married. (Kandil et al. [2017]). On the other hand, more educated and more integrated individuals in the labour market would prefer cohabitation (Kiernan [2002]).

The allocation of time affects women's income, but income can also be a form of bargaining power within the couple and thus affect the allocation of women's time in return. Ponthieux and Schreiber [2006] show that, among full-time working partners, the more the woman's salary increases, the more egalitarian the distribution of domestic work is. Gershuny [2003] finds similar results for dual-erner couples.

The issues surrounding bargaining power within the couple are real.As the household is not an immutable institution, the allocation of working time, consumption and therefore income can have important economic consequences once the marriage is over (Hobson [1990]). In this sense, several studies show how divorce is more economically costly for women than for men with an increased risk of falling into poverty (Holden and Smock [1991] ; Poortman [2000]; Hoffman et al. [2002]; Ananat and Michaels [2007]; Leopold and Kalmijn [2016]). Again, it would seem that the more economically vulnerable populations are more affected by divorce. Vandecasteele [2010] or Hogendoorn et al. [2020] show that less educated women are more likely to divorce and fall into poverty.

Measuring economic independence would therefore make it possible to account for women's economic position both within the couple and in the market. However, this notion is still analysed mainly at the level of the couple and the marriage. Looking at the issue of single women or mothers, another term is used: poverty or economic vulnerability.

2.2 Redefining women's economic independence beyond the couple

In Huber et al. [2009], the authors use, like Hobson [1990], the share of women's income in the household to talk about the independence of married or cohabiting women but the poverty rate for single mothers. This distinction calls for reflection: can the economic independence of married women be dissociated from the situation of poverty or economic vulnerability? A woman in a couple who is economically independent in Hobson's sense may be in a situation of poverty, in which case, is it still relevant to use the term "independence"? In fact, this debatable distinction between 'women's poverty' and 'economic independence of wives' illustrates a limitation already documented in the analysis of inequality between women and men: studying poverty through the household would lead to a dissimulation of the poverty of married women or cohabiting women (Folbre [1986]; Woolley and Marshall [1994]; Ruspini [1999]). Thus, Pahl [1988] shows that the unequal distribution of consumption and income within the household leads to a situation of 'concealed poverty dependence'.

In addition to the disparities that emerge after the dissolution of a marriage or partnership, there are also inequalities that persist during the relationship, particularly in terms of income distribution and allocation. Numerous studies challenge the Beckerian model and the assumption of equal resource sharing within households [Pahl, 1988, Cantillon et al., 2016, Ponthieux, 2012]. Drawing on the EU-SILC 2010 module "Intra-household sharing of resources," it seems that a significant proportion of households do not fully pool their income. On average, 70% of households in Europe report pooling all individual income, but this figure decreases when individuals within households are surveyed separately. Quantifying and generalizing the various financial arrangements within households remains complex [Berthonnet, 2022]. The level of income pooling is influenced by socio-economic and demographic factors, suggesting that analyzing financial pooling regimes by specific population categories may provide more insights [Berthonnet, 2022] Moreover, there are biases in the perception and reporting of income pooling, adding uncertainty to the information collected from households.

While further work is still needed to define a suitable alternative, Becker's hypothesis remains highly debatable, and the work cited above underlines the importance of moving away from measuring individual poverty through the prism of the household.

In this sense, Meulders and O'Dorchai [2011] develop a method to individualise the income received by a household in order to better reflect the precariousness of the members of this household. Individualised disposable income is composed firstly of income received individually by the members of the household (income from work and certain individual social benefits for example) and secondly of household income split in such a way that: i) family allowances paid to parents are divided in two, ii) taxes paid by the household are divided between the members according to the distribution of taxes paid individually by the members, iii) other types of income are divided equally between the adults in the household.

Therefore, the authors compare the results of individual poverty rates, which they call 'financial dependency rates', with those of traditional poverty rates. The authors find two interesting results: i) the gap between the financial dependency rates of women and men is much larger than the gap between the traditional poverty rates of women and men, ii) the gap between the financial dependency rate and the poverty rate of women is also larger than the gap between the financial dependency rate and the traditional poverty rate of men. This confirms the hypothesis that the household hides women's poverty.

In addition, Corsi et al. [2016] use the financial dependency rate to analyse the effects of the 2008 crisis on the poverty rates of women and men. They individualise incomes using this method:

$$\textit{Individualized income} = II + [(HI + IT + ST - T)/\textit{Equivalence scale}] \tag{1}$$

where II is individual income, HI is income received at household level, IT is inter-household transfers, ST is social transfers and T is taxes. The equivalence scale applied is the weighting scale traditionally used in European statistical institutions.

This calculation differs from that of Meulders and O'Dorchai [2011], in particular in the allocation of taxes between household members. Despite a different methodology, Corsi et al. [2016] obtain similar results to those of Meulders and O'Dorchai. This confirms the importance of moving away from a household approach to account for the economic situation of women.

Finally, this observation could be applied to the notion of women's economic independence as studied in the literature: the definition and the method of calculation retained concern wives or women in couples and not women as a social group. While Meulders and O'Dorchai [2011] argue that the traditional poverty rate retained by authorities would imply a miscalibration of social policies, focusing on women's economic independence only in households in the context of welfare state studies, as Hobson [1990] advocated, may also not be sufficient to understand the role of the state in the economic emancipation of all women.

Despite a concern to individualise women's income as much as possible, scholars face resource constraints. Indeed, because of the importance of the household as the unit of analysis, most data on individual income is actually collected at the household level. (Findlay and Wright [1996] ; Sutherland [1997]). The assumption of resource sharing or equal distribution of resources between spouses is then more easily used (Meulders and O'Dorchai [2011]. Although Meulders and O'Dorchai [2011], and Corsi et al. [2016] elaborate on individualisation measures, they make partial use of this assumption for income available only at the household level.

2.3 What about the defamilialisation or independence of women from the family?

Lister [1997] defines the concept of defamilialisation as "the degree to which individual adults can uphold a socially acceptable standard of living, independently of family relationships, either through paid work or through social security provisions". This definition highlights the importance of being able to support oneself independently of one's family status. In concrete terms, defamilialisation is translated in empirical studies on the welfare state as the capacity of the welfare state to free women from care activities and to give them access to the labour market. Scholars approximate defamilialisation through variables related to childcare or parental leave as well as indicators of women's employment (Bambra [2007], Bambra et al. [2009], Michoń, Alper [2019]).

The concept of defamilialisation is the subject of a rich and varied literature, but it often ignores the income dimension of family independence and thus the issue of women's poverty, even though the principle emerges in response to that of decommodification (Esping-Andersen [1990]), which reflects the ability of the welfare state to enable an individual to provide for oneself without depending on the market.

While the study of women's poverty in the defamilialisation literature remains limited, the different state classifications based on this concept open up an interesting analytical framework. Thus, it can be expected that countries with high defamilialisation and high defamilialisation will have better economic independence scores for women than those with high familialism and low decommodification. Indeed, social policies, especially family policies, and the level of generosity of the welfare state may have a positive impact on women's labour market participation (Bradley and Stephens [2007], Nelson and Stephens [2013]) or on women's poverty (Huber et al. [2009])

3 Method to measure women's economic independence

The primary contribution of this paper is to propose a novel methodology for measuring women's economic independence. As previously mentioned (Hobson [1990], Alper [2019], Huber et al. [2009]), women's economic independence is commonly measured at the household level by comparing the incomes of spouses.

The objective of this article is to introduce an indicator that assesses the economic situation of women, regardless of their marital status. Specifically, the methodology involves,for each woman, associating an approximation of their individualized incomes based on the method developed below, and examining the proportion of women's disposable income relative to the income threshold necessary to avoid poverty (60% of the median individualized income). The Women's Economic Independence Index (WEII) is calculated as follows:

$$WEII_i = [(IDI_i/(1 + 0.5nc_{14i} + 0.3nc_{13i}))/pline_e] * 100 \tag{2}$$

The construction of this index draws upon two distinct bodies of literature. Firstly, to ensure the treatment of women independently of their marital status, the focus is placed on women's individual income, in line with the method proposed by Corsi et al. [2016].

The second element of this indicator involves replacing men's income level, which is traditionally used as a reference variable in the literature on women's economic independence, with the poverty line (*pline*) of the country e in which the woman resides. The poverty line is defined as 60% of the median individualized income in country e. This revised reference variable provides an approximation of the income level required to meet an individual's basic needs. Consequently, the WEII measures the proportion of an individual woman's primary needs covered by her income in country e.

3.1 Approximation of individualized disposable income (IDI)

The first part of the calculation (IDI) is based on Corsi et al (2016). Since the idea is to treat women independently of their marital status, I chose to individualize women's income as much as possible. Indeed, Meulders and O'Dorchai [2011], Corsi et al. [2016] show how analyzing poverty by household leads to an underestimation of women's poverty.

To align with Lister's definition of defamilialization, the inclusion of specific income types in women's disposable income has been carefully considered. Capital income and inter-household transfers, which can pose challenges in terms of women's access, have not been included. Additionally, there is a limitation in obtaining individual-level information for certain types of social benefits, as such data is often available only at the household level.

To overcome this limitation and accurately measure the social assistance received by women, an approximation method will be employed. This involves estimating the amount of social assistance based on the level of assistance received by single women with the same income level and number of children. By utilizing this approach, it is possible to measure the social assistance received by women without relying on the assumption of equal resource distribution for this specific income category.

3.1.1 IDI calculation and approximation of household-specific social benefits

$$IDI_i = w_i + isb_i + ihsb_i - t_i \tag{3}$$

The woman's disposable income is made up of income from work (w), social transfers that she receives individually (isb) and benefits traditionally received by the household, such

as family allowances, housing assistance or assistance benefits that have been individualized ($ihsb$). From this we subtract the taxes (t) paid by the individual.
There are two possible scenarios:

- The woman i belongs to a single or single-parental household h:

$$ihsb_i = hsb_i \tag{4}$$

  i.e the amount of social benefits the household receives

- The woman i comes from a household h that is not composed of one person or a single-parent household: in this case

$$ihsb_i = \overline{hsb_{qc}} \tag{5}$$

Calculation of $\overline{hsb_{qc}}$

In order to circumvent the 50/50 distribution of social benefits and to approximate what woman i would receive if she were in a single-parent household, the following calculation is made:

- I classify single-parent households into 5 quantiles q based on labor income
- For each quantile, I decompose single-parent households according to the number of children c in the household and I take the average social benefits received by households in quantile q and for a number of dependent children c (0,1 and 2 or more)
- I associate with each woman i with an average of social benefits according to the quantile-number of children combination qc to which she is affiliated.

For example, if a single-mother household with two children or more in the first quantile whose maximum income is 1800€ receive 1500€ of annual benefits, then I associate 1500€ of aid to all women i with two children or more whose income from work is less than or equal to 1800€.

This variable makes possible to include important social benefits that are mainly based on income and household composition, notably family allowances, which constitute an important resource in terms of redistribution and the fight against poverty. This method is feasible for public social benefits, which are based on relatively universal allocation method, but it would not be relevant to make a similar calculation for private pensions or capital income, which on the contrary would not be universalizable since they are not based on allocation criteria.

Nevertheless, the choice to exclude capital income is evidently a limitation in the results of the indicator. Indeed, if a woman lives solely on her capital income, declaring no income from work and receiving no social benefits based on income level, she will probably be considered like not independent by the indicator.

3.1.2 Applied equivalence scale

In order to take into account dependent children, the following weighting is applied: 0.5 for children aged 14 and over and 0.3 for children under 14, which is the equivalence scale traditionally used by the OECD.

3.2 Poverty line and WEII interpretation

The index built is therefore a ratio between the disposable income of women weighted by the number of dependent children and the poverty line, i.e. 60% of the median individualized income of the country.I chose as reference value 60% of the median income because it allows to approach the standard of living of individuals in a country and facilitates international comparisons (Hurteau [2018]).

The objective of the indicator is to measure women's subsistence capacity through the income they receive on an individual basis.

In addition, using the poverty line provides a standardized measure of women's economic independence whether they are in a household or single, a mother or not.

Thus, the result of this index is interpreted as the share of primary needs that a woman's disposable income can cover.

In contrast to the literature on women's poverty, the focus is not on the share of women who do not reach the poverty line but on the distance between women's income and this line.

4 Data and Results

4.1 Data presentation

In this article, I used the Luxembourg Income Study micro-data base. The index is calculated for seventeen European countries, Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Spain, Sweden and the UK for the years 2000, 2010, and 2016.

The database contains information on income at the household level and also for the individuals who compose the household. At the individual level, it provides data on labour income, pensions and some social benefits received. Data on the socio-demographic characteristics of individuals, on the composition of the household and on the labor market activity are also available.

4.2 Descriptive statistics

The article focuses on two distinct populations: married women and single women. Figure 1 illustrates the distribution of these populations within the overall female population, revealing an increase in the number of single female households over time. This emphasizes the importance of studying the economic independence of single women, not only limited to cases where they are single mothers.

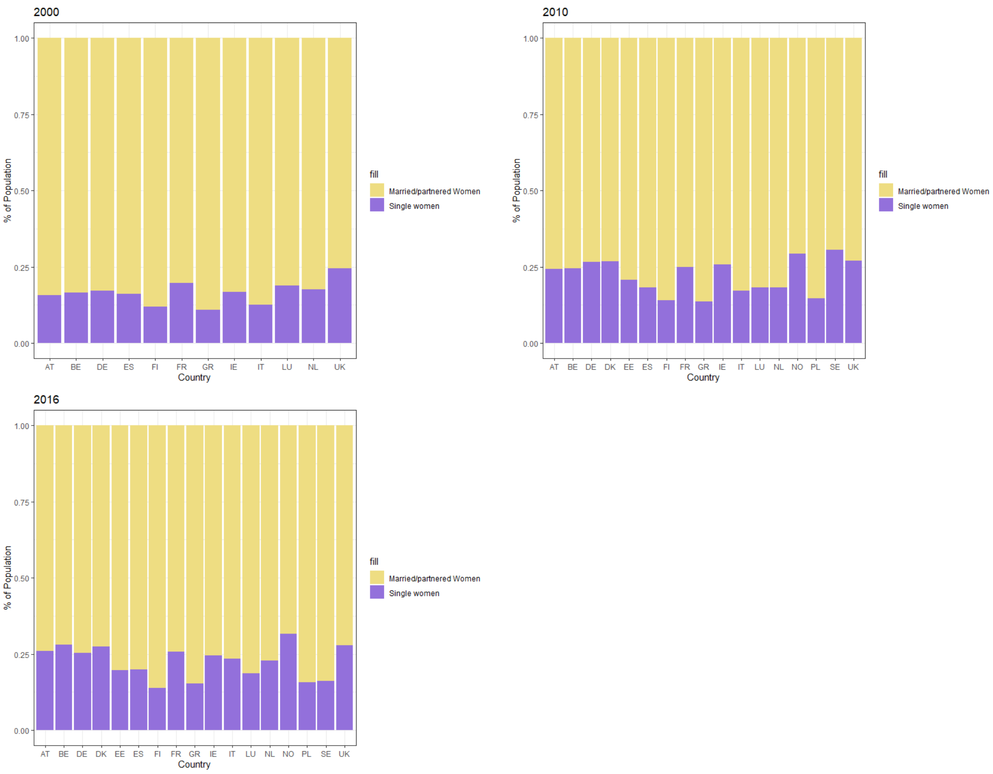

Figure 1: Share of single women in the female population

Figure 2 presents the disparity in disposable income, computed using the developed methodology, between single women and cohabiting women. In most countries, the gap favors single women, indicating that cohabiting women face greater economic challenges. This observation aligns with existing literature highlighting the influence of marriage or cohabitation on women's economic circumstances.

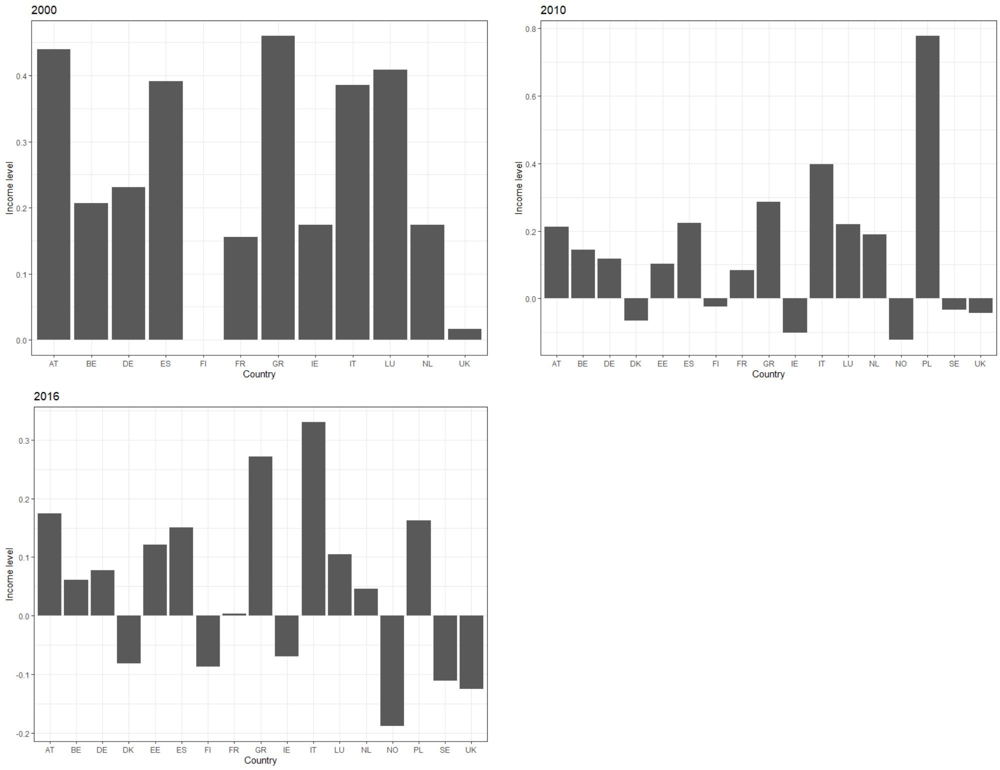

Figure 2: Mean disposable income gap between single women and married/partnered ones

4.3 General results

Figure 3 indicates aggregated resultats for the seventeen countries studied in 2000, 2010 and 2016 [1]. In 2000, five countries do not reach the economic independence threshold for women, Italy, Spain, Austria and Luxembourg, but in 2016 only Italy is below the threshold. Over the three years studied, most of the countries reached the 100% threshold, which means that women are theoretically able to cover their primary needs by earning an income above the poverty line

Germany, Belgium, Estonia and the Netherlands stand out with the highest scores. These continental countries seem to offer better living conditions for women. This result can be unexpected since Scandinavian countries are usually considered as more advantageous to women. In contrast, Italy semms to be the "ugly duckling" of the group, offering the lowest independence scores, particularly in 2010 whoch may raise the question of the post-2008 crisis for women.

Looking at the evolution of the indicator by comparing the results of 2000 and 2016, several observations emerge. In most of the seventeen countries, there is an improvment of women's economic situation. It is especially notable for Belgium, Netherlands, Spain and Greece with the highest increases. Meanwhile, for Finland, Italy, Poland, Denmark and Sweden, scores tends to be stable between the three periods. However, France and Norway are the only two countries to see their rates fall over the years.

[1] For year 2000, it was not possible to calculate the WEII for Estonia and the Scandinavian countries (except for Finland).

Figure 3: Women Economic Independence Index for 17 European coutries in 2000, 2010 et 2016

Although the results in figure 3 seem to be encouraging for women's economic situation, the reality is quite different when we put the results for women into perspective with those obtained for men. For example, for 2010 Dutch men earn enough to cover up to 300% of their primary needs on average while Dutch women are closer to 150%. For 2000, Italian women are unable to reach economic independence (around 90%) while Italian men can cover 190% of their primary needs. Theses results show the economic privilege of men relative to women.

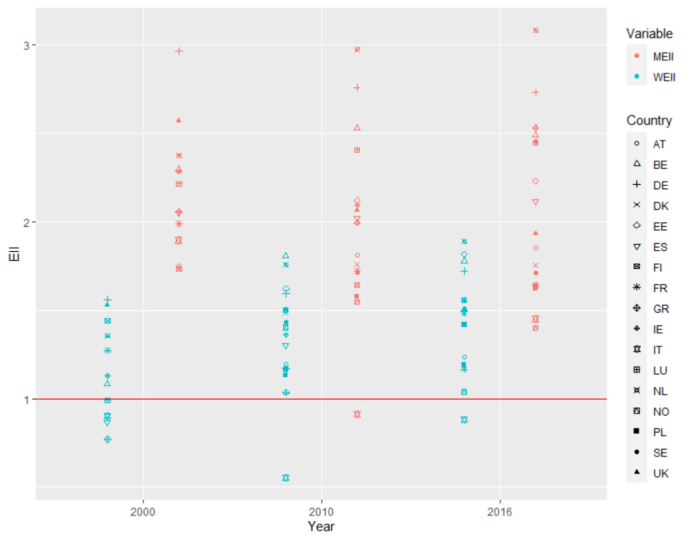

Figure 4: Women Economic Independence Index and Men Economic Independence Index for 17 European coutries in 2000, 2010 et 2016

4.3.1 Marital situation and women's economic independence

If women enjoy a less comfortable economic situation than men, literature has shown that marriage doesn't necessarily make things any better. What's the situation here? Figure 5 is obtained by calculating the rate of economic independence for single women and married women or partnered women. The results seem to be in line with the literature: married women or women in couples experience less favorable economic situations than women living alone.

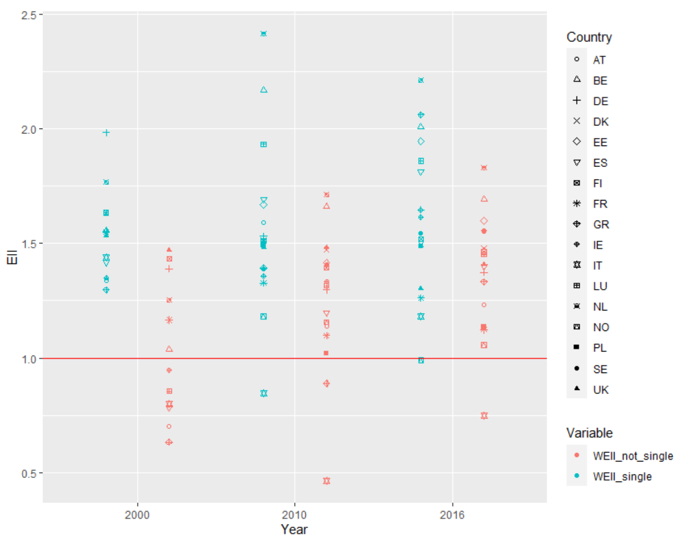

Figure 5: Women Economic Independence Index according marital situation for 17 European coutries in 2000, 2010 et 2016

Regarding the share of women who do not reach an economic independence situation according to marital situation, Single women are slightly under-represented in comparaison to their share in the totale female population (Figure 6). This was particularly the case in 2000, when single women were under-represented in the population of economically vulnerable women in all countries. Marital status seemed to play a greater role than women's economic situation. For 2010 and 2016, the picture seems more nuanced. Indeed, in the Scandinavian countries, the UK and Ireland, marriage does not seem to affect women's economic situation, since the share of single women in the female population who are not economically independent is almost equal to the share of single women in the overall female population.

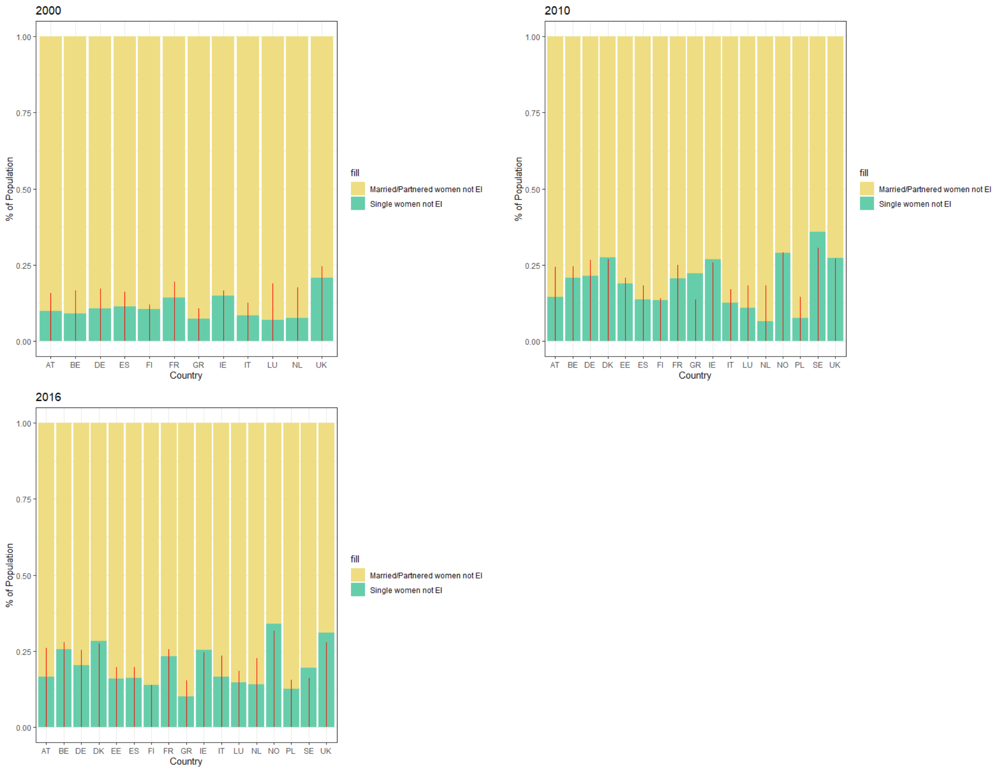

Figure 6: Comparaison betwenn the share of single women in the female population (red line) and the share of single women relative to women population that are not economically independent

4.3.2 Inequalities in economic independence

By examining the disparities in independence levels between men and women alongside the differences in independence levels between married or coupled women and single women, we can gauge the extent to which women are recognized as autonomous individuals. If the independence gap between men and women is substantial, it indicates that men generally possess a more favorable economic position. This suggests that men may face higher economic vulnerability within the overall economic system, potentially occupying more precarious positions. Additionally, it may also signify a power imbalance within the household if we agree with the notion that women's income influences their bargaining power within the couple.

On the other hand, the independence gap between married or coupled women and single women reveals whether establishing a household has a negative impact on women's economic independence. Ultimately, this disparity reflects the influence of the couple on women's economic situation. A larger gap signifies a greater impact of the household on women. These two measures ascertain whether women face gender-based disadvantages, experiencing varying degrees of burden within the domestic sphere when establishing a household, or whether they enjoy a comparable economic situation to men, irrespective of their marital status.

Figure 7 displays the marital status gap for women and the gender gap for the three years under study on the same graph. From 2000 to 2016, there was a trend of decreasing disparities between men and women and between married and single women. Interestingly, a positive relationship can be observed between these two gaps, which is not surprising. It is indeed reasonable to consider that if women already face lower integration into the paid economy compared to men, being in a couple or being married may further exacerbate their disadvantages by assigning them to a greater extent within the domestic sphere.

When examining country groupings, distinct patterns emerge. Scandinavian countries exhibit the lowest disparities between women and men, as well as between married and single women. In fact, the gaps between married and single women can even be negative, suggesting that marital status has little to no impact on women's economic independence. This indicates that women and men in these countries have relatively similar living conditions.

The UK and Ireland follow, where differences based on marital status are minimal, but notable inequalities persist between men and women in terms of economic independence. In these countries, women face challenges in achieving equal economic opportunities compared to men.

On the other hand, Germany, the Netherlands, Luxembourg, and Greece stand out as some of the most unequal countries, both in terms of gender disparities and disparities between married and single women. Interestingly, the Netherlands and Germany, despite having high rates of female economic independence during the studied years, still exhibit a gender gap where women remain economically disadvantaged compared to men. These findings suggest that women in these countries face economic challenges due to their household status.

To gain a deeper understanding of the disparities between European countries, further analysis is required, particularly regarding the types of jobs held by women in Germany and the Netherlands, as well as the wages they receive. Such an examination will shed light on the factors contributing to the observed economic disparities in these countries.

Figure 7: Interaction between Gender Independence Gap and Marital status Independence Gap between women

4.4 Robustness

To ensure the reliability of the indicator, a recalculation of the Women's Economic Independence Indicator (WEII) was conducted using Corsi et al.'s (2016) income individualization method. The results in figure 9demonstrate a close alignment between the share of women who are not economically independent calculated using Corsi et al. [2016]'s method and the share obtained using WEII. Therefore, the results semms to be consistent.

However, there are noteworthy differences, particularly in the case of Denmark, the Netherlands, the UK, and Ireland, where the WEII calculation method yields lower scores compared to the Corsi et al. [2016]. method. This variation is also reflected in the independence scores presented in Figure8. Overall, the WEII calculated based on the notion of defamiliarization produces scores that are generally close to, but slightly higher than, those obtained with the Corsi individualization method.

There are two possible explanations for the observed differences. Firstly, Corsi et al. [2016] method includes capital income, inter-household transfers, and various forms of taxation beyond those associated with labor income. In contrast, the method developed in this article does not incorporate these factors. The inclusion of inter-household transfers or household taxation in Corsi et al. [2016] results could lead to lower scores by reducing women's disposable income. However, it is difficult to determine whether it is the women themselves or their partners who bear the burden of these private or public income transfers, as the available data do not provide individual-level information on ownership of taxed wealth income or pensions paid to other households.

A second possible explanation relates to the individualization of household benefits. While Corsi et al. [2016] distribute household benefits equally among all adult members of the household, the methodology employed in this article allocates benefits based on women's income and the number of children, taking into account benefits paid to single women. This difference in the allocation of benefits could contribute to the variations observed in the scores between the two methods. Thus, it is possible that the method developed in this article may end up overestimating the amount of social assistance received by women, compared with what they would be entitled to as married or partnered women. This raises the question of the individualization of social benefits, which could potentially be favorable to women if the differences between the two independence scores were explained by social assistance received individually.

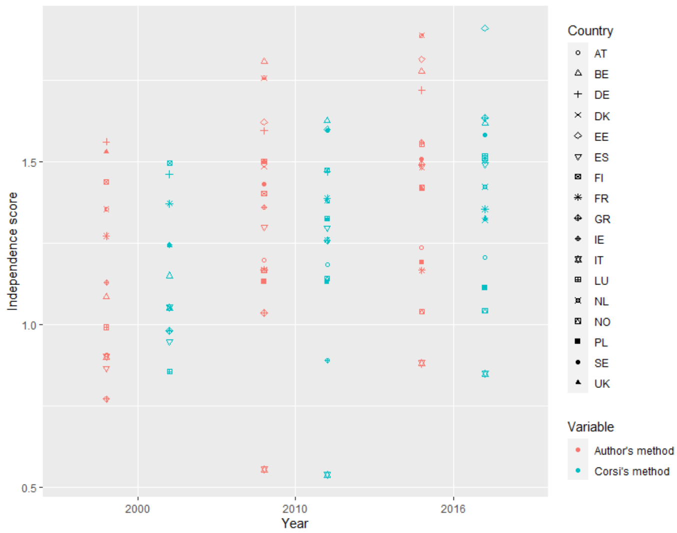

Figure 8: Women Economic Independence Index according Corsi et al.'s method and author's method

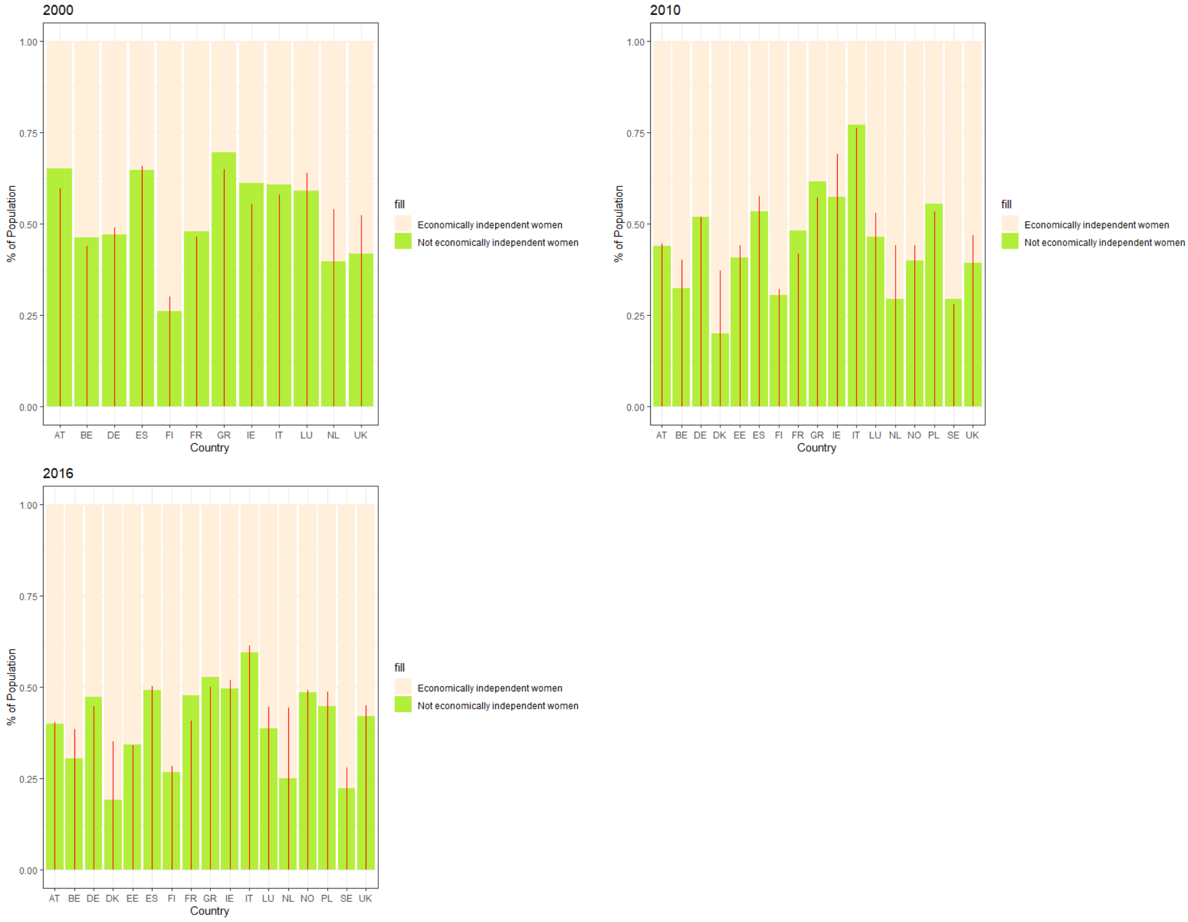

Figure 9: Comparaison betwenn the financial dependence rate according to Corsi et al (2016) (red line) and the share of women who are not economically independent according to author's calculation

5 Discussion

Women's economic independence is mainly studied within the household framework as the share of women's income in the household or spouse's income. By moving beyond the analytical framework of the household, an indicator of economic independence can be calculated which includes all women, married or not, mothers or not, and which allows us to assess their ability to support themselves and thus to escape poverty in case of household dissolution.

By constructing this indicator of women's economic independence, this article introduces a fresh perspective on defining economic independence. It is rooted in the concept of defamilialization, not only in terms of the objective it aims to measure but also in the approach taken to construct the indicator. The application of the income individualization method goes beyond the conventional focus on the couple or household and challenges the assumption of equal resource distribution within the household.

The results of this index show that women achieve economic independence in most of the thirteen countries studied. The article demonstrates that married women are the least economically independent, which confirms the need to measure the economic independence of women in-couple not in comparison with household or husband's income, but according to a poverty-related reference point. These results are therefore consistent with the idea that the household masks women's economic inequalities and poverty(Folbre [1986]; Woolley and Marshall [1994]; Ruspini [1999];Pahl [1988])

Indeed, while this indicator contributes to contextualizing women's economic independence in relation to poverty, there are certain limitations that warrant further investigation in future research. Firstly, the developed methodology remains incomplete in fully capturing women's economic situation. Specifically, the method used to approximate individual incomes does not account for certain income sources such as capital income or inter-household transfers, including alimony payments, for instance. The existence of sexist dynamics and biases in the transmission of wealth or in the process of marital dissolution (such as the division of assets during divorce and determination of alimony payments) has been documented in sociology Bessière and Gollac [2022]. However, quantifying these dynamics on a large scale in economics poses challenges.

The primary challenge in addressing the limitations mentioned earlier stems from the predominant focus on the household as the unit of analysis in micro-databases, which depends the methodology for constructing this economic independence indicator and other income individualization methods. As highlighted by several scholars, in order to comprehensively understand and measure inequalities within couples, it becomes necessary to collect detailed data on the individual income and assets held by each member of the household rather than solely aggregating them at the household level.

"Desacralizing" the household as a unit of measurement and challenging its status as an "economic agent" can be viewed as a social policy concern. The findings of this study highlight that Scandinavian countries exhibit the highest levels of gender equality and economic equality between married or partnered women and single women. These countries align with the individualistic or universal welfare state model, as classified by Esping-Andersen [1990] and Sainsbury [1994]. In this model, individuals access benefits based on their citizenship rather than their family or employment status. Consequently, neither gender nor marital status significantly impacts individuals' independence scores in these countries.

The issue of individualizing social benefits also arises in this context. As demonstrated in the robustness analysis, when social benefits declared at the household level are individualized irrespective of marital status, women's independence scores tend to be higher. This raises questions regarding the recipients of social benefits, including those received on an individual basis, as it may contribute to fostering greater independence among women. Further examination of the distribution and allocation of social benefits can shed light on the potential impact of individualized benefits on women's economic independence and overall gender equality.The question of who receives social benefits, including individualized ones, raises the broader issue of social citizenship. Does social citizenship primarily extend to the household as a unit, or does it recognize the individuals comprising it? This question delves into the underlying principles of social welfare policies and their impact on promoting independence, particularly for women. For instance, France has recently implemented a policy change where, starting from 2023, the calculation of the Allocation Adulte Handicapé (Adult Disability Allowance) will no longer consider the income of the disabled person's partner. This measure has received positive feedback from various associations, as it is expected to enhance financial autonomy for individuals with disabilities, including within the context of a couple. By decoupling the income assessment from the partner's earnings, this policy aims to provide greater economic stability and independence for a population already facing economic vulnerabilities.

Such policy shifts acknowledge the importance of recognizing individuals' rights and autonomy within the household, rather than solely relying on household-level income assessments. By embracing an approach that prioritizes individual financial autonomy, social welfare policies have the potential to contribute to greater gender equality and support women's economic independence within the household.

Another point to consider is the use of the poverty line, specifically 60% of median equivalised income, to approximate the level of income required to meet basic needs raises important considerations. The monetary measurement of poverty, whether for women or more broadly, is a complex research area in itself. It is crucial to acknowledge the limitations of the poverty line, as it only captures one aspect of a multidimensional problem. The concept of poverty encompasses various dimensions such as material deprivation, health inequalities, and educational disparities, among others. While this indicator of economic independence focuses on the monetary dimension, it is important to recognize that living above the poverty line does not necessarily imply a decent standard of living.

The proposed indicator focuses on assessing women's economic position using the threshold of 60% of median income, which is a minimum level of income recognized by governments as necessary to meet basic needs. While this approach has its limitations, it provides a starting point for understanding women's economic independence. Although the indicator is mainly based on an income approach, it could subsequently be interesting to integrate public services and other in-kind social benefits provided by governments, which also participate in the fight against poverty and can have a drastic impact on women's economic independence.

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