

Mismeasuring Women's Work

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"the rise in women's relative wages was sufficient to induce a significant increase in labor force participation, generating a demographic transition." (Galor 2005, p. 233)

"A fundamental change over the last century has been the vast increase in female labor force participation, particularly for married women." (Fernandez, 2013, p. 472)

"Historically speaking, married women did not work outside of the home. . . . In 1900 only 5 percent of married women worked." (Greenwood, 2018, p. xiv and 45)

"When more than half of the population's economic role changes, it marks a staggering historical shift." (Goldin, 2021, p. 15)

The proverbial economist looks for his wallet, not where he lost it, but under the lamppost, because the light is better there. When it comes to understanding women's work in the past, economic historians have spent too much time looking under the lamppost. We focus on labor force participation because it is a familiar measure of labor supply, and it seems to be easily measured using census data, but labor force participation won't tell us what we want to know. In fact, limiting our study to a binary measure such as labor force participation will prevent us from correctly measuring the extent of women's market work, and the sectors in which women worked.

Work today is different from work in the past. The vast majority of workers are wage or salary workers, and it is rare for workers to have more than one job. Even as recently as the nineteenth century patterns of work were much different. Self-employment and production for use were more common. Workers often combined many different types of work.

It has been more than three decades since Humphries (1990) described the income-generating potential of the commons, but production for use has received relatively little attention. One obstacle is that researchers do not value it. For example, Chiswick and Robinson (2021, p.3) justify their decision to exclude housework from labor force participation by noting that "We have in mind productive activities that enhance a family's economic well-being, either directly or indirectly." Another obstacle is that production for use is hard to measure, since it rarely left documentary evidence. Moehling (2001) uses changes in market substitutes such as bakery bread and commercial laundries as indicators of changes in household production. Boter (2020) directly estimates the value of potatoes, milk, and eggs produced by Dutch families. She

finds that the value of such production was substantial; output of gardens produced 14 percent of income for textile families and 45 percent of income for agricultural families.

There is also some disagreement about the importance of multiple work tasks. There is disagreement on the importance of "by-employments" in pre-industrial England (Overton et. al., 2004; Keibek and Shaw-Taylor 2013).

In this paper use household accounts from late nineteenth-century Europe to argue that:

1. Labor force participation, whether we define participation as any market work or regular market work, does not accurately reflect the percentage of women's time that they spent in the market.
2. Even if we ignore unpaid housework, both men and women spent a significant portion of their time on production for use. Since women spent more time in production for use than men, ignoring non-market production underestimates women's relative contribution to the economy, and under-estimates the size of the textile sector.
3. We should abandon the term "work outside the home." While this term is typically used to distinguish market work from household production, market work often took place inside the home, and non-market production often took place outside the home.

Data

To illustrate my points I will refer to a sample of nineteenth-century household accounts collected by Frédéric Le Play and his colleagues, and published in multiple volumes under the titles *Les Ouvriers Européens* and *Ouvriers des Deux Mondes*. Le Play (b. 1806) was a professor of metallurgy at the *Ecole des Mines*, and as part of his job visited mines in Russia in the 1830s. As a result of this trip he became interested in collecting data on families, and gathered around him a group of people with similar interests (*Le Société Internationale des Etudes Pratiques d'Economic Sociale*). The families in this study do not constitute a random sample of the European population. Because of his background Le Play seems to have oversampled metal workers. However, the sample does include a variety of locations, occupations, and family sizes.

Descriptions of each household are very extensive. Le Play does a much better job than other sources of including goods and services that do not go through the market. For example, the accounts regularly include activities such as keeping a pig or garden, collecting firewood, and even collecting wild berries. In all parts of the budget Le Play distinguishes between receipts and expenditures that are made in cash (*en argent*) and those that are made "in kind" (*en nature*). The only type of work Le Play did not value at all was housework (*travaux de ménage*), which included cooking, cleaning (*soins de propreté*), child care, and sometimes laundry. In this paper

I focus entirely on the days of work rather than income. I distinguish between market work and non-market work according to whether Le Play lists the income as in cash or in kind.¹ Unvalued housework is part of non-market work.²

Work time is measured in days of work, which in some cases is explicitly equated with ten hours of work.³ The 252 days for work for the 1890 Belgian typographer are explained as 315 days of 8 hours, which is equal to 252 days of 10 hours. (*Deux Mondes*, 2d series, vol. 3 p. 390). Similarly, the Swiss cobbler who worked 3565 hours over 303 days was recorded as working 365.5 days,⁴ and the wife of a glover was credited 3 days for spending 30 hours making bread over the course of the year.⁵ As a result of defining a day as ten hours, a few workers are listed as working more than 365 days in a year. For example, in a family running a laundry the head worked 355 days in the laundry, plus 21 days in the garden and 2 taking care of the ducks, while his wife worked 360 days in laundry and an additional 12 days on housework.⁶

An example of a family's work account (reporting only days of work not the value of the work) is given in Table 1. Victor M. (aged 43), his wife Marie (34) and their two daughters Eugénie-Augustine (15) and Augustine–Eugénie (13) lived in the Champagne region of France.⁷ They owned a house 36 acres of land, one pig, and 15 rabbits. Victor mainly worked as an agricultural laborer, though he also worked in construction and in the manufacture of earthen tiles. Marie did needlework for the market, and her household production included needlework and agricultural work as well as housework.

Les Ouvriers Européens (1877-79) contains 45 household accounts and *Les Ouvriers des Deux Mondes*, which was published in two series over the period 1857 to 1899, includes 91 complete household accounts. I drop duplicates and non-European households, leaving me with 108 households. I collected the number of days work for all 582 individuals age 5 and over, of which 129 had no days of work, leaving 453 workers.⁸ Table 2 provides basic descriptive statistics of the sample. Individuals in my sample were on average 27 years old, but ranged from

¹ In cases where an activity produced both cash and in-kind income, I divide the days of work accordingly.

² Corvee work and reciprocal labor are included in non-market work.

³ *Deux Mondes*, 2d series, #84, vol 5 p. 156.

⁴ "303 journées formant 3565 heures" *Deux Mondes*, 2d series, vol. 4, #77.

⁵ "30 fois par an soit 30 heures equivalent" *Deux Mondes*, 2d series, vol. 1, #55.

⁶ Le Play, *Les Ouvriers Européens*, vol. 5, ch. 8.

⁷ Le Play, *Les Ouvriers Européens*, vol. 5, ch. 7.

⁸ There are two female-headed households, and the rest are headed by a married couple.

age 5 to 95. Since children were the most likely to be non-workers, the average age of workers was older, at 32.

Labor Force Participation

Labor force participation is a binary measure; you are in the labor force or out. This measure works fairly well in a world where work is regular, where at any one point in time a worker is employed or not employed, and where transitions between the two states are infrequent. Labor force participation is not well designed for a world where workers combine many different part-time and temporary activities into full-time employment, so it is not well designed to describe the pre-industrial past. Women's work in particular was irregular, and thus is poorly measured by labor force participation.

The binary nature of labor force participation creates a problem: how regular does a woman's work have to be for her to be considered in the labor force? Historians have identified large numbers of women who appear in employment records of firms or farms but do not have occupations in the census (Humphries and Sarasua, 2012, pp. 48-9; Verdon, 2002, p. 117). Miller (1984, p. 146) finds specific examples of English women who were paid for farm work but were not listed in the 1871 census as having an occupation. Sarasua (2019, p. 490) notes that the work of Spanish women must be under-recorded because.

according to householder declarations, no one worked in cheese making, although the region was well known for its cheese and town officials provided the price at which cheese was sold. Nobody worked in honey and wax production, either, even though the county of Alcarria, in Guadalajara, produced honey and war for candles; the country's candles were used in churches in Madrid and throughout central Spain

We see the same pattern in the US census: the population census clearly under-reports women's work compared to the Census of Manufactures (Folbre and Able, 1989).

Censuses may undercount women's work because they fail to count irregular work such as part-time or seasonal work. Leigh Shaw-Taylor (2007, p. 34) defends the occupational information in the British census by noting that census enumerators only intended to record regular work.

Some of those writing about the deficiencies of the census . . . do not appear to be aware that only 'regular' employment was supposed to be recorded. . . a problem which primarily pertains to irregular work done by married women has been presented as if it pertains to all work done by all adult women.

However, noting that most of women's work was irregular doesn't solve the problem; it simply exposes the problem. Women's work was rarely regular, so if we don't record irregular work we don't record women's work.

Married women in particular rarely worked regularly at any one task and divided their time among many different tasks. In the family budgets recorded by Le Play, men spent most of their working time on one primary activity, but women divided their time among a wide variety of tasks. Table 3 presents averages by gender for three different measures of work task diversity.⁹ The first measure is the number of different work tasks the individual engaged in. Both genders were engaged in many different tasks, and on average women engaged in more tasks than men. The second measure, the percentage of work time spent in the most common tasks, also shows that men were more concentrated than women. While the average married man spent 75 percent of his time on one task, the average woman spent at most 50 percent of her time on one task. I also calculate a Herfindahl-Hirschman index (HHI) from the percentage of time spent on each task.¹⁰ While the HHI was designed to measure the concentration of firms in an industry, it can also measure whether a single task "monopolizes" the individual's time. The HHI measures how concentrated work tasks are; it ranges from 0 to 1, and values closer to 1 indicate more concentration in a single task. The HHI shows a distinctly higher concentration for married men than for married women. While neither sex specialized in only one work task, men were more specialized than women.

If we use labor force participation to measure women's work, we will entirely miss this important characteristic of women's work. Women specialized less than men and did a greater variety of tasks. When they did work for pay it was unlikely to be full-time year-round work, because nothing they did was full-time year-round. If we count only women with "regular" work as in the labor force, labor force participation will necessarily be low. However, if we count any market work as participation, we will overestimate the amount of time women spent in market work. Table 4 considers whether labor force participation correctly measures how much time

⁹ There is of course some discretion how tasks are divided; those engaged in agriculture do many different tasks throughout the year. I follow the division of tasks given in the accounts except in the case where the same task is divided seasonally. For example, the Le Play separately enumerated the days the Basque fisherman spend fishing in the winter, spring, summer, and fall; I combine these as one task (vol. 4 ch. 6).

¹⁰ The HHI is the sum across tasks of the square of the portion of time spent in that task. For example, if a worker spent exactly half of his time in each of two tasks then the HHI is $0.5^2 + 0.5^2 = 0.25 + 0.25 = 0.5$, while if he has two tasks but spends 90% of his time on one of those tasks the HHI is $0.9^2 + 0.1^2 = 0.81 + 0.01 = 0.82$.

men and women spent in market work. The first four columns report what percentage of their time each group spent in market work, nonmarket work, and leisure. Leisure is equal to 365 days minus total work days, and each type of work is shown as a percentage of 365 days.¹¹ The "market work" column, then, shows what percentage of available time each group spent in market work. Married women spent 22 percent of their time in market work, and unmarried adult women 41 percent. Labor force participation, as a binary measure of work, cannot accurately describe this situation. If we consider a married woman to be in the labor force if she does any market work during the year, then the labor force participation rate is 85 percent for married women and 97 percent for unmarried women. This, of course, vastly overestimates the amount of time that women spent doing market work.

I also calculate a labor force participation rate for regular work, where women have to work at least 200 days in market work to be considered in the labor force. This measure, however, understates women's market work. Only 11 percent of married women worked in the market regularly; this is only half of the average amount of time that married women spent in market work. For unmarried women, the labor force participation rate for regular work was 28 percent, which is only two-thirds of the fraction of time that unmarried women spent in market work. The problem is that a binary measure cannot accurately describe women's multi-faceted work. The continuous measures, such as the percent of time spent in market work, do a much better job of capturing the extent to which women worked in the market.

When we use continuous rather than binary measures, the shift in women's work since the late nineteenth century doesn't look so revolutionary. Women did not change from spending all of their work time on unpaid domestic work, to spending all of their work time on paid work. In the mid-nineteenth century married women spent about one-third of their time on housework, 29 percent on production for use, and 22 percent on paid work, leaving 16 percent of their time for leisure.¹² A century later they spent more time on paid work, and less time on unpaid work, and had more leisure, but the change was hardly the radical change it is sometimes said to be. In Britain in 1970, married women working full-time in the market spent 36 percent of their total working time on housework, and women working part-time spent 57 percent of their total work

¹¹ If, due to working more than 10 hours per day, an individual's reported work days are greater than 365 then their leisure is zero and the percentage of market and nonmarket work are calculated as a percentage of the total days worked.

¹² If women had one day per week for leisure, that would be 14% of their time.

time on housework (Young and Willmott, 1973, Table 13). In the US in 2003, the average woman spent 45 percent of her work time in paid work, 41 percent in housework, 14 percent in childcare (Aguir and Hurst, 2007, p. 976).

Table 5 shows estimates of the number of hours per year that women spent on paid and unpaid work at various times. For the nineteenth century I multiple the number of days by ten to get the approximate number of hours, and I include both housework and valued nonmarket work in "unpaid" work. Generally women's market work has increased, their unpaid work has decreased, and they have enjoyed more leisure. There have been important changes: leisure has increased, and total work time has decreased, and women have shifted from unpaid to paid work, but to say that "the past century has seen "a staggering historical shift" (Goldin 2021 p. 15) or "a fundamental change" (Fernandez, 2013, p. 472) is an exaggeration.

Nonmarket Production

Economists have, without convincing justification, decided to ignore household production when calculating GDP (Ferber and Birnbaum, 1980; Goldin 2021, p. 48). Usually this is assumed to be simply housework. During the nineteenth century, however, household production was not simply domestic services; it was agriculture production and textile manufacturing, as well as a variety of other goods and services. In the Le Play accounts, 71 percent of valued nonmarket production was agricultural output, and 12 percent was related to the making and mending of textiles and clothing for the household. Even if we exclude housework, non-market production was an important contributor to household budgets and the economy. In this section I will argue that nonmarket production *other than housework* was important, and that ignoring it causes us to mis-measure not only the extent of women's work, but also the sectoral composition of the economy.

Figure 1 shows the percentage contribution of four different kinds of income to household budgets in the Le Play accounts. Overall non-market work contributed 30 percent of household budgets, though this was larger in rural areas and smaller in urban areas. Figure 2 shows how days of work were divided among market and non-market work for various demographic groups. Generally men did more wage work and women did more unvalued housework. Men were much more likely to engage in non-market production other than housework; indeed individuals of all ages engaged in this form of production.

If we ignore production for use we will underestimate the contributions of women to the labor force. Table 6 shows the percentage of work days contributed by women. "Market work" includes only work for pay or profit. "Valued work" includes production for the family's consumption other than housework. "All work" includes housework as well. Looking exclusively at work for the market, women contributed 29.5 percent of market work days among the 108 households. If we include production for use but not housework, they contributed substantially more: 38 percent of work days. Women contributed 47 percent of work days if we include housework, but housework is typically not what people mean when they are talking about the labor force. Broadberry et. al. (2015, p. 348) assume that women contributed 30 percent of total days worked in the British economy. The Le Play sample produces that same figure for market work: women worked 30.8 percent of market work days in Britain. However, once we include non-market production that figure is too low; in Britain women worked 38 percent of valued work days. Ignoring production for use underestimates women's contributions to the economy even if the economy even if we exclude housework from the economy.

Failure to include non-market production will lead us to mis-measure the sectoral composition of work. Table 7 reports the distribution of work across 8 different industrial categories. Panel A reports the distribution for market work, and panel B reports the distribution for all work except unpaid domestic work. If we limit our attention to only market work we underestimate the percentage of time spent in agriculture and the manufacture of textiles and clothing. We also overestimate the percentage of time spent in other industries, particularly in other manufacturing. Ignoring production for use also underestimates women's contribution in all industries except services.

Work Outside the Home

Economic historians are obsessed with women's work "outside the home". Here are some examples of the widespread use of this term:

"The outstanding feature of this rising tide has been the growing number of married women working outside their homes." (Myrdal and Klein, 1968, p. 60)

"In 1920 it was rare to find married women working outside the home; today about 40 percent of them are in the labor force." (Vanek, 1974, p. 118)

"Women, though they worked in the sense of having occupations, often tiring and time-consuming ones, relatively rarely had jobs outside the home." (Laurence, 1996, p. 114)

"Widespread work for pay outside the home and work in the highest echelons of society would have been unheard of for women of a century ago." (Costa, 2000, p. 101)

- "Under this domestic regime, it became inappropriate for women to work outside the home." (Van Poppel, Van Dalen, and Walhout, 2009, p. 102)
- "In the early nineteenth century, when few American women worked outside the home . . ." (Robb, 2017, p. 142)
- "Historically speaking, married women did not work outside of the home. . . . In 1900 only 5 percent of married women worked." (Greenwood, 2018, p. xiv and 45)
- "married women's labor – at least labor outside the house – was usually frowned upon in light of the increasingly pressing domesticity norm" (Boter and Woltjer, 2020, p. 790)
- "Over the course of the entire century, more and more women worked outside the home, and women became an ever-larger percentage of the wage labor force." Putnam and Garrett, 2020, p. 255.
- "Before the 1940s, married women, even those without children, were not supposed to work outside their homes." (Goldin, 2021, p. 85)

The term "work outside the home" is quite common. Sometimes it is a polite way of saying that housework doesn't count. Even if what we want to do is distinguish market work from non-market work, the term "work outside the home" does not accomplish that goal. While it is usually assumed that work outside the home was market work and work inside the home was non-market work, this equation does not hold, particularly in the past. I argue that we should stop using this term because it contains inaccurate assumptions and prevents us from understanding what work women did and where they did it.

Much preindustrial work, market or non-market, was centered in the home. For peasant farmers and artisans the workplace and the home were the same place. Examining urban homes in nineteenth-century England, Barker (2017, p. 170) concludes that "around a third to two-thirds of all internal space was given over predominantly or entirely to business use." The eighteenth century saw an important separation of home and work (Davidoff and Hall, 1986), but even in my mid-nineteenth century sample it is clear that the location of work does not tell you whether the work was market or non-market production.

Table 8 examines what portion of the work of husbands and wives was done in the home and what portion was done outside the home. I include work done in a field, garden, or barnyard attached to the home as work "in the home".¹³ While it may not be surprising that women spent 90% of their work time in the home, it is more surprising that men spent 31% of their work time in the home. Men did most of their market work outside the home, but women did the majority of their market work in the home (69%). For men and women about one-fifth of work time was spent in the off-diagonals, in market work inside the home or non-market work outside the home.

¹³ For husbands, half of their work "in the home" was done in the family's fields, garden or barnyard. For wives the fraction is 16 percent.

So we should not assume that all work located in the home was non-market work, or that all work located outside the home was market work.

If we do make the mistake of assuming that non-market work is the same as work inside the home, we will mis-measure the time that women and men spent in market activity. While women spent only 10 percent of their work time outside the home, they spent 22 percent of their work time on market activities. While men spent 31 percent of their time in the home, they spent only 19 percent of their time on non-market activities. Clearly we should distinguish between non-market work and work located in the home, as they are not the same thing.

If we go farther back in time we find that women were less likely to have been "in the home" when doing their work. In Germany in 1646-1800, wives worked in a "domestic location" 53 percent of the time, compared to 41 percent for husbands (Ogilvie 2003, p. 147). In sixteenth- and seventeenth-century England, women did 49 percent of their work indoors, compared to 29% for men (Whittle and Hailwood, 2020, p. 21). Examining records of accidental deaths in medieval England, Hanawalt (p. 7) finds that only 21 percent of women's deaths were in the house or close (compared to 8 percent for men).

Another problem is that work "in the home" is typically equated with domestic services. Economic models generally assume only three possible uses of time (market work, household production, and leisure), and household production is assumed to be domestic services (Gronau 1977, Greenwood 2018). This assumption reflects the time use data we have for contemporary families: Aguiar and Hurst (2007) report time spent in market work, nonmarket work, and childcare; nonmarket work includes "meal preparation and cleanup, doing laundry, ironing, dusting vacuuming, indoor housecleaning and indoor design and maintenance," plus "obtaining goods and services" and "home maintenance, outdoor cleaning, vehicle repair, gardening, and pet care." (979). In the past, however, non-market production included a much wider range of tasks, including agriculture and manufacturing.

Nor should we assume that all domestic services were unpaid. Domestic services were very much in the market. Both live-in servants and women working by the day were hired to do housework. Some housework tasks were done in a different location; children might be sent out to wet-nurses, and laundry sent out. Le Play's sample we find a number of workers, of both genders, engaged in domestic services as paid work. One wife took in laundry, and one family

ran a laundry, employing all 4 family members full-time plus a hired servant.¹⁴ The wife of the Sheffield carpenter took in a three-year-old child, for which she was paid; Le Play puts the value of this payment at 325 francs, or about 23 percent of the husband's annual earnings.¹⁵ Adult women spent on average about 2 percent of their work time in paid domestic work.

We should stop using the term "work outside the home" unless we actually mean the physical location of the work. We should not assume that women working in the home are unpaid or that they are engaged in domestic services. We should use the term "market work" when we mean that, and "domestic services" when we mean that.

Conclusion

Historians of women's work should avoid using labor force participation measures. It is an ahistorical concept, and prevents us from understanding what women did. If what we want to know is how much time women spent in market work, or how much of their time they spent on domestic services, we should use continuous measures of women's work to answer those questions.

We should also avoid using the term "work outside the home" because it leads to inaccurate assumptions about what work women did in the home. Women did market work in the home, and they engaged in agriculture and manufacturing work in the home. We should make clear distinctions between market work, domestic services, and work inside the home.

Some are drawn to women's labor force participation as a measure of women's economic independence. When women have access to independent earnings they have more bargaining power within the household, so it matters whether women were paid for the work they did. Women who substituted market work for nonmarket work would have enjoyed increased freedom and power as a result of this work. However, we are better off measuring women's independence directly, rather than trying to infer it from labor force participation. Even when working for the market, women will have more independence when paid directly, rather than when contributing to the earnings of the family enterprise. They will also have more independence when they are working for or with individuals outside their family, rather than for

¹⁴ Le Play, vol 4 ch. 2, and vol. 5 ch. 8.

¹⁵ Le Play, vol. 2 ch. 8.

or with other members of the family. These things, though, are not well measured by labor force participation and should be examined directly.

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Table 1: Labor Accounts for the family of Victor M, 1856

	Days worked by			
	Victor	Marie	daug 15	daug 13
Agricultural day labor	220	28	30	
Road/canal construction	38			
Making earthen tiles	20			
Felling trees	20			
Work on community roads	3			
Maintenance of house and furniture	15			
Needlework, by the day		80		
Needlework, but the task		90	70	
Apprentice lingerie maker			165	
Housework		35	40	15
Making/mending family's clothes		36		
Gleaning		8		
Collecting manure from the roads		20	10	45
Laundry		24		
Gardening	6	10		
Care of animals		7		
Helping grandmother with housework				15
Total	322	338	315	75

Source: Le Play, *Les Ouvriers Européens*, vol. 5, ch. 7.

Table 2: Descriptive Statistics

	All Individuals	All Workers	Male Workers	Female Workers
AVERAGE				
Age	27.21 (18.10)	31.70 (16.66)	31.99 (17.38)	31.36 (15.80)
Days Market Work	121.87 (123.93)	156.57 (119.57)	205.03 (114.99)	100.00 (98.22)
Days Housework	33.65 (59.57)	43.23 (64.40)	5.27 (15.43)	87.56 (71.19)
Days Other Nonmarket Work	59.67 (71.31)	76.69 (72.31)	61.41 (73.33)	94.53 (66.99)
PERCENT				
Head of house	18.6	23.8	43.4	1.0
Married	42.6	54.7	50.8	59.3
France	56.7	58.3	57.0	59.8
Britain	5.8	5.1	4.1	6.2
Low Countries	8.2	7.5	8.2	6.7
North	6.2	5.3	6.1	4.3
South	10.5	11.0	11.1	11.0
East	5.0	4.0	4.6	3.3
Russia	7.6	8.8	9.0	8.6
N	582	453	244	209

Table 3 Measures of Work Diversity

Averages

	Number of Work Tasks	Percent of Work Time spent in Top Task	Herfindhal Index	Number of Observations
Married Men	5.4	74.7	0.65	123
Married Women	6.5	49.5	0.36	123

Table 4 Labor Force Participation Does Not Accurately Measure Market Work

	Percent of the Year Spent in . . .				Labor Force Participation (%)		
	Market Work	Valued Nonmarket Work	Housework	Leisure	Any Market Work	Regular Market Work	N
Married Men	67.8	15.8	0.9	15.5	100.0	71.7	120
Married Women	21.8	28.9	33.6	15.7	85.1	10.7	121
Unmarried Men (18-65)	54.7	21.3	1.5	22.5	98.1	46.3	54
Unmarried Women (18-65)	41.4	27.6	13.0	18.0	96.9	28.1	32
Boys (5-12)	8.3	5.2	1.3	85.1	35.5	3.9	76
Girls (5-12)	3.3	4.2	0.8	91.7	16.3	1.1	92
Teen Boys	42.4	13.5	1.6	42.5	81.1	48.6	37
Teen Girls	38.4	16.3	10.2	35.1	76.5	35.3	34
Elderly Men	42.1	17.4	0.0	40.5	66.7	33.3	9
Elderly Women	13.7	11.1	12.4	62.7	42.9	14.3	7

Table 5 Work by Adult Women, Hours Per Year

	Le Play sample, 19th c. Europe	Italy 1930s	Married Women, London 1970	US 1965	US 2003
Market Work	959	993	858	1167	1296
Unpaid Work	2123	1609	1971	2000	1561
Total Work	3082	2602	2829	3167	2857
Percent Unpaid	68.9%	61.8%	69.7%	63.2%	54.6%

Notes: For the Le Play sample I average work by all women age 18 to 65. Unpaid work includes production for use and unvalued work.

Data for Italy from Mancini, 2023, "Breadwinner, Breadmaker," *European Review of Economic History*.

Data for London are from Young and Willmott, 1973, p. 348. The hours are the average of working women and women not in paid work.

Data for the US from Aguiar and Hurst, 2007 "Measuring Trends in Leisure," *Quarterly Journal of Economics*. Aguiar and Hurst report time use in hours per week; I multiply by 52 weeks per year. Unpaid work includes nonmarket work and childcare.

Table 6 Percentage of Total Work Days Contributed by Women

	All Europe	Britain	Europe except Britain
Market Work	29.5	30.8	29.4
Valued Work	38.5	39.1	38.4
All Work	47.1	50.1	46.9

All Work includes housework. Valued Work does not include housework, but does include other forms of production for use.

Table 7 The Sectoral Composition of Days Worked in the Le Play Accounts, with and without Nonmarket Production

A. Market Work Only

Industry	Percent of male labor	Percent of female labor	Percent of total labor	Females as a percent of workers in the industry
Agriculture	27.5	34.2	29.5	34.1
Extractive	14.4	5.1	11.7	12.9
Transport	2.5	2.5	2.5	29.2
Construction	2.6	0.0	1.9	0.0
Textiles & Clothing	8.6	31.6	15.3	60.5
Other Manufactures	32.8	11.6	26.6	12.9
Paid Domestic Services	2.5	11.1	5.0	65.2
Other Services	9.0	4.0	7.5	15.5
Total	100.0	100.0	100.0	29.4

B. All Work Except Unpaid Domestic Labor (Market and Nonmarket Work)

Industry	Percent of male labor	Percent of female labor	Percent of total labor	Females as a percent of workers in the industry
Agriculture	39.0	42.4	40.2	38.3
Extractive	13.7	5.3	10.6	18.0
Transport	2.3	1.6	2.1	29.0
Construction	2.9	0.0	1.9	0.5
Textiles & Clothing	7.2	35.2	17.3	73.7
Other Manufactures	26.0	7.1	19.1	13.4
Paid Domestic Services	1.9	6.3	3.5	65.2
Other Services	7.1	2.2	5.3	14.9
Total	100.0	100.0	100.0	36.3

Extractive industry includes mining, fishing, woodcutting, and collecting wild foods.

Table 8 Market Work vs. Work Outside of the Home

Panel A: Husbands

	Market	Non-Market	Sum
Out of the House	65.1	4.5	69.5
In the House	16.1	14.3	30.5
Sum	81.2	18.8	100.0

Panel B: Wives

	Market	Non-Market	Sum
Out of the House	6.8	3.4	10.1

In the House	14.9	75.0	89.9
Sum	21.7	78.3	100.0

Figure 1 Distribution of Household Income by Type

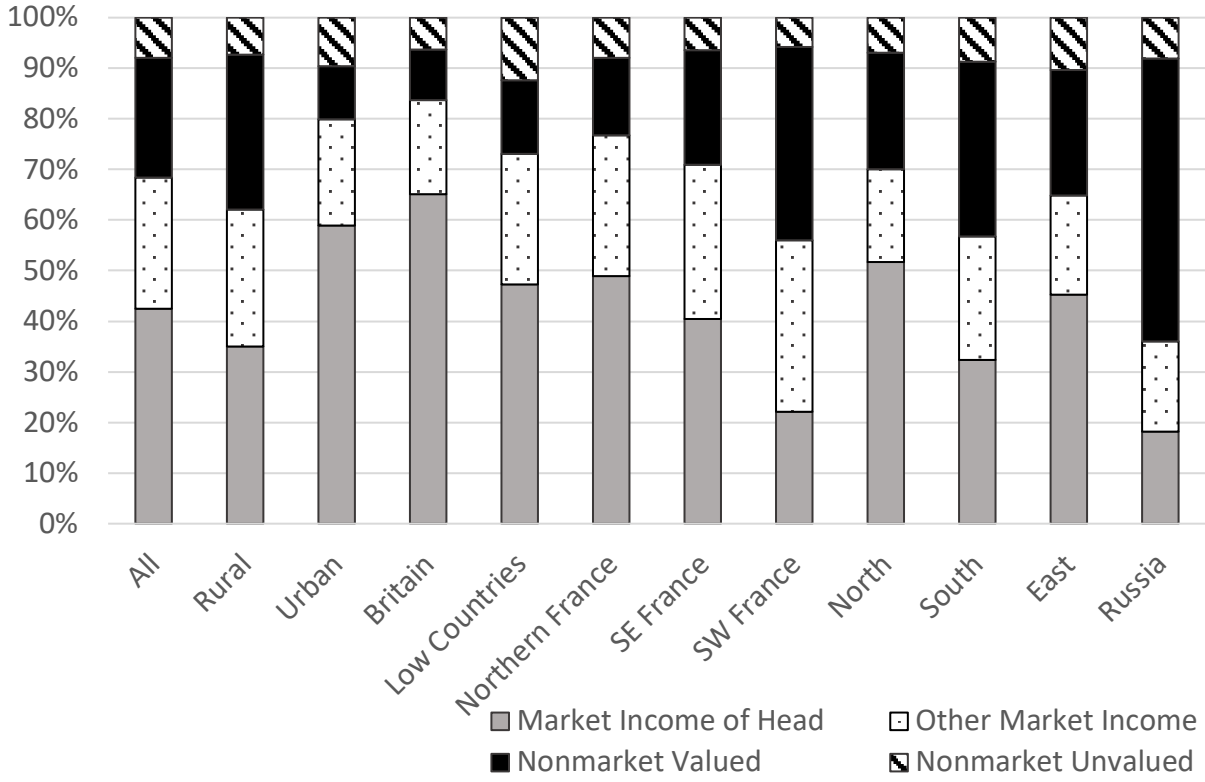


Figure 2 Distribution of Individual Days

