Time And Income

Empirical Evidence On Gender Poverty And Inequalities From A Capability Perspective

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Abstract and Keywords
This chapter discusses from a capability perspective — how and to what extent gender inequalities in terms of time allocation between paid and unpaid work can affect income poverty and individual well-being. In the first part, the chapter illustrates the reasons for which Sen's capability approach, compared to other theoretical frameworks, seems to be particularly adequate to shed light on the complex linkages between time allocation and well-being distribution. In the second part, the chapter presents the results of an empirical analysis based on the Bank of Italy's Survey on Household Income and Wealth, giving evidence that strong gender inequalities exist both in terms of time and income allocation.

Keywords: capability approach, unpaid work, time allocation, income poverty, gender inequality

I. Introduction
GENDER inequalities are deeply rooted all over the world and in most domains of life, and certainly gender division of labor between paid and unpaid work is a remarkable case. In the last four decades women have progressively increased their share of participation in the paid labor force but time-use surveys show that the gender distribution of unpaid work within the household has not changed in any significant way, with the undesirable (and unsustainable) corollary of a “double work day” for most women.

While labor economists have directed their efforts toward understanding gender inequalities on the labor market, the consequences for well-being of an unequal, excessive burden of unpaid work on women have received less attention from mainstream economics. One of the reasons for such meager attention to this dimension of gender inequality is that, while women's participation in the labor market is visible, measurable and positively evaluated as a contribution to the market economy, unpaid work still remains largely invisible, unvalued and confined to the realm of intra-household decisions. Significant efforts have been made to include unpaid work in national and international statistics as well as to measure its economic value, but many other questions still remain open.

This chapter aims in particular to investigate how and to what extent gender inequalities in time allocation between paid and unpaid work can determine time poverty and affect income poverty and individual well-being. In section II, I will discuss at a conceptual level the reasons why the capability approach formulated by Amartya Sen (1987, 1992, 1993, 1999), which provides a broader and richer perspective for analyzing individual well-being compared to other theoretical frameworks, can play a substantial role in clarifying the nature of unpaid work and its relationship to individual and household well-being. In section III, I will present some empirical evidence for such complex links between time and income in Italy, a country which unfortunately ranks high in gender disparities in the division of labor. My analysis of inequality and poverty will be conducted in both spaces using the micro-data of the Bank of Italy’s 2000 survey on Household Income and Wealth (SHIW).

II. Well-Being and Unpaid Work from a Capability Perspective
In the capability perspective, functionings and capabilities represent the main constitutive elements of individual well-being: functionings are achievements, the realized “beings and doings” of a person, whereas capabilities are combinations of functionings that a person can achieve. The possibility of achieving functionings is positively related to the availability of economic resources, but it also depends on personal characteristics and external circumstances, as well as on social and cultural norms, the legal and political context, the availability of social services, access to public support and benefits, and so on. All these factors generate a wide range of interpersonal variations that greatly affect the individual process of converting resources into capabilities, and thus achieved functionings. The space of achieved functionings cannot be considered sufficient to capture the overall well-being of a person: when the purpose is to know not only what has been achieved but also what is the real freedom to achieve, then attention should be focused on the capability set rather than on a selected element of it (i.e. on the space of the functionings achieved).

The capability approach postulates a richer and more complex relationship between means and ends than in the utilitarian tradition or welfarism, and describes well-being as a process and not simply as a condition. It thus makes room for a plurality of dimensions, acts and states that are important per se (e.g. being happy and choosing what one desires). It also recognizes how important the environment (conceived in a broad sense, including household and society, culture and nature) can be in affecting human capabilities and individual well-being. All these aspects prove to be particularly relevant from a gender perspective, as I will try to show in the rest of this section.
II.1 Gender Inequalities from a Capability Perspective

The capability approach can allow us to investigate gender inequality issues in at least four distinct but related spheres: material resources, conversion factors, well-being and time allocation.

A first kind of gender inequality relates to the material basis of well-being: there is plenty of empirical evidence that testifies how resources and commodities are unequally distributed between men and women both in developed and developing countries. Everywhere women hold fewer economic resources and have lower earnings than men. These are nothing more than unavoidable consequences of persistent inequalities in the entitlement space: fewer employment opportunities, inadequate assets, limited access to credit markets, wage discrimination and lack of property rights are among the main causes of gender inequalities in the space of economic resources. To identify possible cures for this kind of inequality, it is essential to distinguish between the distribution of economic resources between men and women and the actual entitlement they have in terms of command over resources. Public policies that affect an individual’s entitlement can structurally modify economic inequalities, whereas income redistributions (p.240) simply represent a partial and temporary, even if necessary, adjustment of these inequalities.

A second source of gender inequality can be noticed in the process of converting resources into functionings and capabilities. A traditional argument states that physical differences can justify differences in people's conversion rates: an ill person needs more support and help, more income and medical care, so her conversion rates will be lower than those of a healthy person. Differences in physical factors is an important key for understanding the variable ability to convert means into ends. However, if age and metabolic conditions, illness and disability, abilities and talents, are characteristics normally distributed between men and women, so that the probability of being healthy or sick is also equally distributed, there is no reason to believe that women must have lower conversion rates than men. Of course, women's conversion rates can be (and, as a matter of fact, often are) systematically lower: this happens, for instance, if a woman suffers bad health because, being a woman, she is undernourished, receives less medical care or is a victim of sexual abuse. However, the causes of this inequality must be found in
cultural, social and political norms and cannot be justified only on the basis of physical features. 4 More remarkable for our purposes are, in fact, the “environmental” constraints: a woman may have a lower conversion rate because households, markets and societies do not offer her the same opportunities as a man. Having a lower level of education, being discriminated against in the labor market, being psychologically dependent on an adult man, or having no voice in the political arena obviously affect women’s conversion ability. Thus, a clear distinction between physical features (given and often immutable) and environmental features (which, reflecting gender roles and gender norms, can be changed) is essential for appropriate public action.

A third type of gender inequality that can be measured is that of capabilities and functionings. A larger capability set will reflect greater opportunities, a higher level of freedom and a wider set of choice. A greater amount (and/or a higher quality) of achieved functionings will reflect a higher standard of living. The amount of gender inequality of this type that can be observed is, by and large, a direct consequence of gender inequalities of the previous two kinds. But once again, it can be particularly helpful in discussing gender inequality to distinguish clearly among inequalities in terms of (1) means to achieve, (2) ability to convert means into ends, (3) opportunity to achieve and (4) achievements.

From a gender perspective these distinctions are rather essential: concentrating on capabilities allows us to go back to the causes of gender inequality, whereas looking at achieved functionings gives us just a measure of the existing disparities between men and women (though an innovative measure, if compared with other standard measures based on income).

Finally, gender inequalities can be investigated in the realm of time allocation. Time is a resource and like any other scarce resource is unequally distributed; but it is not always easy to understand why unpaid work is so unequally distributed between men and women within the family, or to evaluate the consequences in terms of personal well-being. The empirical literature on time allocation in developed countries confirms that women do most of the unpaid work and that “everywhere husbands are scarcely available to assure a better market work/family work equilibrium for their wives” (Bonke and Kock-Weser 2001: 56). If the nature of work
is different in developing countries, the situation is not substantially dissimilar: again, the overall burden of work is heavier for women than for men (UNDP 1995). Explanations for such inequalities have been found in insufficient public support, cultural norms and behavioral models that seem hard to modify, whereas socio-economic conditions such as the age and education of the spouses or the number and age of the children give only partial reasons for such differences in the patterns of male and female division of work.

If time allocation matters in determining individual well-being, how can it be encompassed within a capability perspective? If time, like income, is a (scarce) resource, should it be considered an instrument, a means for “producing” well-being? Or should it be regarded as an end and thus considered as a dimension of well-being? As in the case of income, the answer may not be obvious and might require some further clarification.
II.2 Income and Unpaid Work: Means or Ends?

It seems prima facie to be a basic tenet of the capability approach that, as already mentioned, income and, generally speaking, economic resources are not capabilities or functionings but means for acquiring commodities and services, which become inputs in securing well-being. Sen (1992, 1999) does not deny the essential contribution that income makes to achieving valuable functionings, but criticizes welfare economics for measuring poverty and inequality exclusively in terms of income and highlights the necessity of moving one step further by asking what people are able to do and to be with these available resources. If this distinction between means and ends is generally recognized at a conceptual level, nonetheless most empirical applications based on (or inspired by) the capability approach, including the well-known Human Development Indices, usually consider income or consumption on a par with other functionings, such as being healthy or being educated, without drawing any substantial methodological distinctions between resources and achievements.5

Obvious justifications for this relate to the complexity of measuring functionings and capabilities, and the claim that income represents a useful proxy for capturing the material, instrumental dimension of standard of living. However, if income and economic resources should not be included in the list of capabilities, the possibility of having a job and thus earning income, and entitlement to ownership and property rights, certainly pertains to the capabilities domain. These capabilities are not only instrumentally important, as they allow people to provide means for other ends; they are also valuable per se because they allow people to achieve autonomy and self-respect, to enhance their agency and power. It is on the basis of these arguments that Alkire and Black (1997), Nussbaum (2003) and Robeyns (2003), among others, explicitly include paid work and property rights in their lists on human capabilities.

What can be said about unpaid work? Should it be considered as an instrument for achieving valuable functionings or should it be regarded as an end and be included in the list of capabilities? We need only look at our own lives to recognize that most social reproduction activities and care work provided by the household affects significantly, and in many cases contributes directly to, the generation and enhancement
of our capabilities, and our possibility of achieving functionings. This is mostly true for basic dimensions of life, such as adequate nutrition and health, but generally speaking and in many particular respects, family environment is an essential source of development of individual capabilities. To receive help and care, practical, moral and psychological support, is a fundamental requirement for expressing and improving talents and abilities, generating self‐respect, and living an autonomous and worthy life. Care work is not only a basic element for enhancing human capabilities but is often also an essential means of offsetting personal disadvantages and restrictions: people who have some handicap or invalidity frequently find the primary, and sometimes the only, answers to their needs within the family.  

Thus there seems good reason to regard domestic activities and care work as an essential input in the process of transforming commodities and resources into outputs, here conceived as a set of fundamental functionings for human life. It is, however, quite a peculiar input, not only because it is not remunerated but also because: (1) it is mainly provided by women but is principally devoted to satisfying the needs of other household members; and (2) it produces economies of scale and positive externalities, so that most domestic activities can be characterized as “public household goods” (I will return to (1) later).

The idea of seeing the well‐being process as a kind of production function is not a new one: it dates back to Gary Becker's contribution to the household production literature (see Becker 1965, 1981) and it has also been mentioned in the capability literature, in particular in Sen (1985), Muellbauer (1987), Kuklys (2005) and, most recently, Chiappero Martinetti and Salardi (2008) and Chiappero Martinetti et al. (2008).

Although there are some analogies between Becker's theoretical framework and the capability approach, there are also some substantial differences, the most relevant being their different normative foundations. Moreover, Sen (1985) raised some doubts about the appropriateness of seeing functionings as fundamental commodities produced by the household, due to the substantial and intrinsic differences between functionings and commodities. In addition, the rather
restrictive assumptions of Becker and other authors regarding the existence of shadow prices and implicit markets do not really seem to fit the capability framework.

However, the capability approach, precisely because it looks beyond the commodities purchased on the market and produced by the household, can extend and complement Becker's household production theory, in at least three different directions. First, if Becker focuses on the household production function that converts goods, time and household work into useful outputs, capability theory goes further by looking at what a person can be or can do with these outputs. In this way, the capability approach allows us to link available resources (market commodities plus household commodities) with the beings and doings that a person has achieved or can achieve. Secondly, in Becker's approach the evaluative exercise focuses on a unique variable (e.g. utilities or income), whereas in the capability approach this exercise is extended to a plurality of domains of well-being. This not only places the evaluative phase in a pluralistic perspective but also permits us to analyze how and how much domestic activities and care work can affect each separate dimension of human life. Finally, unpaid work can be viewed not only in its quantitative dimension (i.e. the total amount of time spent on domestic activities), as Becker's approach does, but also in its qualitative aspects. In fact, the “value” of social reproduction activities lies not only in the amount of time devoted to that activity and in its market value, but also in terms of achieved function- ings for the care-givers as well as for those who benefit from domestic and care activities.

A different way of encompasing unpaid work within the capability approach is to consider it as an end instead of (or in addition to) a means. Robeyns (2003) moves in this direction and includes social reproduction activities and non-market care, as well as time autonomy, in a list of 14 capabilities regarded as relevant from a gender perspective. In particular, she identifies social reproduction activities and non-market care as the capability of “being able to raise children and to take care of others” and time autonomy as “being able to exercise autonomy in allocating one’s time”. To incorporate unpaid work and time autonomy in the capability list surely gives more prominence to these aspects and can draw
attention (as I also intend to do in this chapter) to the large
gender inequalities that still exist in the distribution of
domestic work and care responsibilities.

(p.244) However, it is not wholly clear how achievements in
these well-being domains should be interpreted. As Robeyns
also recognizes, if, generally speaking, domestic work and
non-market care might have a positive impact on those who
benefit from these activities, the well-being effects on the
care-givers are for various reasons much less straightforward
to determine. First, as already mentioned, these activities are
not equally stressful or rewarding. Second, they produce
effects on a plurality of well-being domains (e.g. emotional and
mental well-being, health, social relations, etc.), and all of
these domains need to be considered. Finally, allocation of
time among leisure, paid work, and unpaid work, particularly
for women, is rarely the result of free individual choice but is
strongly affected by household, society and labor market
characteristics. To restrict attention only to the overall amount
of unpaid work by a person and how she allocates time among
different activities could give an incomplete picture and
therefore misrepresent the well-being of that person.

As Sen remarks, “the issue of gender inequality is ultimately
one of disparate freedoms” (Sen 1992: 125), and the
distinction made by the capability framework between what
people do and what people can choose to do is particularly
relevant for understanding the complex links lying behind the
time allocation process and the possible consequences for
well-being.

A clear distinction between resources or means to achieve
(e.g. amount of time), freedom to achieve (alternative time
allocations among paid, unpaid and leisure activities) and
achievements (amount of time effectively spent on these
activities) can give a better understanding of such gender
disparities. Moreover, sensitivity to the internal and external
factors that might affect this conversion process (e.g.
individual socio-demographic characteristics, household
structures, labor market and welfare-state features, cultural
norms) can throw light on asymmetries between the sexes in
pursuing the life that people have reason to value and on the
unequal gender distribution of resources, opportunities and
achievements in different well-being domains.
In a recent paper Burchardt (2006) takes an important step in this direction, suggesting a measure of time and income poverty consistent with the capability approach. In that paper, time and income are considered essentially as input or resources. But she moves a step further, as she integrates into her analysis not only the actual time allocation between paid and unpaid work, and the consequent amount of income that can be generated, but also the range of feasible time allocations and incomes available, thus considering the capability to be free of time and income poverty. This double vision of time allocation (and, consequently, of disposable income) both as means and as ends seems particularly fruitful from a gender perspective. The analysis in the next section attempts to move in the same direction, providing some empirical findings on the two intertwined income and time spaces.

III. Gender Poverty and Inequalities in Time and Income: Some Empirical Evidence for Italy
III.1 Description of the Data

One of the main difficulties in carrying out joint analysis on time and income distribution is the lack of availability of sufficiently accurate statistical information. On the one hand, a typical data source is time use surveys, which cover time allocation in considerable detail but usually provide information on individual and household income, if at all, only in a very aggregated and rough manner. On the other hand, household surveys are generally very detailed and accurate regarding income but usually neglect time allocation. A merging of different sources is often required for carrying out this kind of analysis, with all the problems that this procedure implies (Del Boca et al. 2005; Burchardt 2006).

The empirical analysis presented in this section is based on the microdata of the Bank of Italy's Survey on Household Income and Wealth (SHIW), a representative survey conducted every two years on a sample of 8,000 households and over 22,000 individuals, and the main source on income and wealth distribution in Italy. The 2000 wave used for this chapter is the only one which contains an ad hoc module on unpaid work and provides information on three distinctive issues: (1) the overall amount of hours worked weekly by all household members older than 14; (2) the allocation of unpaid work among domestic care, child care, and care activities for other family members living in the household as well as for parents and relatives living outside the household; (3) the average number of hours per week contracted out for domestic work and child care or received by relatives. Finally, information is provided on family composition, employment, housing, and other individual and household socio-demographic characteristics (see Bank of Italy 2002).

The main reference unit for our analysis is individuals in work, a homogeneous subgroup of the population for which all time and income information is available (n = 4,052). Reference is made to the weekly amount of hours devoted to care and domestic activities and to paid work, while for income weekly labor income is used, which includes wages, salaries and income from self-employment recorded net of direct taxes and social security contributions. Weekly income is obtained simply by dividing annual income by 52. Most poverty and inequality index calculations are performed using the
Distributive Analysis Stata Package (DASP; see Araar and Duclos 2007).
As already outlined in other research on this topic, Italy is traditionally considered one of the industrialized countries with the highest degree of gender inequality in terms of unremunerated work (UNDP 1995; Bonke and Kock-Weser 2001; Addabbo and Picchio 2003; Chiappero Martinetti 2003; Del Boca et al. 2005). A first glance at Table 13.1 confirms that there is still a substantial gender gap in unpaid work in Italy: on average women spend almost 30 hours per week in unpaid work, 2.3 times that of men (12.5 hours per week), and have an overall (paid and unpaid) workload 15% heavier than men. In our sample of over 4,000 working individuals (63% men and 37% women), almost 40% of the men spend less than five hours of unpaid work per week, while the range with the highest percentage of women (25%) is that of 21 to 30 hours of unpaid work per week.\footnote{7}

The allocation of time between paid and unpaid activities is also significantly different: men spend about three quarters of their time working on paid activities and one quarter on unpaid work, while women allocate their work time more or less equally (46% for unpaid and 54% for paid work). In absolute terms, this means that men work on average 43 hours per week on the labor market (women 8 hours fewer) but nevertheless the total workload is higher for women (64.2 hours vs 55.8 hours).

The gender gap in time allocation does not vary significantly within socio-demographic groups, confirming that gender inequality in domestic work and care responsibilities seems an intrinsic and widespread feature of Italian society. Women systematically have a cumulative workload higher than that of men, and traditional explanatory factors of inequality, such as level of education, work status or geographic area, do not seem to play a significant role. In accordance with what Gershuny (2003) identifies as a consequence of a status transition, there is a substantial increase in the amount of time people spend on unpaid work when they move from single to couple status.\footnote{8} Both men and women increase their unpaid work but women nearly treble it (from 13 to 36 hours per week) while men double it. Other personal and household characteristics do not substantially affect this pattern. No matter what level of education she has, where she lives or what her work status is, as soon as a woman moves from her single status an irreducible amount of unpaid work seems to
be assigned to her in a more or less stable way that, in addition to the paid work load, confirms once again the “double work day” hypothesis, and reduces the substitution elasticity between paid and unpaid work to nearly zero, particularly for low-income families. To prove this assumption requires (p.247)
Table 13.1. Gender distribution in the use of time by personal and household characteristics

<table>
<thead>
<tr>
<th>Unpaid work (average hours per week)</th>
<th>Total work (paid + unpaid) (average hours per week)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average hours per week</td>
</tr>
<tr>
<td></td>
<td>Female</td>
</tr>
<tr>
<td>Average hours per week</td>
<td>29.3</td>
</tr>
<tr>
<td>Range of hours per week</td>
<td></td>
</tr>
<tr>
<td>≤5</td>
<td>12.3</td>
</tr>
<tr>
<td>6–10</td>
<td>10.5</td>
</tr>
<tr>
<td>11–20</td>
<td>16.7</td>
</tr>
<tr>
<td>21–30</td>
<td>24.7</td>
</tr>
<tr>
<td>31–40</td>
<td>15.7</td>
</tr>
<tr>
<td>&gt;40</td>
<td>20.1</td>
</tr>
<tr>
<td>F–M ratio</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>&lt;30</td>
<td>18.0</td>
</tr>
<tr>
<td>31–40</td>
<td>33.0</td>
</tr>
<tr>
<td>41–50</td>
<td>31.4</td>
</tr>
<tr>
<td>51–65</td>
<td>35.4</td>
</tr>
<tr>
<td></td>
<td>Female</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------</td>
</tr>
<tr>
<td><strong>Work status</strong></td>
<td></td>
</tr>
<tr>
<td>Black-collar</td>
<td>29.1</td>
</tr>
<tr>
<td>White-collar</td>
<td>29.1</td>
</tr>
<tr>
<td>Manager</td>
<td>22.5</td>
</tr>
<tr>
<td>Self-employed</td>
<td>32.6</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>13.5</td>
</tr>
<tr>
<td>Married</td>
<td>36.4</td>
</tr>
<tr>
<td>Divorced</td>
<td>27.1</td>
</tr>
<tr>
<td>Widow/widower</td>
<td>35.9</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
</tr>
<tr>
<td>No education</td>
<td>25.4</td>
</tr>
<tr>
<td>Primary school</td>
<td>31.8</td>
</tr>
<tr>
<td>Secondary school</td>
<td>27.4</td>
</tr>
<tr>
<td>University degree</td>
<td>29.1</td>
</tr>
<tr>
<td>Geographic area</td>
<td>Female</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------</td>
</tr>
<tr>
<td>North</td>
<td>27.9</td>
</tr>
<tr>
<td>Center</td>
<td>28.5</td>
</tr>
<tr>
<td>South</td>
<td>34.2</td>
</tr>
</tbody>
</table>

*Note:* All data are for a subsample of employed or self-employed individuals (n = 4,052).

*Source:* Author's calculations from 2000 SHIW dataset (Bank of Italy 2002).
a more detailed analysis of the link between income and time, and I will return to this issue in section III.3.

Gender inequality is summarized in Table 13.2 and in Figures 13.1 and 13.2, where the typical tools of distributive analysis are applied to time and income distribution (p.248)
## Table 13.2. Inequality indices on weekly income, paid and unpaid work, and total work

<table>
<thead>
<tr>
<th></th>
<th>Net weekly labor income</th>
<th>Unpaid work</th>
<th>Paid work (hours of work per week)</th>
<th>Total work</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gini index</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>0.297 (0.007)</td>
<td>0.529 (0.007)</td>
<td>0.147 (0.004)</td>
<td>0.187 (0.003)</td>
</tr>
<tr>
<td>Men (population share = 62%)</td>
<td>0.293 (0.009)</td>
<td>0.567 (0.010)</td>
<td>0.126 (0.005)</td>
<td>0.174 (0.004)</td>
</tr>
<tr>
<td>Women (population share = 38%)</td>
<td>0.275 (0.009)</td>
<td>0.402 (0.011)</td>
<td>0.162 (0.006)</td>
<td>0.195 (0.006)</td>
</tr>
<tr>
<td><strong>Theil index</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>0.1759 (0.012)</td>
<td>0.5110 (0.014)</td>
<td>0.0453 (0.0025)</td>
<td>0.0599 (0.0025)</td>
</tr>
<tr>
<td>Men (population share = 62%)</td>
<td>0.1739 (0.017)</td>
<td>0.6060 (0.011)</td>
<td>0.0346 (0.003)</td>
<td>0.0523 (0.003)</td>
</tr>
<tr>
<td>Within men</td>
<td>0.1215 (69%)</td>
<td>0.2520 (49%)</td>
<td>0.0230 (51%)</td>
<td>0.0309 (52%)</td>
</tr>
<tr>
<td>Women (population share = 38%)</td>
<td>0.1409 (0.012)</td>
<td>0.2902 (0.015)</td>
<td>0.0524 (0.003)</td>
<td>0.0653 (0.004)</td>
</tr>
<tr>
<td>Within women</td>
<td>0.0425 (24%)</td>
<td>0.1690 (33%)</td>
<td>0.0172 (38%)</td>
<td>0.0267 (44%)</td>
</tr>
<tr>
<td>Between men and women</td>
<td>0.0120 (7%)</td>
<td>0.0890 (18%)</td>
<td>0.0047 (11%)</td>
<td>0.0021 (4%)</td>
</tr>
</tbody>
</table>

*Note:* $n = 4,052$; standard errors and percentages in parentheses.

*Source:* Author's calculations from 2000 SHIW data set (Bank of Italy 2002).
between men and women. Gini indexes confirm a higher concentration of unpaid work for both men and women, even if this time component is more unequally distributed in the case of men. The opposite occurs for paid work, characterized by a low Gini value but with a relatively higher concentration for women. The decomposition of Theil indexes allows us to quantify the absolute and relative contribution of the two “between-group” and “within-group” inequality components. In all three cases (paid, unpaid and total work) the within-group component plays a major role in determining total inequality, half of which is due to the “within-men” component, and from one third to 44% to the “within-women” component, while the residual can be ascribed to the disparities between genders. As expected, the between component takes a higher value in the case of unpaid work, contributing 18% to the overall inequality.

In a similar way, Figure 13.1 compares inequality between men and women in the three domains (unpaid, paid and total work), as well as in the income space, by using generalized Lorenz curves, while Figure 13.2 makes a within-group comparison using Lorenz curves. The generalized Lorenz curve for women clearly dominates that of men in the case of unpaid work (Figure. 13.1a), showing that the cumulative domestic workload is systematically higher, and the distance between these two curves increases as we move to the right end of the x-axis, that is, when greater (p.249) (p.250)

Fig. 13.1. Gender inequality between groups: generalized Lorenz curves on paid work, unpaid work, total work and weekly income, by gender

Note: n = 4,052.
shares of the population are taken into consideration. The pattern is reversed in the case of paid work (Figure 13.1b) but the differences between the curves for men and women are smaller. The generalized Lorenz Curve for women is still higher when we look at total workload (Figure 13.1c). Within-group comparisons in time allocation described by Lorenz curves separately for men and women show that unpaid work is more unequally distributed for both groups, even if more considerably in the case of men (Figure 13.2b), almost one third of whom, as already noted, do no unpaid work at all. This inequality is (p.251) partially offset by lower disparities in paid work distributions, typically characterized by full-time work for both men and women.

Table 13.2 and Figure 13.1d also indicate gender inequality in the income space, another area where horizontal inequality between groups typically adds up to vertical inequality. The Gini index for all workers is close to 0.3, slightly higher for the male subgroup compared to women, and the generalized

Fig. 13.2. Gender inequality within groups: Lorenz curves on paid, unpaid and total work, by gender

Note: n = 4,052.

Source: Author's calculations from 2000 SHIW data set (Bank of Italy 2002).
Lorenz curve for men dominates the corresponding curve for women. However, and similar to what we see for gender inequality in time, the decomposition of the Theil index shows that most of the inequality in labor income is due to the within-subgroup component and, in particular, to inequality among men, which accounts for 69% of that inequality. The equivalent component for women gives a relative contribution of 24% to the overall inequality, while the disparities between men and women account for the remaining 7%.  

As we noted earlier, the capability perspective maintains that focusing on economic resources is not sufficient for evaluating individual well-being or understanding the causes of gender inequalities in income distribution. As a matter of fact, these gender inequalities generally arise from horizontal inequalities between men and women in control over resources and thus opportunities (e.g. the capability of participating in the labor market), inequalities which can arise from mechanisms of gender discrimination that act on the labor market but which in turn are also affected by gender inequalities in the distribution of domestic activities and care responsibilities.

The considerable workload of Italian women workers can help explain why Italy has one of the lowest female employment rates among the OECD countries. This is partially confirmed by our data set, as almost 35% of women not lacking for work, when asked to identify the main reason, claimed that this was due to the necessity of taking care of family members, while the percentage of men not seeking work who gave the same answer is negligible (0.75). Family ties are more relevant when the woman has pre-school children (52% of these cited this as their main reason) but the percentage of childless women who do not participate in the labor market for family-care reasons is still quite high (over 30%), showing that informal care for the elderly helps to discourage female participation in the labor market (on this see also Marenzi and Pagani 2005). Finally, 11% of women do not look for a job because they wish to spend more time with their own family, while almost 10% (p.252) do not seek employment because they are discouraged by the difficulties of finding a job.

Two conclusions can be drawn from this descriptive analysis. First, these figures are given a precise significance from the capability view, in virtue of the distinction between opportunities (to have a job), preferences (to stay out of the
labor force because I prefer to have more time to spend with my family) and constraints people face due to contextual factors that can restrict the real freedom to pursue their own well-being (I cannot take part in the labor market because I must take care of my children, and/or the labor market discriminates against women having parental responsibilities). Secondly, even if capabilities are usually considered as inherently unobservable, knowledge of people’s effective or potential constraints can nevertheless contribute to an indirect estimation of the opportunity set.\footnote{12}

III.3 Time and Income Poverty

This final subsection aims to present some results of our analysis of time and income poverty, both individually and jointly considered. We will focus our attention on workers and not the whole population, so our analysis will be confined to those who are usually defined as working poor, that is individuals who have regular employment but remain in relative poverty.

Following a standard approach, the income poverty threshold is defined as £288.46 per week, corresponding to 60% of the median income, which in our sample was £480.77.\footnote{13} In a similar way, the time poverty threshold might be defined as a given percentage of median disposable time, but what constitutes disposable time is a disputed matter (Goodin et al. 2005; Burchardt 2006). Generally speaking, disposable time is considered to be the time left over from personal care and paid and unpaid activities. The amount of time we need to satisfy basic physiological needs is conventionally estimated at around 12 to 14 hours per day, and time use surveys using individual time diaries generally confirm these figures. In the course of a single day or week, time for paid work is also largely predetermined,\footnote{14} while it is more difficult to define a minimum or standard amount of time that should be devoted to unpaid activities.

In this chapter, we consider disposable time as the overall time available per week (168 hours) minus the amount of time spent for personal care (conventionally identified as 12 hours per day and assigned to each individual), minus the effective
amount of time allocated by each individual to paid and unpaid work. The median disposable time in our sample is 29 hours and the time poverty threshold, corresponding to 60% of this value, is equal to 17.4 hours per week, that is 2.5 hours per day. As shown in Table 13.3, only 4.4% of individuals are classified as both income- and time-poor, while on average one Italian worker out of four is only time-poor and one out of eight is only income-poor, proportions that vary significantly by gender. The share of women who are time-poor is almost 30%, 10 percentage points higher than for men; the number of women below the income-poverty threshold is twice that of men, and the number of time- and income-poor women is four times that of men. The correlation coefficient between income and disposable time is -0.17 for men and -0.15 for women.

Table 13.4 shows, in turn, that on the basis of the Foster, Greer and Thorbecke class of poverty measures, the headcount ratio or incidence of poverty (P_0) indicates a significant percentage of working poor (16.5%) with a substantial gap between men and women: 11.6% of male workers, but 24.9% of female workers, are below the poverty line. These large disparities between men and women are also confirmed by the other poverty measures, namely the intensity of poverty (P_1 or poverty gap) and the poverty severity index (P_2 or square poverty gap) as well as the index decomposition. Although women represent only one-third of all workers, they are the major contributing factor to the overall poverty index (56%-58%).
A similar gender pattern, but one which is worse overall, emerges for the parameter of time: more than one worker out of four is time-poor (26.7%), and although the contribution of poor men and poor women to the overall index is rather similar (48% and 52% respectively), only one man in five is time-poor, while this condition affects more than one third of woman workers.

(p.254)
### Table 13.4. Poverty indices in time and income space

<table>
<thead>
<tr>
<th></th>
<th>Unidimensional poverty</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$P_0$</td>
<td>$P_1$</td>
<td>$P_2$</td>
</tr>
<tr>
<td><strong>Income space</strong></td>
<td>Overall index</td>
<td>16.5</td>
<td>6.8</td>
<td>3.7</td>
</tr>
<tr>
<td>Men (population share = 63%)</td>
<td>Subgroup index</td>
<td>11.6</td>
<td>4.7</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>(Absolute contribution)</td>
<td>7.2</td>
<td>2.9</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>% contribution</td>
<td>44%</td>
<td>43%</td>
<td>42%</td>
</tr>
<tr>
<td>Women (population share = 37%)</td>
<td>Subgroup index</td>
<td>24.9</td>
<td>10.5</td>
<td>5.8</td>
</tr>
<tr>
<td></td>
<td>Absolute contribution</td>
<td>9.3</td>
<td>3.9</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>% contribution</td>
<td>56%</td>
<td>57%</td>
<td>58%</td>
</tr>
<tr>
<td><strong>Time space</strong></td>
<td>Overall index</td>
<td>26.7</td>
<td>17.2</td>
<td>14.5</td>
</tr>
<tr>
<td>Men (population share = 63%)</td>
<td>Subgroup index</td>
<td>20.6</td>
<td>12.7</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>Absolute contribution</td>
<td>12.9</td>
<td>7.9</td>
<td>6.6</td>
</tr>
<tr>
<td></td>
<td>% contribution</td>
<td>48%</td>
<td>46%</td>
<td>46%</td>
</tr>
<tr>
<td>Women (population share = 37%)</td>
<td>Subgroup index</td>
<td>36.8</td>
<td>24.9</td>
<td>21.0</td>
</tr>
<tr>
<td></td>
<td>Absolute contribution</td>
<td>13.8</td>
<td>9.3</td>
<td>7.9</td>
</tr>
</tbody>
</table>
### Unidimensional poverty

<table>
<thead>
<tr>
<th></th>
<th>P₀</th>
<th>P₁</th>
<th>P₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>% contribution</td>
<td>52%</td>
<td>54%</td>
<td>54%</td>
</tr>
</tbody>
</table>

### Multidimensional poverty (time and income)

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chakravarty et al. (1998)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>α =0</td>
<td>30.0</td>
<td>22.6</td>
<td>42.1</td>
</tr>
<tr>
<td>α =1</td>
<td>15.7</td>
<td>11.7</td>
<td>22.3</td>
</tr>
<tr>
<td>α =2</td>
<td>11.3</td>
<td>8.4</td>
<td>16.0</td>
</tr>
<tr>
<td>Bourguignon and Chakravarty (2003)</td>
<td>α = 1, β = 1, γ = 1</td>
<td>24.1</td>
<td>17.2</td>
</tr>
</tbody>
</table>

**Source:** Author’s calculations from 2000 SHIW data set (n = 4,052).
Finally, income and time have been taken jointly into consideration and several multidimensional poverty indexes have been computed. Table 13.4 reports

1. the Chakravarty et al. (1998) class of poverty measures, which represents the multidimensional extension of the FGT poverty indexes $P_{\alpha}$; and in the simpler bivariate case it takes the form:

$$P(X, z) = \frac{1}{n} \sum_{i=1}^{n} \left[ a_i \left( \frac{x_i - x_1}{x_1} \right)^\alpha + a_i \left( \frac{z_i - z_1}{z_1} \right)^\gamma \right]^\frac{1}{\alpha - 1}$$

The weighting coefficients $a_i$ and $\alpha < 1$ and $\sum a_i = 1$, reflect the importance attached to the $j$ dimension and $\alpha$ is a parameter reflecting poverty aversion.

2. the class of measures suggested by Bourguignon and Chakravarty (2002, 2003),

$$P_{\alpha}(X, z) = \frac{1}{n} \sum_{i=1}^{n} \left[ \left( \frac{x_i - x_1}{x_1} \right)^\gamma + \beta \left( \frac{z_i - z_1}{z_1} \right)^\gamma \right]^\frac{1}{\beta}$$

(p.255) where $\alpha \geq 1$, $\gamma \geq 1$ is a substitutability parameter and $\beta > 0$ shows the relative importance attached to attribute 2 relative to attribute 1 ($\beta = a_2/a_1$). The main advantage of this index over the previous one is that it allows us to take into account substitutability and complementarity among attributes. Table 13.4 reports the simpler case in which all parameters are equal to 1, that is when the two attributes (income and time) have equal weights and are substitutes, and the iso-poverty curves are linear ($\alpha = \gamma = 1$).

All indexes show a higher incidence, intensity and severity of multidimensional poverty for women workers, with a substantial gender gap.

IV. Conclusion
The theoretical suggestions and empirical exercise presented in this chapter represent merely a first preliminary step in the direction of research that could be helpful for: (1) investigating inequalities between men and women in the interrelated domains of time and income, (2) revealing the invisible contribution of unpaid work and the impact it can have on well-being, and (3) understanding the complex relationship between constraints and preferences in time allocation decisions on the one hand, and, on the other hand, well-being in terms of opportunity to pursue the life people value.
In section II of this chapter, I discussed how these three research goals can find a proper space within a capability framework, highlighting the way in which gender inequalities can arise not only in material resources and time allocation but also in conversion factors, and ultimately, in individual well-being. Further, in discussing the distinction between means and ends with reference to both income and unpaid work, I argued that regarding domestic and care activities as an essential input into the production of well-being, i.e. converting goods and services into functionings and capabilities, means proceeding one step further from the simple amount of time allocated for these activities to the impact that these activities have on individual well-being for both care receivers and care-givers.

In the third section, I presented some empirical evidence on gender poverty and inequalities in terms of time and income in Italy, one of the most peculiar cases of gender disparity among the industrialized nations. With regard to the distribution of unpaid work, and in line with other studies, two facts clearly emerge from this analysis. First, the amount of time dedicated to social reproduction work is unequally distributed between men and women but equally distributed among women, in that it does not seem easy to explain only on the basis of factors such as social and economic status, geographical area, level of education, age, or household size and structure. From whichever point of view the problem is considered, the burden of work is always more onerous for women, and the fact that during the last decade women have participated to a greater extent in the job market has simply translated into an overall work load—paid plus unpaid—which remains greater than men's. This double inequality in both income and time allocation cannot but be the consequence of the higher level of poverty among women workers.

The preliminary analysis presented in this chapter is only a hint of the fruitful avenues of research that the capability approach opens up for a better understanding of gender inequalities and gender poverty: much work remains to be done. With respect to unpaid work, at least two directions should be pursued.

First, our descriptive analysis provides evidence for links between job opportunities and constraints on time, links that in the case of Italy can contribute to explaining the
peculiarities of this case—low female participation in the labor force, a low fertility rate, discrimination in terms of job opportunities and careers, and large gender gaps in wages. A deeper analysis could make these links more evident.

Second, the question of how an unequal distribution of unpaid work can negatively affect the well-being of care-givers in terms of professional decisions is just one side of the coin; the other is how, and to what extent, social reproduction activities supplied by women positively affect the recipient's well-being and what achieved functionings are most affected by these activities. But this is a topic for future study.

Bibliography references:


Notes:
(1) Unpaid work or social reproduction activity will be understood as the total amount of activity carried out in the household context. However, at the theoretical as well as at the empirical level it could be useful to distinguish between domestic work, which includes all the impersonal activity in home management (and which could be done by people outside the family), and care work for children, the elderly or the sick, which, because of its interpersonal and emotional nature, is more difficult to hand over to others or to purchase on the market. A third category of unremunerated work is represented by the voluntary and community work supplied by civil society.

(2) On this, see, among others, Goldschmidt-Clermont and Pagnossin-Aligisakis (1996); Ironmonger (1996); Himmelweit (2000); McFarlane et al. (2000); Nyberg (2000); OECD (2000).

(3) Amartya Sen has written extensively on the profound inequalities in human capabilities which still exist between men and women in almost all countries, and many other scholars have made fundamental contributions to this field of investigation. See, in particular, Nussbaum (1995, 2000a, 2000b, 2003) and Robeyns (2000, 2001, 2003, 2008).

(4) For an attempt to estimate the conversion rates for subgroups of a population according to gender and age, see Chiappero Martinetti and Salardi (2008).
(5) A different view on the link between income and capability can be found in Bojer (2006), who argues that the capability approach should include income as a measure of access to economic goods and suggests a measure of full income capability.

(6) Household environment can also negatively affect individual well-being. As a growing body of literature has shown, intra-household resources are not always allocated according to needs and intra-household inequality is often the rule instead of the exception in many contexts.

(7) One man out of three does not spend any time in unpaid work at all, while this is the case for only 7% of women in our sample (figures not included in Table 13.1).

(8) We are interpreting cross-sectional data here as a proxy for life-course changes. However, these data simply compare different people of different ages and do not allow us to observe directly the transitions in the family cycle, a kind of investigation which would require longitudinal data, as in Gershuny (2003).

(9) As is well known, generalized Lorenz curves allow proper comparisons in the case of distributions characterized by different absolute levels, as happens in the case of the distribution of unpaid work between men and women, for which mean values are substantially different, while in the case of comparisons within a group, Lorenz curves are an appropriate tool.

(10) It should be borne in mind that the relatively low level of income inequality is due to the fact that we are considering a relatively homogeneous subsample of population which includes only workers. The Gini index calculated on the equivalent income of the overall sample is higher, 0.329 (see Bank of Italy 2000). Medeiros et al. (2007) find different values but a similar pattern in the unpaid inequality decomposition in Bolivia.

(11) In 2000, the year of reference for our analysis, the Italian female employment rate was 39.6%, whereas the corresponding rate for the OECD as a whole was 55.3% (OECD 2004).
(12) See Burchardt and Le Grand (2002) for an interesting account of the extent to which decisions on labor market participation are affected by constraints and opportunity.

(13) The corresponding value for the whole household is €502 per week, while the equivalent income is €270 (Bank of Italy 2002).

(14) The average time spent on paid work in our sample of workers is equal to 40.1 hours, which corresponds to a typical full-time job.

(15) For checking the extent to which the number of poor is affected by the choice of poverty threshold we also did a sensitivity analysis. With an income-poverty threshold of 50% of median labor income, the percentages of working poor change but the gender gap remains the same: twice as many women workers are poor compared to men (20.6% vs 10%, respectively).