# Women's labour force participation and unpaid work 

Tindara Addabbo* and Donata Favaro§<br>AIEL XXIV National Conference of Labour Economics<br>Faculty of Economics - University of Sassari<br>24-25 September 2009<br>This version July 312009


#### Abstract

Preliminary Abstract Women's participation in paid work in Italy is at a very low level as compared to other industrialised countries, showing a wide gender gap: in $200726 \%$ of men of working age were inactive against $50 \%$ of women, a trend also on the increase. This paper aims to explore the causes of women's non-participation in the labour market by exploiting an innovative source of data: the Isfol 2007 survey on a sample of 6,000 women aged 25-44. The sample is representative of the Italian population and allows for comparisons across different areas of the country. Data were collected on the basis of a questionnaire designed by an interdisciplinary group of researchers in order to cover different areas connected to paid work participation. Our analysis confirms that the female labour market inactivity is often not an outcome of choice but seems to be highly constrained by the gender division of unpaid labour and by labour demand. Together with institutional factors, labour market status and individual characteristics, we can also disentangle the effect on participation from women's beliefs on gender roles and on the centrality of work in the construction of identity. Women's labour market participation and its interaction with the model of unpaid work distribution between partners is analysed more in depth and jointly modelled, showing the relevance of taking into account their interaction for the evaluation of public policies.


JEL classification: J16, J22.
*Department of Economics, University of Modena \& Reggio Emilia, Italy. E-mail: tindara.addabbo@unimore.it. Affiliations: Child (Centre for Household, Income, Labour and Demographic Economics) http://www.child-centre.it/; Capp (Centro di Analisi delle Politiche Pubbliche), http://www.capp.unimo.it, RECent, http://www.recent.unimore.it/
§ Department of Economics, University of Padua, Italy. E-mail: donata.favaro@unipd.it. Affiliations: Child (Centre for Household, Income, Labour and Demographic Economics) http://www.child-centre.it/.

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## 1. Introduction

The high level of women not belonging to the labour force can be found in many OECD countries (OECD, 2003); however, the incidence of not participation amongst women in Italy is greater than the European average. In 2007, inactivity rates for the working age population stood at $26 \%$ for men and $50 \%$ for women with maximum levels of not participation in the south of Italy. Moreover, the decrease in unemployment rates observable before the crisis has been matched in other European countries by a decrease in inactivity rates, while in Italy there has been a parallel decrease in unemployment and an increase in people not in the labour force with a growth, amongst the not participant population of the so called 'grey area' of those who are looking for a job but not actively, and those who are looking for a job but are not immediately available to work, or who are not looking for a job but would be available to work (Istat, 2008) ${ }^{1}$. The latter group of not participant workers was detected by Istat (the National Statistics Office) through a set of questions in the labour force survey, and it is more concentrated on the 25-44 age group (Istat, 2008). And it was on this age group that the Isfol survey on factors affecting female inactivity was carried out in Italy in 2007 (Isfol, 2008). The sample consisted of 6,000 women and the analysis presented in this paper tries to assess the factors affecting inactivity and whether non-participation is the result of choice or is involuntary.

## 2. Not in the labour force and unpaid work

The role of unpaid work in sustaining human well-being and its unequal distribution by gender has been well documented in the literature and in applied research, and its distribution in Italy is particularly unbalanced by gender, with women supplying a massive amount of unpaid domestic and care work and taking on the greater share of responsibilities (see Burda, Hamermesh and Weil, 2008; Addabbo, Caiumi, Maccagnan, 2009; Picchio, 2003). Here we try to assess the link between unpaid work and

[^1]participation outcomes for women. To what extent is the unpaid work supply related to the observed inactivity? Is this observed inactivity the result of a choice and/or the consequences of the unequal distribution of roles within the family, or it is rather constrained by labour demand or affected by individual characteristics?

The first important element is a relevant presence of involuntary not participation: amongst married or cohabiting women $34 \%$ are 'inactive' not out of choice ( $38 \%$ of inactive women in the South against $28 \%$ in the North) and involuntary inactivity is higher amongst unmarried or single women where the involuntary not in the labour force rate is $55 \%$ ( $60 \%$ in the North West and $63 \%$ in the Centre) (Table 1). Amongst unmarried women $28 \%$ are inactive, whereas the inactivity rate is higher for cohabiting or married women ( $40 \%$ of them are inactive).

Table 1. Involuntary inactivity - Average (Standard deviation)

| Area | Unmarried or <br> not cohabiting | Married or <br> cohabiting | Total |
| :--- | :---: | :---: | :---: |
| North west | $60 \%$ |  |  |
| North east | $49 \%$ | $28 \%$ | $30 \%$ |
| Centre | $53 \%$ | $45 \%$ | $46 \%$ |
|  | $50 \%$ | $28 \%$ | $29 \%$ |
| South and Islands | $63 \%$ | $45 \%$ | $45 \%$ |
|  | $49 \%$ | $32 \%$ | $33 \%$ |
| Total | $52 \%$ | $47 \%$ | $47 \%$ |
|  | $50 \%$ | $38 \%$ | $39 \%$ |
|  | $55 \%$ | $49 \%$ | $49 \%$ |
|  | $50 \%$ | $34 \%$ | $35 \%$ |
|  |  | $47 \%$ | $48 \%$ |

When we analyse the motivations of being out of the labour force, in the capability approach, we can look for indicators of the kind of environmental, social, institutional, family and individual conversion factors affecting the conversion of the capability of work in the functioning of work or job-seeking, and we can also assess the link between unpaid and paid work. As can be seen, the main causes stated by the women who are out of the labour force interviewed are connected to unpaid work or to the perception that paid work is not compatible with unpaid domestic and care work (Table 2). When we restricted the sample to those inactive who were unmarried the main motivations they give on their inactivity are connected on their belief that they cannot find a job
( $38 \%$ of them) and to their involvement in housework ( $38 \%$ ), while $15 \%$ state to be inactive for health reasons.

When we disaggregate the sample by area, we can see that in the south of Italy, consistently with higher female unemployment rates, the perception of difficulties in finding a job is more important as a motivation being out of the labour force than in the North ( $26 \%$ for not participating women in the South against $10 \%$ in the Centre North, Table 3).

Table 2. Reasons for being out of the labour force

| Variable | Mean | S.D. |
| :--- | :---: | :---: |
| What are the main reasons of your inactivity? |  |  |
| I have decided to devote myself entirely to childcare | $78 \%$ | $42 \%$ |
| Working life is not compatible with housework and childcare | $46 \%$ | $50 \%$ |
| I don't think I will find a job | $18 \%$ | $39 \%$ |
| I intend to continue studying or training | $1 \%$ | $10 \%$ |
| Household income is high enough to allow for my not being active | $2 \%$ | $13 \%$ |
| I'm involved in household management | $35 \%$ | $48 \%$ |
| I care for dependent relatives | $1 \%$ | $12 \%$ |
| Health | $5 \%$ | $21 \%$ |
| Out of choice | $0 \%$ | $4 \%$ |
| My previous employment was discontinued | $0 \%$ | $4 \%$ |
| For my husband's choice | $0 \%$ | $5 \%$ |
| I have not found a job suitable in terms of time/wages/satisfaction | $0 \%$ | $5 \%$ |
| Problems in travelling to reach the workplace | $0 \%$ | $2 \%$ |
| Other | $1 \%$ | $8 \%$ |

Together with labour demand policies, linked to the discouraging effect that can be detected in the areas of Italy characterised by a higher unemployment rates, policies that could make the whole labour market and paid work activities more sensitive to gender differences can also decrease women's inactivity. In this respect, one may also consider the higher incidence (amongst not participant women living in the centre-north of Italy where employment rates are higher and the discouragement effect should thus be lower) of not participant women who state that they do not look for a job because they consider paid work not easily compatible with housework and childcare.

Table 3. Not in the labour force reasons by macro area

| Variable | Centre North |  | South |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Mean | S.D. | Mean | S.D. |
| I have decided to devote myself to childcare | $81 \%$ | $39 \%$ | $74 \%$ | $44 \%$ |
| Paid work not compatible with housework and | $53 \%$ | $50 \%$ | $40 \%$ | $49 \%$ |
| childcare |  |  |  |  |
| I don't think I can find a job | $10 \%$ | $30 \%$ | $26 \%$ | $44 \%$ |
| I want to study or attend training courses | $1 \%$ | $8 \%$ | $1 \%$ | $11 \%$ |
| Household income is high enough to allow me not to | $2 \%$ | $13 \%$ | $2 \%$ | $13 \%$ |
| work |  |  |  |  |
| I'm involved in household management | $40 \%$ | $49 \%$ | $30 \%$ | $46 \%$ |
| I must care for dependent relatives | $1 \%$ | $11 \%$ | $2 \%$ | $13 \%$ |
| Health | $5 \%$ | $22 \%$ | $5 \%$ | $21 \%$ |
| Out of choice | $0 \%$ | $3 \%$ | $0 \%$ | $4 \%$ |
| My previous employment was discontinued | $0 \%$ | $4 \%$ | $0 \%$ | $5 \%$ |
| Husband's choice | $0 \%$ | $2 \%$ | $1 \%$ | $7 \%$ |
| I cannot find a job that fulfills my | $0 \%$ | $5 \%$ | $0 \%$ | $6 \%$ |
| time/wage/satisfaction expectations |  |  |  |  |
| Problems in commuting to reach the workplace | $0 \%$ | $3 \%$ | $0 \%$ | $1 \%$ |
| Other | $1 \%$ | $8 \%$ | $1 \%$ | $8 \%$ |

We then analysed the sample of not participant women with respect to the presence of children or dependent relatives and the reason for being out of the labour force. $86 \%$ of not participant women who have children or dependent relatives state that they have chosen not to be in the labour force in order to devote themselves to childcare, followed by the unbalance of paid work with respect to housework and childcare (51\%) and housework ( $34 \%$ ). The latter is also the reason most often chosen by women who do not have children or dependent relatives, followed by the difficulties in finding a job (Table 4).

Table 4. Reasons of being out of the labour force by type of family

| Reasons for being out of the labour force and not searching for a job | With children or dependent relatives |  | Without children or dependent relatives |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Mean | S.D. | Mean | S.D. |
| I have decided to devote myself to childcare | 85.80\% | 0.35 | 0.30\% | 0.05 |
| Paid work not compatible with housework and childcare | 51.40\% | 0.5 | 0.00\% | 0 |
| I don't think I can find a job | 17.90\% | 0.38 | 23.40\% | 0.42 |
| I want to study or attend training courses | 0.80\% | 0.09 | 2.10\% | 0.14 |
| Household income is high enough to allow me not to work | 1.70\% | 0.13 | 1.90\% | 0.14 |
| I'm involved in household management | $34.20 \%$ | 0.47 | 43.60\% | 0.5 |
| I must care for dependent relatives | 1.50\% | 0.12 | 0.60\% | 0.08 |
| Health | 4.00\% | 0.2 | 12.50\% | 0.33 |
| Out of choice | 0.10\% | 0.02 | 0.40\% | 0.06 |
| My previous employment was discontinued | 0.20\% | 0.05 | 0.00\% | 0 |
| Husband's choice | 0.30\% | 0.06 | 0.00\% | 0 |
| I cannot find a job that fulfils my | 0.10\% | 0.03 | 0.90\% | 0.09 |
| time/wage/satisfaction expectations |  |  |  |  |
| Problems in commuting to reach the workplace | 0.00\% | 0.02 | 0.10\% | 0.02 |
| Other | 0.50\% | 0.07 | 2.00\% | 0.14 |
| Number of observations | 3268 |  | 384 |  |

The decision on whether to participate in the labour market can be simultaneously taken by both members of the couple in the light of the allocation of unpaid work within the couple. This survey allows us to detect the degree of fairness in unpaid work distribution through the interviewees' perception of their partner's contribution to unpaid housework. According to women's perception, $43 \%$ of the women interviewed live in households where unpaid work is equally distributed, while $6 \%$ live in households where the partner does all the unpaid work. In $38 \%$ of cases, the partner's contribution to unpaid work is perceived as not substantial, and in $13 \%$ of cases they make no contribution (Table 5).

Table 5. Women's perceived partner's collaboration in unpaid work

| To what extent does your partner do a share of unpaid domestic and care work? | $\%$ |
| :--- | :---: |
| 1. He does everything | 5.95 |
| 2. Equally shared | 43.1 |
| 3. Not particularly relevant | 37.71 |
| 4. He does not do any; I do all unpaid work by myself | 13.24 |
|  | 100 |
| Number of observations | 4760 |

The interviewees' perception of partner's sharing unpaid work is used to give an initial definition of the equal distribution of unpaid work in the family, defined by assessing as equal a condition whereby a woman perceives her partner contributes in an equal or relevant way to unpaid work activity not equal or whether, in her perception, he does not contribute at all or he does in do so to a relevant extent. As we can see from Table 6, the partner's contribution to unpaid work activities is perceived to increase with the woman's level of education, and this is in line both with a higher degree of woman's empowerment in the bargaining of unpaid work, increasing with her level of education or with assortative mating meaning more educated women tend to have a more educated partner (Table 6). The partner's perceived contribution to unpaid work decreases with the number of children in the household, and among couples living in the south of Italy (Table 7).

The survey does not however allow us to observe the actual allocation of time to this within the couple, and we used the perception of the partner's contribution to specific unpaid working activities to more accurately define the model of allocation of unpaid work in the family with reference to: childcare, shopping, cooking, cleaning, everyday management, and more complex management.

Table 6. Relevance of partner's participation to unpaid work by level of woman's education

| Education | Mean | S.D. | Number of <br> cases |
| :--- | :---: | :---: | :---: |
| Elementary | $23 \%$ | 0.43 | 50 |
| Secondary | $40 \%$ | 0.49 | 1538 |
| Professional high <br> school diploma <br> High school diploma <br> Degree or more | $50 \%$ | 0.50 | 481 |
| Total | $49 \%$ | 0.50 | 2020 |

Table 7. Relevant participation to unpaid work by partner by area

| Area | Mean | S.D. | Number of <br> cases |
| :--- | :---: | :---: | :---: |
| North West | $50 \%$ | 0.50 | 981 |
| North East | $51 \%$ | 0.50 | 964 |
| Centre | $48 \%$ | 0.50 | 979 |
| South | $38 \%$ | 0.48 | 1613 |
| Total | $46 \%$ | 0.50 | 4537 |

We can see that the woman's perception of her partner's contribution to different unpaid work activities is correlated: in fact by looking at the correlation coefficients we can see that there is a positive correlation between partner's perceived contribution to everyday and complex management ( 0.74 ) and between childcare and shopping ( 0.40 ) or between shopping and cleaning (more than 0.40 ), or cleaning and cooking ( 0.52 ) and between shopping and household management (0.30) (Table 8).

Table 8. Correlation coefficients amongst partner's collaboration in different activities

Childcare Shopping Cooking Cleaning \begin{tabular}{c}
Everyday

 

More complex <br>
management
\end{tabular}

| Childcare | 1.00 |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Shopping | 0.40 | 1.00 |  |  |  |  |
| Cooking | 0.29 | 0.45 | 1.00 | 1.00 |  |  |
| Cleaning | 0.32 | 0.42 | 0.52 | 1.00 |  |  |
| Everyday <br> management <br> More complex <br> management | 0.26 | 0.30 | 0.16 | 0.17 |  |  |

We then used different definitions of the equally shared unpaid work model:
D1 - The woman perceives that there is an equal sharing of unpaid work or that her partner makes a relevant contribution to unpaid work.

D2 - The woman perceives that there is an equal sharing of unpaid work or that her partner makes a relevant contribution to unpaid work, and she perceives that there is a substantial or great enough contribution by the partner in all the activities.

D3 - The woman perceives that there is an equal sharing of unpaid work or that her partner makes a relevant contribution to unpaid work, and she perceives that there is a substantial or great enough contribution by the partner to childcare (if there are children
in the household) or housework and shopping, but not that her partner's collaboration in other management activities is adequate.

There is not a substantial difference in the percentage of those who can be considered cases of fairly distributed unpaid work in the family between the last two definitions of the fair sharing of unpaid work (Table 9). In Section 3, in order to define the model of sharing unpaid work in the household, we shall use the second definition.

Table 9. Defining the equal sharing of unpaid work in the household

| Definitions | Number of <br> cases | Mean | S.D. |
| :--- | :---: | :---: | :---: |
| D1 | 4537 | $46 \%$ | 0.50 |
| D2 | 5981 | $9 \%$ | 0.28 |
| D3 | 5981 | $10 \%$ | 0.30 |

## 3. Education and inactivity

Descriptive statistics show a lower presence of women not in the labour force amongst highly educated women. Inactivity goes from $69 \%$ for women without any education or with elementary schooling to $22 \%$ of those with at least a university degree (Table 10). However, the incidence of people who are not in the labour force by educational level varies in different areas of the country: in the North the not in the labour force rates of low educated women is $17 \%$ and for women with a degree it is $11 \%$, whereas in the other areas, inactivity decreases with women's level of education and it is consistently higher (given a comparable level of education) in the South (Table 10).

Table 10. Not in the labour force by region and woman's level of education (\%)

|  | North | Centre | South | Total |
| :---: | :---: | :---: | :---: | :---: |
| Elementary or no schooling | 17.2 | 69.4 | 91.5 | 69.4 |
| Middle school | 40.1 | 43.7 | 76.7 | 55.0 |
| Professional training secondary school | 17.8 | 38.2 | 52.8 | 30.8 |
| Secondary school | 15.9 | 26.3 | 52.0 | 29.3 |
| University degree or higher | 10.9 | 18.3 | 36.5 | 21.5 |
| Total | 23.8 | 31.5 | 60.7 | 38.2 |

We then turn our attention to assess to what extent the educational level and the type of education chosen is correlated to parents' level of education and has been affected by various factors (parents' beliefs, individual preferences, teachers' advice, brothers and sisters' educational choices or better chances of finding a job). Amongst women with a high level of education, $43 \%$ of their mothers have a medium-high level of education (secondary schooling or higher) and $45 \%$ of their fathers.

Individual preferences on average have a greater weight in affecting educational decisions both for active and for inactive women ( $80 \%$ of active and $73 \%$ of not participant) followed by parents' advice (similar for mother and father and for active and not participant), whereas the possibility of finding a job is higher for active (51\%) than for not participant ( $40 \%$ ) women (Table 11).

By considering only the factors that have been assessed by women as making a higher contribution to educational choices, individual preferences play the most relevant role ( $56 \%$ of active and $51 \%$ of inactive) and $22 \%$ of active compared to $19 \%$ of not participant state that finding a job makes a high contribution. We can also see a different degree of importance of the various factors if we analyse women's level of education: the role of individual preferences increases with the level of education. In fact $79 \%$ of active female graduates and $77 \%$ of not participant female graduates assess that individual preferences played an important role in determining their educational choices against $30 \%$ of not participant women with elementary schooling. On the other hand, amongst active women with elementary schooling, $30 \%$ assess that finding a job had a high impact on their education decisions against $20 \%$ of active female graduates, whereas among the not participant, the number of women that view this factor as very relevant increases with their level of education (it is considered very relevant by $14 \%$ of not participant women with elementary or no education, and by $25 \%$ of those with a degree or higher). For not participant women, their mother's advice is found to have a very relevant weight in their educational choices (41\%) if they have only elementary or a low level of education.

Table 11. Factors affecting educational choices

|  | Participants |  | Non-participants | Total |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mean | S.D. | Mean | S.D. | Mean | S.D. |
|  |  |  |  |  |  |  |
|  | 0.49 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Father | 0.52 | 0.50 | 0.49 | 0.50 | 0.51 | 0.50 |
| Mother | 0.80 | 0.40 | 0.73 | 0.44 | 0.78 | 0.42 |
| Individual preferences | 0.37 | 0.48 | 0.37 | 0.48 | 0.37 | 0.48 |
| Teachers | 0.21 | 0.40 | 0.23 | 0.42 | 0.21 | 0.41 |
| Friends/brothers/sisters | 0.51 | 0.50 | 0.40 | 0.49 | 0.47 | 0.50 |
| Likelihood of finding a |  |  |  |  |  |  |
| job |  |  |  |  |  |  |

## 4. Probability of being out of the labour force

In this section we use multivariate analysis to assess the weight of different factors (institutional, individual, household, cultural) on inactivity.

We apply a Probit model to the probability of being not participant across the whole sample of women (Table 12). This estimate shows that inactivity significantly decreases with a woman's education and if her mother has been employed in her life (Table 12).

Table 12. Probit on the probability of inactivity


[^2]Inactivity increases with the presence of children, particularly with children aged over two, and this is consistent with descriptive analysis of the reasons for being not in the labour force given by women in Section 1. The likelihood of not being in the labour force increases when women live in the South or with traditional models (such as if she breaks off her education to start a family, or if she simply believes it is fair for a woman to deal with childcare and housework). On the other hand, inactivity decreases if the woman believes that work is an important dimension of family life.

The first section shows the relevance, among the not participant population, of involuntary not in the labour force. We use a Heckman Probit model to correct for nonrandom selection by initially estimating the inactivity probability, in order to assess the factors affecting involuntary inactivity. Multivariate analysis (Table 13) shows that once not participant, the probability of being involuntarily not participant increases among widows or separated women, those living in the South or who believe that work is very/quite important, and decreases if there are children in the family, especially if there is child under 3 or between 6-10. This is probably connected to work-life balance difficulties that emerge with children in the family.

Table 13. Heckman model on involuntary non-participation

|  | Not participant | Involuntary inactive |
| :---: | :---: | :---: |
| Age | 0.009 | -0.008 |
|  | (1.60) | (1.04) |
| Unmarried |  | 0.272 |
|  |  | (1.45) |
| Widow, divorced, separated | 0.790** | 0.600** |
|  | (3.72) | (3.34) |
| Middle school |  | -0.028 |
|  |  | (0.13) |
| Secondary school | -0.760** | -0.046 |
|  | (12.08) | (0.18) |
| Degree or higher | -1.200** | 0.091 |
|  | (12.20) | (0.27) |
| Central Italy |  | 0.104 |
|  |  | (1.32) |
| Southern Italy | 0.765** | 0.245 |
|  | (11.36) | (1.80) |
| Work is very/quite important | -0.733** | 0.434* |
|  | (4.33) | (2.21) |
| Child under 3 |  | -0.309** |
|  |  | (3.07) |
| Child between 3 and 5 |  | -0.128 |
|  |  | (1.44) |
| Child between 6 and 10 |  | -0.197* |
|  |  | (2.37) |
| Child between 11 and 14 |  | -0.023 |
|  |  | (0.27) |
| Child over 14 |  | 0.024 |
|  |  | (0.19) |
| Dependent relatives | -0.138 | 0.098 |
|  | (1.14) | (0.68) |
| Married | 0.394* |  |
|  | (2.12) |  |
| Mother employed during her life | -0.154* |  |
|  | (2.52) |  |
| Employed partner | 0.217 |  |
|  | (1.34) |  |
| Number of children | 0.279** |  |
|  | (7.43) |  |
| Education interrupted to start a family | 0.093 |  |
|  | (0.69) |  |
| Belief that it is right for a woman to do childcare and housework | 0.245** |  |
|  | (3.92) |  |
| Education not consistent | -0.081** |  |
|  | (2.97) |  |
| Constant | -0.715* | -0.443 |
|  | (2.46) | (0.93) |
| Number or cases | 5485 | 5485 |

Note: Robust z statistics in brackets. * Significant at 5\%; ** Significant at 1\%

We then restricted the sample only to women who live with a partner. For this subsample, we also analysed the effect of the type of sharing of unpaid work by introducing
a variable that defines the presence of a fair model of distribution of unpaid work, taking the value of 1 if the woman believes that unpaid work is equally distributed and if her partner (in her perception) contributes to all the activities. This variable has a significant effect on inactivity (Model A in Table 14). We also estimated another model in which we defined the partner's contribution to each activity, and this estimation shows that the variable that most significantly decreases woman's inactivity is the presence of a partner who shares cooking activities (Table 14, Model B).

To account for the likely interaction between not being in the labour force and living in a couple with an unequal share of unpaid work, we estimated a joint model of the probability of not being in the labour force and of the probability of living in a household in which sharing is more commonplace. The bivariate model estimation (Table 15) shows that there is a correlation in the error terms, and thus confirms the existence of a correlation between the two probabilities and requires their joint estimation. The probability that a woman is not participant and lives in an equal sharing model is $2 \%$, whereas the probability that there is no sharing and that the woman is not participant is $36 \%$ (Table 16). We see that the probability that an active woman lives in a couple in which there is an equal sharing of unpaid work is $7 \%$, whereas $54 \%$ of active women still live in a couple where there is not equal sharing of unpaid work. This shows that not participant women are more likely to be found in unequal sharing households, but it still shows a very high presence of unequal sharing of work inside households with an active woman. The latter shows that women who are looking for a job or are employed are still facing a relevant burden of unpaid work that, added to the time allocated to job-seeking or to performing paid work, contributes to increasing women's total working time and the gender inequality in the allocation of time.
Table 14. Married or cohabiting women's inactivity probability by unpaid work sharing

| Variables | Model A | Model B |
| :--- | :---: | :---: |
| Age | -0.004 | -0.003 |
|  | $(0.60)$ | $(0.41)$ |
| Secondary schooling | $-0.744^{* *}$ | $-0.818^{* *}$ |
|  | $(10.07)$ | $(10.53)$ |
| Degree or higher | $-0.983^{* *}$ | $-1.131^{* *}$ |
|  | $(8.00)$ | $(9.36)$ |
| Woman employed during her life | $-0.173^{*}$ | -0.122 |
|  | $(2.54)$ | $(1.74)$ |
| Child under 3 | 0.103 | 0.136 |
|  | $(1.12)$ | $(1.25)$ |


| Child between 3 and 5 | 0.225** | 0.230** |
| :---: | :---: | :---: |
|  | (2.95) | (2.68) |
| Child between 6 and 10 | 0.123 | 0.091 |
|  | (1.85) | (1.23) |
| Child between 11 and 14 | 0.216** | 0.177* |
|  | (2.74) | (2.12) |
| Southern Italy | 0.830** | 0.785** |
|  | (11.16) | (9.91) |
| Employed partner | -0.287 | -0.271 |
|  | (1.71) | (1.41) |
| Disabled or dependent relatives | 0.069 | -0.073 |
|  | (0.40) | (0.49) |
| Education interrupted to start a family | 0.133 | -0.002 |
|  | (0.95) | (0.02) |
| It is right for a woman to do childcare or unpaid domestic work | 0.180* | 0.130 |
|  | (2.53) | (1.69) |
| Work is very/quite relevant | -0.638** | -0.692** |
|  | (3.41) | (3.15) |
| Partner significantly collaborates on childcare |  | -0.058 |
|  |  | (1.20) |
| Partner significantly collaborates on shopping |  | -0.015 |
|  |  | (0.36) |
| Partner significantly collaborates on cooking |  | -0.171** |
|  |  | (4.22) |
| Partner significantly collaborates on cleaning |  | -0.039 |
|  |  | (0.91) |
| Partner significantly collaborates on everyday management |  | -0.050 |
|  |  | (1.01) |
| Partner significantly collaborates on more complex management |  | 0.037 |
|  |  | (0.73) |
| Equal share model | -0.387** |  |
|  | (3.10) |  |
| Education not consistent with personal predispositions | -0.079** | -0.087** |
|  | (2.73) | (2.81) |
| Constant | 1.015** | 1.804** |
|  | (2.59) | (3.57) |
| Number of cases | 4,772 |  |

Note: Robust z statistics in brackets. * Significant at 5\%; ** Significant at 1\%

As we can see from Table 15, the fact that a woman believes work is important is likely to have a significant effect on her inactivity probability, but does not affect the equal sharing model probability. On the other hand, if a woman believes that it is right for a woman to do childcare and housework, there is a negative effect on the likelihood that she might live in a equal sharing family and a positive effect on the not in the labour force probability.

An education inconsistent with one's predispositions increases the likelihood for there to be an unequal sharing of unpaid work and also decreases the inactivity probability. This arises probably because education, albeit less consistent with individual predispositions, can be more consistent with the labour market demand increasing participation probability.

The level of education does not significantly affect the probability of an equal sharing model, but it increases the probability of women's participation. On the other hand, ageing has a negative effect on the probability of equal sharing (with a $10 \%$ level of significance) and does not significantly affect woman's participatory probability. Mothers' inactivity probability increases by $8 \%$ if there are children aged from 11 to 14 , while their presence does not significantly reduce the probability that she lives in an equal sharing model. The presence of children aged from three to five decreases both a woman's participation and the probability that she might live in an equal sharing household. If the woman's partner is employed, the probability of equal sharing decreases but this does not significantly affect the probability of participation. The marginal effects in Table 15 show that with respect to women with a level of education not higher than secondary school, women with a degree or other higher education show a $31 \%$ decrease in the probability of being not participant, against $27 \%$ among women with secondary schooling. A woman's not in the labour force probability decreases by 7\% if her mother has been employed during her life. Living in the south of Italy increases woman's inactivity probability by $32 \%$, while if a woman considers working participation very or quite important, her inactivity probability decreases by $25 \%$.

Table 15. Inactivity and Sharing model (biprobit)

|  | Equal sharing model |  | Inactivity |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Coefficients (S.E.) | Marginal Effects | Coefficients (S.E.) | Marginal Effects |
| Age | -0.020 | -0.003 | -0.003 | -0.001 |
|  | (1.74) |  | (0.41) |  |
| Secondary school | -0.011 | -0.002 | -0.738** | -0.27 |
|  | (0.10) |  | (10.05) |  |
| Degree or higher | 0.213 | 0.04 | -0.991** | -0.31 |
|  | (1.44) |  | (8.17) |  |
| Mother employed during her life | -0.010 | -0.002 | -0.171* | -0.07 |
|  |  |  |  |  |
|  | (0.11) |  | (2.53) |  |
| Children under 3 | -0.135 | -0.02 | 0.112 | 0.04 |
|  | (1.09) |  | (1.24) |  |
| Children 3-5 | -0.295* | -0.05 | 0.241** | 0.09 |
|  | (2.53) |  | (3.18) |  |
| Children 6-10 | -0.003 | -0.0006 | 0.122 | 0.05 |
|  | (0.03) |  | (1.82) |  |
| Children 11-14 | -0.012 | -0.002 | 0.216** | 0.08 |
|  | (0.11) |  | (2.71) |  |
| Southern Italy | -0.080 | -0.014 | 0.830** | 0.32 |
|  | (0.75) |  | (11.27) |  |
| Employed partner | -0.504* | -0.11 | -0.242 | -0.09 |
|  | (2.41) |  | (1.45) |  |
| Dependent relatives | 0.140 | 0.03 | 0.057 | 0.02 |
|  | (0.73) |  | (0.33) |  |
| Education interrupted to start a family | 0.154 | 0.03 | 0.122 | 0.05 |
|  |  |  |  |  |
|  | (0.83) |  | (0.87) |  |
| It is right for a woman to do childcare or unpaid housework | $-0.310^{* *}$ | -0.05 | 0.197** | 0.08 |
|  |  |  |  |  |
|  | (2.79) |  | (2.79) |  |
| Work is very/quite important | 0.122 | 0.02 | -0.644** | -0.25 |
|  | (0.54) |  | (3.52) |  |
| Education not consistent with predispositions | -0.102** | -0.02 | -0.072* | -0.03 |
|  |  |  |  |  |
|  | (2.70) |  | (2.53) |  |
| Constant | 0.173 |  | 0.862* |  |
|  | (0.30) |  | (2.26) |  |
| Number of cases | 4,772 |  | 4,772 |  |

Note: Marginal effects valued at the mean value for the continuous variables and on the discrete change from 0 to 1 for dummy variables.
Note: Robust absolute values of z statistics in brackets. * Significant at 5\%; ** Significant at 1\%

Table 16. Inactivity probability and presence of an equal sharing model

|  | Inactive Woman | Active Woman |
| :--- | :---: | :---: |
| Couple with equal sharing | 0.02 | 0.07 |
| Couple with unequal sharing | 0.36 | 0.54 |

## 5. Towards participation

Amongst not participant women, $45 \%$ would like to look for work in the future and this availability brings them closer to the labour force (in the Eurostat definition). This group has a higher weight in the North (52\%) than in other regions (Table 17).

Table 17. Not participant women who are planning to look for a job in the future by region

|  | Mean | S.D. | Number of cases |
| :--- | :---: | :---: | :---: |
| South | $42 \%$ | 0.49 | 1,746 |
| North | $52 \%$ | 0.50 | 1,524 |
| Centre | $42 \%$ | 0.49 | 878 |
|  |  |  |  |
| Average | $45 \%$ | 0.50 | 4,148 |

Within the group of not participant women, we find women who are far from labour force: those who are not looking for a job and are not willing to work. The survey shows us what might bring these women closer to the labour force, providing proxies for those factors that affect their labour force participation. The most important condition is the possibility of having a job with shorter hours and flexible time (for $45 \%$ of more than 300 women who replied to this question) followed by an interesting job ( $20 \%$ ) the availability of nursery places ( $16 \%$ ), while as second factor affecting this condition, $29 \%$ gives relevance to earnings, $24 \%$ to shorter working hours and flexibility, and $22 \%$ to the higher sharing of unpaid work inside the family.

The gap between desired working time and actual working time provides a policy suggestion with respect to the time schedule of paid work and its balance with personal and family time that, given the current unpaid domestic and care work distribution by gender, is likely to significantly affect women's labour supply.

| Table 18. Conditions under which women might be available to supply their labour * |  |  |  |
| :--- | :---: | :---: | :---: |
|  | I | II | III |
|  | condition | condition | condition |
| Availability of nursery place | 16.17 | 4 | 4.69 |
| A better sharing of housework within the couple | 8.09 | 22.4 | 9.4 |
| A job with shorter hours or more flexible time | 45.14 | 24.11 | 16.75 |
| A well-paid job | 10.79 | 28.86 | 33.29 |
| An interesting job | 19.81 | 20.63 | 35.88 |
| Number of observations | 317 | 210 | 126 |

* Three answers in order of priority were possible

When the probability of finding a job is higher (as in the north of Italy) the weight of those not participant who are currently more distant from the labour force yet who would be willing to work with more flexible and shorter working hours increases (Table 19) while amongst women living in the South (and even more so if in the family there are children under six) the availability of childcare services is higher ( $36 \%$ for women with children under three, against $7 \%$ in the North of Italy and $14 \%$ in the Centre, while in the two latter areas the most important condition is shorter working hours and flexible time).

Table 19. Conditions under which inactive women would be available to work. Most important condition by area

|  | South | North | Centre |
| :--- | :---: | :---: | :---: |
| Availability of childcare services | 19.9 | 6.11 | 17.63 |
| More equal sharing of unpaid domestic and care work in the | 8.7 | 4.75 | 11.65 |
| family |  |  |  |
| Shorter hours or flexible time | 42.9 | 50.63 | 45.38 |
| A well-paid job | 10.94 | 10.2 | 11.21 |
| An interesting job | 17.56 | 28.32 | 14.14 |
| Number of cases | 170 | 91 | 59 |

In the previous section of this paper, we analysed those factors that affect the inactivity probability with special regards to the distribution of unpaid work and type of education. If one extends the model to include the effect on the labour supply in a dynamic framework (Addabbo, 1996), one can see the effect of current labour supply decisions on future labour supply and earnings. If we use the capabilities approach, we can see the long-term effects of not being in the labour force on the capability of working and on the probability that in the future we might observe the conversion of
this capability into employment. Both theoretical approaches show the long-term costs of current inactivity.

By also taking these costs into account, we shall conclude with some policy suggestions based on the analyses carried out in this paper. In the first section we saw a link between 'inactivity' and unpaid work confirmed by the reasons given by not participant women as regards their condition, and by multivariate analysis carried out in Section 3 showing a positive link between more equal sharing of unpaid work activities and women's participation in the labour force. Policies that can affect the distribution of unpaid work in the family from within the family and promote the presence of an equal sharing model can increase women's participation in the labour force and make it more sustainable (in terms of total work burden).

The group of women who are not in the labour force is heterogeneous, and their mothers' choices on inactivity have a significant effect on their daughters' participatory behaviour, suggesting the likelihood of persistent inactivity in further generations. The analysis on inactivity probability and the factors seen to affect it lead us to highlight policies that can reduce female non-participation in the labour force:

- Given the weight that not participant women give to unpaid domestic and care work in their not in the labour force, policies designed to reduce the unpaid workload on women by a different allocation within the family (i.e. by increasing the partner's share in daily unpaid work) and/or by providing more public services may be important to reducing women's inactivity;
- Changes to working hours: a significant share of not participant women who are more distant from the labour force (i.e. those who state that they are not looking for a job and are not willing to work) stated that they might be willing to work with shorter hours or flexible working time. One should therefore increase the availability of jobs with reduced or flexible working time, ensuring the possibility of converting shorter hours into fulltime work to avoid negative effects on women's careers or on the equal sharing of unpaid work within the family.
- The incidence of women who are not in the labour force is higher in areas with lower female employment rates, and in these areas more not participant women
state that they are not participant because they are discouraged from looking for a job or are involuntarily not participant. Therefore, policies designed to increase female employment and to improve the efficiency of services devoted to matching labour supply and labour demand in the south of Italy would ensure a flow from not in the labour force to participation. ${ }^{2}$


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[^0]:    Part of this research was carried out within the Isfol Project on female inactivity in Italy. We took part in the elaboration of the survey tools and the elaboration of microdata. We thank the research group for the stimulating discussion and for having shared the different phases of the survey. We are grateful to participants to IAFFE 2009 Annual Conference in Boston for stimulating comments to a previous version of this paper. Responsibility for what is written in this paper is to be attributed solely to the authors.

[^1]:    ${ }^{1}$ In the year 2008, there was an increase in the group of those non-participants who were not looking for a job and not available to work towards those who were closer to participation, and a flow from inactivity towards the workforce (unemployed) (Istat, 2009). This flow from not being in the labour force towards unemployment and the intra-inactivity flows took place alongside the spread of the financial crisis in the real economy.

[^2]:    Note: Robust absolute values of z statistics in brackets. * Significant at 5\%; ** Significant at 1\%

[^3]:    ${ }^{2}$ On the relevance of activation policies for this segment of people who are not in the labour force, see Carcillo and Grubb (2006). On the higher likelihood for women to be persistently inactive, see OECD (2003).

