

## SERVICES FAVOURING FEMALE WORK AS ELICITED THROUGH A BEST-WORST TECHNIQUE

**Riccardo Benetti, Luigi Fabbris, Manuela Scioni**

*Statistics Department, University of Padua, Italy*

**Abstract.** *Motherhood and childcare can limit women's ability to work and gain economic benefit. The more women's working times and duties are compatible with their personal time and engagements, the more likely it is that they will be able to manage both labour and family. The offer of specific public services and the ways in which work activities are organised could ease, in particular, mothers' aspiration to work outside their homes. But what are the services and organisational elasticities that could ease the family lives of employed women? In this paper, we present the results of a survey conducted in 2014 on a sample of women working in public bodies in Padua. The women were asked to express their preferences among a set of services designed to favour female work. The results, as well as suggestions for future research, are discussed.*

**Keywords:** *Equal opportunities, Family and work life reconciliation, Best-worst measurement, Latent class analysis*

### 1. INTRODUCTION

Female social participation and employment have expanded considerably, starting from the post-war period, not least because a growing proportion of women remains in the labour market throughout their working lives, combining paid work with the raising of children (OECD, 2002). The employment rate trend (Fig. 1) reflects, incidentally, the increasing importance of women's earnings in household income, as well as the notion on the part of governments that increasing female employment rates is an important policy goal. Moreover, women's growing aspirations for independence and fulfilment have brought further progress towards gender equity (Perrons, 2005).

Social interest in equal gender opportunities stems from the 1948 Universal Declaration of Human Rights. The Declaration promoted a formal equality that would help to smooth the significant legal gap between men and women (UN, General Assembly, 1948). Recently, the key concept in the issue of equal opportunities is the so-called 'gender mainstreaming', which is defined as 'the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in any area and at all levels' (United Nations,

1997). Initiatives to support work and family reconciliation, which can help women participate more fully in the labour market and influence society, can be considered gender mainstreaming initiatives.

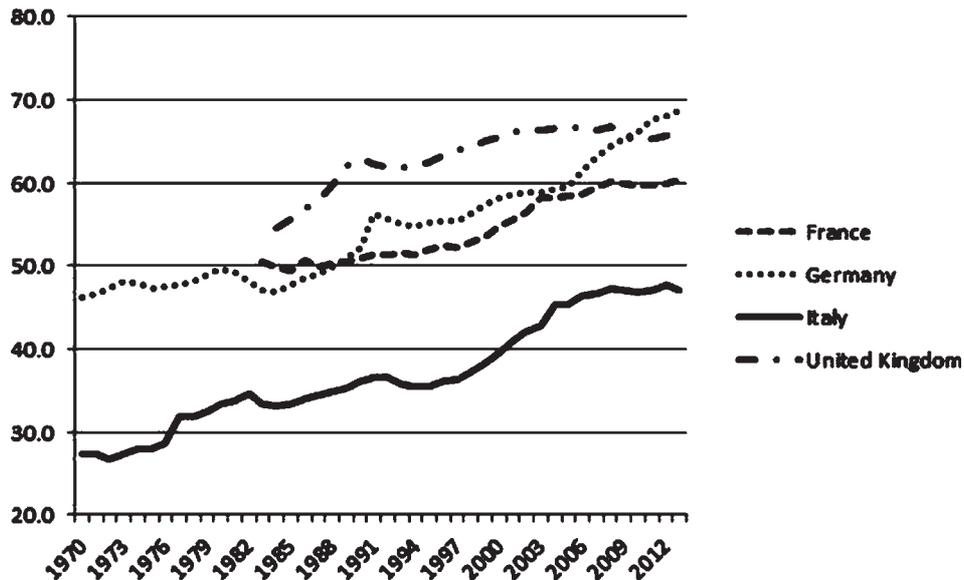


Figure 1: Italian, French, German, Britain female employment rates from 1970 to 2013  
(Source: OECD; [www.oecd.org](http://www.oecd.org))

In Italy, the development of equal gender opportunities started later than it did in other European countries, for historical and cultural reasons. The principle of gender mainstreaming is more widely applied in countries with more open attitudes towards the roles of women in economic and social activities (such as Sweden, Norway and the Netherlands). In Italy, the initial movement was limited to formal statements, which did not find effective applications in local and national policies (Plantenga and Hansen, 1999). Today, Italy is among the countries with the lowest levels of female employment in Europe, although, in more recent years, it has experienced a slow recovery (Fig. 1). Traditionally, child and family care have been considered peculiarities of the female world. For this reason, one of the main problems of working women is balancing labour and family: The more their working times and duties are compatible with their personal times and family engagements, the more likely it is that employed women can manage both labour and family (Tilly and Scott, 1987).

Helping women reconcile work and family lives could be useful in countering

the falling Italian fertility rate, which is currently one of the lowest fertility rates in the world, with fertile women bearing, on average, just 1.39 babies each in 2013 (Istat, 2014).

But what are the initiatives that could help employed women to manage their families, as well? Measures concerning flextimes and flexplaces are useful to balance women's work and family lives. Flexibility in working times has generally been well received by workers (Hill et al., 2004), and the flexplace concept encompasses telecommuting and other options allowing employees to work from various fixed, offsite locations (usually home). Work/family reconciliation policies include public services (e.g., child care, education and health care) for families, the elderly and the disabled (Bovenberg, 2005). Women must also have more equitable access to assets and services, which can be provided either for free or through agreement and can be managed either by public authorities or by private companies.

In 2013, the Equal Opportunities Commission of the Municipality of Padua, in collaboration with the Statistics Department of the University of Padua, started a project known as the Balance project to investigate the services and the organisational issues that could ease the family lives of female workers. A first phase consisted of several meetings with experts to discuss gender mainstreaming initiatives. Afterwards, a survey was carried out on a sample of women who worked either in public or private sectors located in the province of Padua. The survey was aimed at understanding the family situations of women employed in public bodies and the services they considered useful to improving work-family balance.

In this paper, we analyse the outcomes of this survey in relation to five public bodies of Padua. The rest of the paper is organised as follows: in Section 2, we briefly describe the data collection procedure and the research methodology. In Section 3, we describe the sample that responded to the survey questionnaire. In Section 4, we discuss the best-worst technique as a method for data collection and analyse the data collected with this technique. In Section 5, we briefly discuss the main outcomes.

## **2. THE SURVEY**

A web-based questionnaire was administered via the Internet (Computer Assisted Web-based Interviewing - CAWI) to all the women working in five main public bodies based in Padua. The public bodies were all those which accepted the invitation to take part in the survey. A paper and pencil questionnaire was administered to the employed women who were unable to access the web at work.

The questionnaire consisted of six sections. The first three sections dealt with characteristics of the respondents, their family situations and their jobs. The fourth section concerned services offered within or close to their workplaces. Questions

in the fifth section were designed to investigate the satisfaction of female workers about their work and family life. In the last section of the questionnaire, women were asked to express their preferences among a set of services designed to favour female work.

To gather the data on the respondents' service preferences, we employed the best-worst technique (Finn and Louviere, 1992), which required each respondent to select the "best" (most preferred) and the "worst" (least preferred) service from a predefined series of services. Best-worst estimation assumes that a subjective dimension underlies the responses obtainable from the sample (in our case, the "degree of importance" of services) and that the researcher can locate the set of offered items along this dimension (Auger, Devinney and Louviere, 2007). The best-worst technique has various advantages over other preference measurement techniques, since it requires the posing of only main questions: Which is the best and which is the worst item? In our case, the (dual) question was: 'Suppose that local institutions and private companies formed a consortium to provide services reconciling work and family, bearing in mind that resources are always scarce. Which of the below-listed services would be the most (least) useful to balance work and family life? (Only one answer admitted)'.

The service options, as identified by the Commission of Equal Opportunities, were typical matter for collective bargaining between internal unions and companies and were the following:

- Nursery for infants
- Children day care facilities for playful/educational activities
- Free or subsidised accommodations
- Summer holidays for workers and their children
- Internal loans (from a cooperative bank)
- Motorbike and car parking
- Agreement for a supermarket or grocery store discount
- Agreement for a hairdresser or beautician discount
- A person to carry out small tasks (e.g., bill payments, etc.), called a "butler"

Employed women were asked to specify their preferred service in the event that it was not included in the proposed list. In this way, needs for services not included in the questionnaire were recorded.

### **3. SAMPLE DESCRIPTION**

The response rate was equal to 46.2%, for a total of 3,461 worker responses to the survey. Interviews were completed by 2,005 respondents, who answered the

question regarding preferred services. The majority of the respondents (60%) worked in the healthcare sector, 21% worked in public administration, and 19% belonged to Padua University. Table 1 shows the distribution of Padua women employed in the public sector by presence and age of child.

**Table 1: Distribution of responding women according to the presence of children**

	<b>Obs</b>	<b>%</b>
With young kids	1205	34.8
With older kids	1122	32.4
With no kids	1134	32.8
<b>Total</b>	<b>3461</b>	<b>100.0</b>

**Table 2: Distribution of responding women according to age, marital status, education attainment and the presence of children**

		<b>With young kids</b>	<b>With older kids</b>	<b>Without kids</b>	<b>Total</b>
<b>Age (years)</b>	≤ 34	7.9	0.1	17.7	<b>9.2</b>
	35 – 44	52.8	5.2	30.2	<b>29.8</b>
	45 – 54	38.2	55.1	34.7	<b>42.0</b>
	≥ 55	1.1	39.6	17.4	<b>19.0</b>
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
	<b>N. of cases</b>	<b>1094</b>	<b>1047</b>	<b>1313</b>	<b>3454</b>
<b>Marital status</b>	Single	2.7	1.7	44.2	<b>18.2</b>
	Married/cohabiting	90.5	79.9	46.8	<b>70.7</b>
	Divorced	6.1	15.3	7.6	<b>9.5</b>
	Widowed	0.6	3.1	1.5	<b>1.7</b>
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
	<b>N. of cases</b>	<b>1094</b>	<b>1047</b>	<b>1309</b>	<b>3449</b>
<b>Education attainment</b>	Graduate degree	57.9	34.6	62.8	52.7
	High school graduate	37.7	54.1	31.7	40.4
	Less than high school	4.4	11.3	5.5	7.0
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
	<b>N. of cases</b>	<b>1091</b>	<b>1043</b>	<b>1305</b>	<b>3439</b>

The class of women titled ‘With young kids’ includes working women with children up to the age of secondary school, while the class ‘With older kids’ includes women with children aged 14 years and over. This distribution of the respondents allows highlight the necessity of following and accompanying children up to a certain age.

The three groups are almost equally distributed, with each category including approximately one-third of the respondents (Table 1).

Table 2 shows the distribution of the respondents for selected age groups. Working women with no kids tended to be younger than the others. Women with young kids belonged mainly to the age classes of 35 to 44 (52.8%) and 45 to 54 (38.2%). In almost all cases, women with older kids (94.7%) were more than 45 years old. The relation between workers’ age and children’s age can be considered also an indirect data quality indicator.

An examination of the marital status of the respondents confirms the common sense notion that having children is a natural consequence of living as a couple. Among mothers with young children, 90.5% lived with a partner; among those with older children, the percentage remained high, at 79.9%.

Respondents are characterized by high educational levels. In Italy (Istat, 2013), the share of employees with a high level of education (i.e. who have completed at least a high school degree) is more focused in the public sector (33%), compared with 8 % recorded in the private sector companies.

Moreover, educational attainment increased over time especially for women (OECD, 2012). For this reason, younger women, with no kids or younger kids, also were higher educated than the rest of the sample.

Table 3 shows the distribution of the respondents according to their job positions. Managers and supervisors constituted 20.4% of the sample. The great majority of respondents were clerical workers, performing administrative tasks. Only 7.8% were salaried workers, performing manual tasks.

**Table 3: Distribution of Padua employed women according to job position**

	<b>N. of obs</b>	<b>%</b>
Managers/supervisors	649	20.4
Employees	2125	66.8
Salaried workers	247	7.8
Self employed	159	5.0
<b>Total</b>	<b>3180</b>	<b>100.0</b>

More than 60% of the respondents worked five full-time days. Shift work, particularly in the health sector, depended on the age of the worker: Younger women without children were usually assigned to shift work, which is more manageable given their condition (Table 4). Part-time work may be ‘horizontal’ (such that hours are reduced on a daily basis) or ‘vertical’ (such that work is executed full-time, but only during certain fixed periods of the week, month or year). Part-time workers represented, in total, about 15% of the sample. The most common form (11%) of part-time employment was the horizontal one.

**Table 4: Distribution of responding women**

Working time	Age				Total
	<34	35-44	45-54	> 54	
5-days full time	48.3	51.5	63.6	73.5	60.5
6-days full time	10.1	12.8	8.2	9.3	10.0
Shift work	35.9	17.9	9.6	8.1	14.2
Vertical part-time	1.0	4.9	5.2	3.2	4.4
Horizontal part-time	4.7	12.8	13.4	5.9	11.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>N. of cases</b>	<b>298</b>	<b>970</b>	<b>1359</b>	<b>627</b>	<b>3254</b>

Table 5 describes how working women in the sample managed their time. Almost half of the respondents had difficulty balancing their own time with that of their partner (49.9%), with children’s school opening hours (56.6%) and with the opening and closing times of other offices (53.3%). Difficulties were lower for balancing work times with the opening hours of shops (32.2%), to the opening hours of places of leisure (36.0%) and to the schedules of public transport (Table 1.5).

Moreover, working women expressed dissatisfaction with the time they had left for themselves (54.3%), for spending with their partners (42.7%) and for caring for parents and parents-in-law (42.0%). Time devoted to children was generally considered satisfactory by 68% of the respondents (Table 6). The amount of time devoted to work was satisfactory for almost all workers (97.3%), although there was strong dissatisfaction with the amount of time spent in social activities and relationships (e.g., friends, volunteer work, hobbies, recreation, etc.).

**Table 5: Distribution of responding women according to the degree of difficulty of balancing their time with other activities**

	Very + Fairly difficult	Very difficult	Fairly difficult	Not much difficult	Not at all difficult	Not much + Not at all difficult	Total
Partner working time	49.9	13.9	36.0	32.7	17.4	50.1	<b>100.0</b>
Start/end kids' school	56.6	17.7	38.9	27.1	16.3	43.4	<b>100.0</b>
Opening/closing of office	53.3	16.5	36.8	33.6	13.1	46.7	<b>100.0</b>
Opening/closing of shops	32.2	7.3	24.9	40.0	27.9	67.8	<b>100.0</b>
Opening/closing of leisure places	36.0	7.3	28.7	38.7	25.3	64.0	<b>100.0</b>
Public transport	41.5	15.1	26.4	30.1	28.4	58.5	<b>100.0</b>

**Table 6: Distribution of responding women according to their satisfaction in managing their time**

	Yes, very much	Yes, partially	No, it is not much	Total
Her self	7.8	37.9	54.3	<b>100.0</b>
Partner	7.9	49.3	42.7	<b>100.0</b>
Kids	15.4	52.6	32.0	<b>100.0</b>
Parents/parents in-law	9.0	49.1	42.0	<b>100.0</b>
Study, training	5.2	36.7	58.1	<b>100.0</b>
Work	37.7	59.6	2.7	<b>100.0</b>
Friends, relationships	8.8	44.0	47.2	<b>100.0</b>
Social activities, volunteering	6.4	31.8	61.8	<b>100.0</b>
Fun/hobby	6.6	31.9	61.6	<b>100.0</b>
Rest	6.2	35.5	58.4	<b>100.0</b>

#### 4. RESULTS

To apply the best-worst preference measurement technique, two questions were posed. In the first question, respondents were asked to indicate which of the reconciliation services was the most useful ('best') for improving their work and family life balance. In the second question, they were asked to select the least useful service ('worst') with regard to work-family balance. As a result of this approach, it is possible to compute the percentage of times each item was selected as the best or the worst (Marley and Flynn, 2012). A simple form of summarising best-worst scores is to take the percentage of times an item was selected as best and subtract the percentage of times the same item was selected as worst (Finn and Louviere, 1992). The greater the difference in the positive direction, the more the corresponding service is to be considered useful by the respondents.

Table 7 shows the best, worst and 'best minus worst' scores associated with each service. The most preferred service was motorbike and car parking (26.8%).

Table 7: Services' best, worst and 'best minus worst' scores (n=2005)

Pos	Services	Best	Worst	Best - Worst
1	Motorbike and car parking	26.8	2.4	24.4
2	Summer holidays for workers and their sons	16.3	2.3	14.0
3	Agreement for supermarket or grocery store discount	14.5	1.9	12.6
4	Nursery for infants	11.5	16.8	-5.3
5	Children day care facilities for playful/educational activities	10.8	4.2	6.6
6	A person to carry out small tasks (e.g., bill payments, etc.), called a "butler"	10.2	13.1	-2.9
7	Free or subsidised accommodation	5.8	9.6	-3.8
8	Internal loans (from a cooperative bank)	2.6	6.4	-3.8
9	Agreement for hairdresser or beautician discounts	1.4	43.2	-41.7
	<b>TOTAL</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>

The demand for parking can be interpreted as women's need to attain autonomy in managing their duties and to optimise transfer times by using personal cars. The use of cars makes work and domestic life balance more viable and efficient.

Summer holidays for workers and their children, nurseries and children day care facilities for playful/educational activities belong to the 'management of children' service category. Childcare services were highly preferred: as a whole, nursery, children daycare facilities and summer holidays, were chosen by 38.6% of women.

The nursery was a controversial service, presenting a negative best-worst score: even though it was characterised by quite a high best score (11.5%), it received an even greater worst score (16.8%). This is because, though nursing is a very important service, it helps to reconcile work with domestic life for only a limited period during women's lives (usually when children are aged zero to three years).

Agreements for supermarket or grocery store discounts and help in carrying out small tasks (e.g., bill payments, etc.) are services dedicated to the facilitation of daily tasks. The supermarket agreement garnered widespread, registering the third best score (14.5%) and the lowest worst score: only 1.9% of the sample believed that the service was not useful. The general support for these services must be interpreted as a desire to save time (through internal structures) and money (through discounts, conventions). The 'butler' service was not considered as very important.

The services providing economic aid, through 'free or subsidized accommodations' and 'loans (from a cooperative bank)' did not generate high preferences.

The service that was absolutely not considered helpful by women for balancing work and family lives was the availability of a hairdresser or beauty salon inside or close to the workplace. Only 1.4% of respondents considered this a priority, while 43.2% of women believed it to be the least useful tool for balancing life and work.

#### **4.1 LATENT CLASS ANALYSIS**

To understand whether all women agreed on the need for the same or whether needs varied among groups of women, or, that is the same, if and how individual characteristics were apt to segment needs, we applied a latent class analysis. A latent class model relates a set of observed (or 'manifest') variables to a set of unobserved (or 'latent') variables. This method allows us to identify the minimum number of latent classes or categories, enabling an explanation of the association between the observed variables. Latent categories are called such because no ascriptive variable can uniquely identify them.

Each observation is assigned to the latent class that maximises its posterior probability of belonging to the defined classes, such that the observations within each class are as homogeneous as possible.

The model can be expressed using a pattern of conditional probabilities indicating the chance that observed (multivariate) categorical variables take on certain values

$$\begin{aligned} P(\mathbf{Y}_i) &= \sum_{t=1}^T P(X_i=t)P(\mathbf{Y}_i | X_i=t) = \sum_{t=1}^T P(X_i=t) \prod_{k=1}^K P(y_{ik} | X_i=t) \\ &= \sum_{t=1}^T P(X_i=t) \prod_{k=1}^K P(y_{ik}; \alpha_{kt}) \end{aligned}$$

where  $\mathbf{Y}_i$  is a vector containing the  $K$  manifest variables observed on  $n$  units ( $i=1, \dots, n$ ) and  $X_i$  is a latent variable with  $T$  ( $t=1, \dots, T$ ) classes.

An extension of this basic model permits the inclusion of covariates to predict latent class membership. Whereas, in the basic model, prior to observing the responses to the manifest variables, every observation has the same probability of belonging to each latent class, in the more general latent class ‘regression’ model, these prior probabilities vary among individuals as a function of a set of independent (or ‘concomitant’) variables (Dayton and Macready, 1988; Hagenars and McCutcheon, 2002). Covariates are chosen according to their significance and to the Bayesian Information Criterion (BIC) (Lin and Dayton, 1997; Forster, 2000).

We considered, as manifest variables, the preferences expressed regarding the best and worst services for the reconciliation of work and family lives. In addition, the following covariates were included: Age, Marital status, Children, Reasons conditioning working hours, Flexibility of work times, Closeness of residency and workplace, Closeness of workplace and parking place, Care to diseased or disabled family members, and Saving capacity. The variable Children assumes the following levels: ‘With young kids’ (up to the age of secondary school), ‘With older kids’ and ‘Without kids’.

The data analysis was performed using the R-package PoLCA for the estimation of the latent class and latent class regression models for polytomous outcome variables (Linzer and Jeffrey, 2011).

The minimum AIC and BIC criteria both indicated that the three-class model was the most parsimonious: With two classes, the AIC was 12949.11 and the BIC was 13180.06; with three classes, the AIC decreased to 12757.57 and the BIC decreased to 13131.39.

The PoLCA output also included the estimated coefficients for the covariates in the latent regression model, as well as their standard errors. Because the first class was used as the reference, it was fixed by definition.

Table 8 includes the estimated coefficients on the covariates and their standard errors in the latent regression model. The first class is used as the reference. Hence, a coefficient, either with positive or negative sign, is considered significant in relation to its ability to discriminate the second or third class from the first one.

Table 9 shows the estimated class-conditional response probabilities. The estimated class population shares were equal to 0.3517 for the first class, 0.3325 for

**Table 8: Estimated coefficients, standard errors and significances of the covariates in the latent regression model**

	<b>Coefficients</b>	<b>Std. error</b>	<b>t value</b>	<b>Pr(&gt; t )</b>
<b>Coefficients for the 2<sup>nd</sup> class</b>				
Intercept	-5.91695	1.55592	3.803	0.003
Age	0.06930	0.15064	0.460	0.654
Marital Status	-0.36218	0.18206	-1.989	0.070
Children	-0.10328	0.16952	-0.609	0.554
Reasons conditioning the working hours	0.07379	0.06364	1.159	0.269
Flexibility	0.71910	0.15379	4.676	0.001
Closeness residency/workplace	0.61021	0.17662	3.455	0.005
Closeness workplace/parking	0.92474	0.14884	6.213	0.000
Care to diseased or disabled family members	-0.02208	0.21456	-0.103	0.920
Saving capacity	0.44906	0.15921	2.821	0.015
<b>Coefficients for the 3<sup>rd</sup> class</b>				
Intercept	4.92103	1.07023	4.598	0.001
Age	-1.22667	0.16917	-7.251	0.000
Marital Status	0.00027	0.23873	0.001	0.999
Children	-1.09476	0.16321	-6.708	0.000
Reasons conditioning the working hours	-0.25653	0.06318	-4.060	0.002
Flexibility	0.50774	0.13957	3.638	0.003
Closeness residency/workplace	-0.02339	0.15461	-0.151	0.882
Closeness workplace/parking	0.04469	0.11790	0.379	0.711
Care to diseased or disabled family members	-0.46120	0.23340	-1.976	0.072
Saving capacity	0.40787	0.16431	2.482	0.029

**Table 9: Estimated class-conditional response probabilities**

<b>Best service</b>	<b>Class 1</b>	<b>Class 2</b>	<b>Class 3</b>	<b>Total</b>
Nursery for infants	0.2	3.9	30.8	11.1
Children day care facilities for playful/educational activities	4.6	1.9	27.9	11.2
Free or subsidised accommodation	8.8	6.1	0.9	5.4
Summer holidays for workers and their children	19.4	5.6	23.7	16.4
Loans (from a cooperative bank)	7.0	0.0	0.0	2.5
Motorbike and car parking	0.0	74.7	10.6	27.0
Agreement for supermarket or grocery store discount	35.4	2.3	2.3	14.3
Agreement for a hairdresser	3.8	0.0	0.3	1.5
A person to carry out small tasks (e.g., bill payments, etc.), called a 'butler'	20.9	5.4	3.5	10.5
<b>Worst service</b>				
Nursery for infants	30.7	18.2	0.0	16.9
Children day care facilities for playful/educational activities	6.7	6.0	0.2	4.4
Free or subsidised accommodation	5.6	9.8	15.4	10.1
Summer holidays for workers and their children	3.2	1.6	1.7	2.2
Loans (from a cooperative bank)	5.3	8.1	7.1	6.8
Motorbike and car parking	3.3	1.4	1.4	2.1
Agreement for supermarket or grocery store discount	1.8	2.1	1.7	1.9
Agreement for a hairdresser	28.8	41.4	60.3	42.9
A person to carry out small tasks (e.g., bill payments, etc.), called a 'butler'	14.6	11.4	12.1	12.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>%</b>	<b>36.5</b>	<b>31.6</b>	<b>31.9</b>	<b>100.0</b>
<b>N. of cases</b>	<b>659</b>	<b>570</b>	<b>577</b>	<b>1806</b>

indicates that respondents assigned to this class did not choose the service as best or worst

the second class and 0.3159 for the third class.

For each class, the services that achieved greater preferences were (Table 10):

- *Class 1*: Agreement for a supermarket or grocery store discount (35.4%) and a ‘butler’ (20.9%)
- *Class 2*: Motorbike and car parking (74.7%)

**Table 10: Distribution of responding women according to age, marital status, presence of children and class composition**

		<b>Class 1</b>	<b>Class 2</b>	<b>Class 3</b>	<b>Total</b>
Age	≤ 34	4.9	9.6	17.2	10.3
	35 – 44	16.7	23.7	53.4	30.6
	45 – 54	51.9	47.9	27.0	42.7
	≥ 55	26.6	18.8	2.4	16.4
	<b>Total</b>	100.0	100.0	100.0	100.0
Marital Status	Single	19.3	24.4	7.8	17.2
	Married/cohabiting	65.6	65.1	86.1	72.0
	Divorced	12.1	9.6	5.4	9.2
	Widowed	3.0	0.9	0.7	1.6
	<b>Total</b>	100.0	100.0	100.0	100.0
Kids	With young kids	15.0	19.8	70.4	34.2
	With older kids	42.3	33.2	11.4	29.6
	With no kids	42.6	47.0	18.2	36.2
	<b>Total</b>	100.0	100.0	100.0	100.0
<b>N. of cases</b>		<b>659</b>	<b>570</b>	<b>577</b>	<b>1806</b>

- *Class 3*: Nursery (30.8%), children day care facilities for playful/educational activities (27.9%) and summer holidays for workers and their children (23.7%)

Class 1 was characterised by working women, who preferred services devoted to the facilitation of daily tasks, which allowed them to save both time and

money. Respondents from Class 1 were older women without children or with self-supporting children, who were able to access services by themselves (Table 10). They did not express preferences for services for children, such as nurseries or children day care facilities for playful/educational activities (Table 9). Instead, ‘summer holidays for workers and their children’ showed a high best score (19.1%), since it is designed for older children or for the women themselves. More

**Table 11: Distribution of responding women according to closeness between workplace and parking place, closeness between residency and workplace and class composition**

		Class 1	Class 2	Class 3	Total
Closeness between workplace and a parking place	Yes, free car parking	47.6	5.3	44.0	33.1
	Yes, subsided car parking	30.2	21.2	29.8	27.2
	Only moto/bike parking	8.5	11.9	7.5	9.2
	Full-price car parking	11.1	36.5	11.4	19.2
	There are no parking	2.6	25.1	7.3	11.2
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Closeness between residency and workplace	Work at my home	0.2	0.2	0.7	0.3
	< 5km	36.6	19.6	25.6	27.7
	5 - 20 km	50.4	57.0	57.4	54.7
	20 - 50 km	10.9	20.0	14.9	15.1
	> 50 km	1.8	2.8	1.2	1.9
	Not a fixed place of work	0.2	0.4	0.2	0.2
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
	<b>N. of cases</b>	<b>659</b>	<b>570</b>	<b>577</b>	<b>1806</b>

than three out of four women (77.8%) in the first class preferred access to free (47.6%) or subsided parking (30.2%) (Table 11).

The second class consisted mainly of those women who considered parking to be the best service for reconciling work and family. This class was heterogeneous

with regard to personal characteristics, but contained employed women living further away from the workplace, who needed parking places closer to the workplace.

The third class identified a subgroup of young working women (70.6% aged 45 year old or younger), who were mostly married with young children. They were

**Table 12: Distribution of responding women according to reasons that may condition working hours, saving capacities and class composition**

		<b>Class 1</b>	<b>Class 2</b>	<b>Class 3</b>	<b>Total</b>
Reasons that may condition working hours	Looking after the children	20.3	16.7	66.6	33.9
	Assisting elderly/diseased family members	10.5	10.5	3.1	8.1
	Keeping the house in order	5.5	3.7	1.2	3.5
	Fitting in personal and partner's work schedules	7.0	8.8	8.5	8.0
	Business needs	25.8	26.7	13.3	22.1
	Other organisational needs (personal health, etc.)	31.0	33.7	7.3	24.3
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Saving capacity	Costs higher than income	46.1	36.5	36.0	39.9
	Income close to costs	41.7	45.6	46.6	44.5
	Managed to save	12.1	17.9	17.3	<b>100.0</b>
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>1806</b>
Care for family members	No	47.2	46.3	61.7	51.6
	Yes	52.8	53.7	38.3	48.4
	<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>N. of cases</b>		<b>659</b>	<b>570</b>	<b>577</b>	<b>1806</b>

characterised by a high interest in services for children and family care. Women grouped in this class stated that their working times were conditioned by the presence of their children (Table 12).

## 5. DISCUSSION AND CONCLUSIONS

This paper sought to evaluate, through a survey, women's needs for balancing their work and social lives. Moreover, a test was conducted to determine whether employed women can be considered a singular group or whether there are classes of women whose needs are particular due to their characteristics. We showed that women are willing to significantly contribute to decisions related to their existential needs.

By applying a latent class analysis, we highlighted that women's needs differ according to age and contingencies; however, it is possible to distinguish between feelings that are common to women of all ages and others that are particular to certain age classes.

A priority common to most surveyed women was access to a parking place close to the workplace. Of course, this need manifested with differing intensities according, in particular, to workplace location, time flexibility of entering or moving from the workplace, children's ages and arrangements with partners. This uncommon result can be explained by the desire of employed women to be as autonomous as possible in managing their daily time, so as to be able to combine the largest number of personal life activities with job activities. Private means of transportation—and, in particular, private cars—are tools that are taken for granted in the achievement of an optimal work-life combination.

Another service that could be considered uncommon in this kind of surveys is the so-called 'butler': a service designed to provide women with a person to help them carry out minor duties, such as paying bills, collecting or delivering private mail and documents, and the like, during their working hours. This service could be particularly helpful to younger women, who are typically more pressed for time at work. Nevertheless, it is easy to forecast that the practical realisation of this service might be very expensive and local authorities could reluctantly support it. Though, in the event that family size continues to shrink and singles increase in number, the need for this service may become more evident than today.

Another primary set of services for all women with children were low-priced kindergartens and other collective structures designed to watch children and aging parents in need of care during working hours and summer holidays. As a whole, the proportion of women who expressed the wish that local administrations would invest in services like internal kindergartens and daily facilities for playful/educational activities was about 22%, but the proportion jumped to 59% for women in middle age ranges, whose children were younger. On top of these preferences, another 24% of middle-aged women wished for summer holidays for them and their

children as a work benefit. By comparison, younger women expressed only a 5% preference for daily nurseries and a 19% preference for summer holidays. It is then evident that a mere ranking of services is nonsense if working women of different ages are involved. In fact, kindergardens and daily facilities are compelling services for women whose children are young but their interest in such services declines as children grow. In other words, all women assign higher importance to services for children, but priorities change while children become autonomous.

These three categories of services (i.e., parking facilities, 'butlers' and daily educational and recreational services for the youth and the elderly) were elicited from women's preferences as the most salient for balancing work and personal lives.

Free or subsidized rent and low interest loans were rather ignored by working women. This may achieve meaning in the local context, that is an area whose wealth is still important despite the current downturn and where more than 80% of families own their house.

What were seen as irrelevant were hairdresser and beautician services. This class of services was inserted as part of the list for evaluation because they were a matter of discussion among the unions and management groups of some public bodies. These services, though, emerged from the list as the least preferred services, with just 1.5% of women indicating it as a priority.

Our outcomes come with two methodological warnings. One is that the surveyed women belonged only to public service professions, making them representative of employed women with more education and better jobs. Salaried workers represented just 8% of the sample, quite a lower proportion than the percentage employed in industry. Our results should be integrated with results for women employed in the private sector and/or who reside in other social realms to make these outcomes fully representative of employed women at large.

A second warning is that we interpreted the needs of women in various age classes as if all women in a given range had the same needs. In fact, our survey is cross-sectional, and we cannot know whether younger women will behave in the same way as their older colleagues in the coming years.

Nonetheless, even though any extension of the current situation in the next decades will be a rough, it is likely that the system of women's preferences related to reproduction will not change much in the near future. In other words, the information we elicited on the services addressed in this paper deserves the attention of local authorities wishing to tailor services to women's preferences.

**REFERENCES**

- Auger, P., Devinney, T.M. and Louviere, J.J. (2007). Using best-worst scaling methodology to investigate consumer ethical beliefs across countries. In *Journal of Business Ethics*. 70: 299-326.
- Bovenberg, A.L. (2005). Balancing work and family life during the life course. In *De Economist*. 153(4): 399-423.
- Dayton, C.M. and Macready, G.B. (1988). Concomitant-variable latent-class models. In *Journal of the American Statistical Association*. 83(401): 173-178.
- Flynn, A. and Louviere, J.J. (1992). Determining the appropriate response to evidence of public concern: The case of food safety. In *Journal of Public Policy & Marketing*. 11: 12-25.
- Forster, M.R. (2000). Key concepts in model selection: Performance and generalizability. In *Journal of Mathematical Psychology*. 44: 205-231.
- Hagenaars, J.A. and McCutcheon, A.L. (2002). *Applied Latent Class Analysis*. Cambridge University Press, Cambridge.
- Hill, E.J., Hawkins, A.J., Ferris, M. and Weitzman, M. (2004). Finding an Extra Day a Week: The Positive Influence of Perceived Job Flexibility on Work and Family Life Balance. In *Family Relations*. 50(1): 49-58.
- ISTAT (2013). Struttura delle Retribuzioni. *Statistiche Report*. <http://www.istat.it/it/archivio/83362>.
- ISTAT (2014). *Indicatori demografici*. <http://www.istat.it/it/archivio/126878>. Last Access: 08/11/2014.
- Lin, T.H. and Dayton, C.M. (1997). Model selection information criteria for non-nested latent class models. In *Journal of Educational and Behavioral Statistics*. 22(3): 249-264.
- Linzer, D.A. and Jeffrey, B.L. (2011). polCA: An R package for polytomous variable latent class analysis. In *Journal of Statistical Software*. 42(10): 1-29.
- Marley, A.A.J. and Flynn, T.N. (2012) Best Worst Scaling: Theory and Practice. *International Encyclopedia of the Social and Behavioural Sciences*, 2nd Edition.
- OECD (2002). *Employment Outlook*. OECD, Paris.
- OECD (2012). *Education at a Glance 2012: OECD Indicators*. OECD, Paris.
- Perrons, D. (2005). Gender mainstreaming and gender equality in the new (market) economy: An analysis of contradictions. In *Social Politics: International Studies in Gender, State & Society*. 12(3): 389-411.
- Plantenga, J. and Hansen, J. (1999). Assessing equal opportunities in the European Union. In *International Labour Review*. 138(4): 351-379.
- Tilly, L.A. and Scott, J.W. (1987). *Women, Work, and Family*. Routledge, New York.
- United Nations (1997). *Report of the Economic and Social Council for 1997*, United Nations, New York.
- UN General Assembly (1948). *The Universal Declaration of Human Rights*. <http://www.un.org/en/documents/udhr/>. Last access: 20/10/2013.

