



COOPERATIVE CREDIT BANKS: SOME FUNDAMENTAL INSTITUTIONAL FEATURES

Annamaria Nese
Roberta Troisi

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Dipartimento di Scienze Economiche e Statistiche
Università Degli Studi di Salerno
Via Ponte Don Melillo – 84084; Fisciano (SA) – Italy

Tel +39-089-96.21.55

Fax +39-089-96.20.49

E-mail dises@unisa.it

Web www.dises.unisa.it

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Authors Annamaria Nese and Roberta Troisi

Abstract: The aim of this paper is to analyze individual preferences in relation to different job characteristics. This is an important issue in the light of the huge literature in labor economics and human resource management about the impact of monetary and nonmonetary incentives on understanding workers' performance and well-being. More specifically, this work considers the case of employees in cooperative credit banks located in Campania; the research is carried out applying a conjoint analysis approach on stated preference data. Novel features of the analysis include the application of this approach to empirical research on worker incentives, particularly in the cooperative sector; and the utilization of a mixed logit model to allow for heterogeneous individual tastes.

Keywords: individual preferences, job characteristics, conjoint analysis, mixed logit, human resources incentives, cooperative organization.

JEL classifications: EL: J32, J54, L31.

1. Introduction

A huge literature in labor economics and human resource management underlines the importance of monetary and nonmonetary incentives for understanding workers' performance and well-being. This paper considers the case of employees in cooperative credit banks (hereafter referred to as BCCs) located in Campania (Italy) and presents an analysis of individual preferences in relation to different specific policies of human resource management; the research is carried out using stated preference data (and the conjoint analysis technique; Hanley et al., 1998).

Credit cooperatives are stable financial institutions in the majority of European Union countries. In Europe, these institutions have an aggregate total of 139 million customers, 722,361 employees and a 20% market share of deposits (Bank of Italy, 2007). In this paper, we specifically investigate the case of Italian BCCs. According to the annual report of the Bank of Italy (2011), at the end of 2010, the financial activity of Italian BCCs featured growth rates that were uncommonly high for the current recessive phase. In particular, during 2010, the funding of Italian BCCs grew by 5.8 percent, whereas the total funding of the Italian banking system grew by only 4.3 percent. At the same time, the increase in lending by Italian BCCs was substantially greater than the increase in lending by other Italian banks, both in the productive sector and in terms of consumption (12.7 percent of the total BCC loans vs. 5.1 percent of the loans issued by Italian banks and 30.5 percent vs. 25.9 percent, respectively).

One of the characteristics of European cooperative credit banks is that these financial institutions are equally owned and democratically managed by their members (which are typically their consumers) and that they are aimed at pursuing specific member interests rather than profit maximization. In addition, Italian BCCs exhibit the following features: i) they must recruit owners in their own local area; ii) they must pursue compulsory

objectives of local development. Finally, as shown in Troisi (2011), most BCC employees in Campania are both owners and consumers. Given these peculiarities, we argue that BCC employees represent a strategic resource (even more than do those of a commercial bank).

The importance of human resources in service firms, particularly in banks, is well known. The bulk of service firm employees come into direct contact with the customer, represent the organization and “produce” the service (Surprenant and Solomon, 1987; Zeithaml and Bitner, 1996). Moreover, employees’ attitudes and behaviors during customer contacts influence consumer satisfaction and service quality (Bowen and Schneider, 1985; Parasuraman, 1994; Gronroos, 1990; Podsakoff and Mackenzie, 1994). Several studies of banking services report a positive relationship among human resource management (HRM) practices with respect to nonmonetary incentives, service quality, trust and consumer loyalty (Reichheldl, 1996; Heskett and Sasser, 1997; Chi Goursy, 2009). An illustration of the delivery of services within a typical bank is shown in Figure 1.

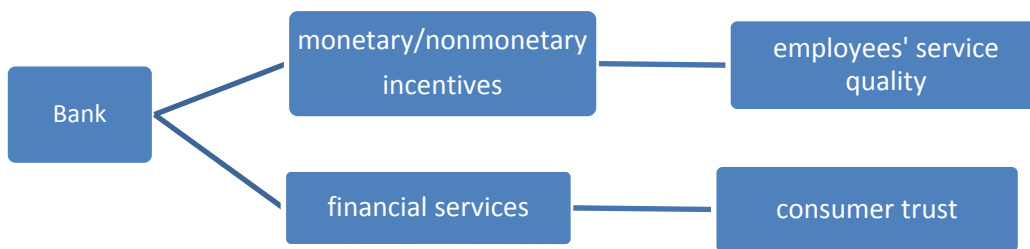


Figure 1

This study focuses on the nature of the set of non-pecuniary incentives that should be preferred by employees at the first step in Figure 1 (at this point, we do not address further implications regarding employees’ service quality and consumer trust). Furthermore, we wonder whether simultaneously acting as an employee, owner and local consumer - a characteristic shared by most BCC employees in Campania - influences workers’ utility.

Theoretical and empirical research has emphasized the impact of monetary and nonmonetary incentives on workers’ performance and well-being. The approach based on the neo-classical principal-agent model defines a central role for income and financial incentives in influencing worker productivity. However, it has been recognized that the equilibrium wage also reflects the valuation of non-pecuniary attributes (Smith, 1979). Starting from the implicit markets model (Rosen, 1974), empirical studies have primarily attempted to estimate compensating wage differentials for various non-pecuniary job attributes, such as work timing (Hammermesh, 1998) and the risks of injuries or illnesses on the job (Thaler and Rosen, 1976; Herzog and Schlottmann, 1990). Typically, these studies provide estimated hedonic wage equations that rely on observations of both wages and job characteristics in the labor markets (Gerking et al., 1988, however, provides

estimates of the worth of risk reduction in the workplace through the contingent valuation approach).

Less attention has been devoted to other job characteristics: most research provides information regarding the factors that are important for jobs (e.g., Sousa-Poza and Sousa-Poza, 2000; Cabral Vieira, 2005; Barling et al., 2003; Bauer, 2004; Messinis and Olekalns, 2007; Fisher and Sousa-Poza, 2009) but not the importance of these factors. Innovative examples in this context are two studies (Gosden et al. 2000; Scott, 2001) that elicit the monetary values given by general practitioners to different practices and job characteristics (e.g., opportunities to develop specialized interests, time spent in administration and the presence of a primary health care team).

Although this approach (e.g., the monetary valuation of nonmonetary attributes) is not new in the literature, it has yet to be incorporated into empirical research on worker incentives, particularly in the cooperative sector. Despite the fact that previous studies in the nonprofit sector (e.g., Destefanis and Musella, 2009; Borzaga and Tortia, 2006) have highlighted the presence of important nonmonetary aspects of employees' utility functions, there have been no attempts to quantify the importance of these nonmonetary motivations.

This paper aims to analyze BCC workers' preferences for different management strategies by focusing on the amenities that characterize BCC jobs (i.e., participation in making-decision processes, the achievement of social goals, the likely alignment between workers' aims and the firm's purpose, etc.). The analysis is carried out using stated preference data collected for BCCs in Campania (the analysis was financed by Federcasse - the National Federation of Italian BCCs). Furthermore, because individuals are likely to have heterogeneous preferences, we use a random parameter (or mixed) logit: such econometric model not only allows us to estimate the average monetary value of each non-pecuniary job characteristic, but also permits us to investigate whether (and to what extent) individuals with different tastes value different job amenities (Revelt and Train, 1996; Train, 2003). The mixed logit is very useful to analyze questionnaire data and an increasing number of studies - mostly analyzing recreational demand or transportation research - have used this method (Train, 1998; Hensher and Greene, 2008). To our knowledge, however, this econometric approach is new in the analysis of individual preferences for job amenities.

The paper is organized as follows: section 2 provides a brief overview of the structural features of Italian BCCs, section 3 describes the conjoint choice experiment. Section 4 presents the econometric model and the results. Section 5 contains concluding remarks.

2. A different model of Banks

In this section, we first offer an overview of the statutory features of Italian BCCs¹ drawn from the European model; secondly, we describe the peculiar (additional) features of Italian BCCs, and finally, we underline the reasons for the strategic role of their employees.

¹ Italian BCC statutes share the same rules concerning institutional goals and governance- the national statute, which, in turn, follows the European model that they reply from - and differ very slightly in the organizational aspects.

Italian BCCs are financial institutions with ownership rights that belong to consumers. These ownership rights result from an individual's membership rather than from the number of shares owned by the individual. As stated in the international credit cooperative model, the ownership rights are equally distributed and involve the following features:

1. privileged access to financing, including the right to obtain credit at competitive rates and benefit from profitable deposit conditions;
2. the right to democratic participation through the exercise of an individual vote, regardless of the number of shares that are held ("one member, one vote").
3. because profit distributions are often restricted, the right to receive limited compensation on the capital that is held by the bank.

Another peculiarity addresses the mutuality of the multiple goals that are pursued:

1. there is an internal mutuality that is strictly linked to the ownership rights because BCCs seek not to maximize profits but to serve the interests of their members, particularly with respect to obtaining financial services at competitive conditions;
2. there is an external mutuality related to the obligation to establish, with part of the profit, a reserve that is used to pursue certain compulsory objectives;
3. there is a network mutuality, which is structured on a regional level through a local federation that coordinates local cooperative credit banks. In accordance with the guidelines of the national federation, this network mutuality ensures that economic support is provided as needed and on a reciprocal basis among Italian BCCs (art. 3 National Statute²)

In addition, with respect to the European cooperative credit model, Italian BCCs exhibit the following features that contribute to defining the characteristics of a local bank:

1. Italian BCCs must recruit owners in their local geographic area;
2. 50% of their financial services must be delivered to their owners, and 95% of their services must be delivered to their defined reference community (art.150, consolidated law on banking, 2010);
3. the external mutuality is more stringently specified than in an international model because, in accordance with national regulations, Italian BCCs must pursue compulsory objectives of local development in the areas and communities in which they are located (art. 2 National Statute³).

In Campania (the site of our survey), BCC employees are drawn from the local geographic area, and most of them are both owners and consumers (Troisi, 2011). In fact, in the survey, employees were asked about their residence, and most of them declared their residence to be within 15 km of their place of work; furthermore, 92% answered positively⁴ when asked whether they were owners (meaning that 92% are consumers and owners at the same time). Therefore, these BCCs are mainly local banks with particular knowledge of the local community from which their consumers are drawn.

2 <http://www.iccreabanca.it/it-IT/Pagine/statuto.aspx>

3 <http://www.iccreabanca.it/it-IT/Pagine/statuto.aspx>

4 To our knowledge such characteristics are likely to be shared among the others Italian BCCs. More specifically, when we contacted 10 out of the 14 Italian cooperatives credit banks federations through telephone interviews, the management respondents confirmed a preference for hiring employees who are either owners or at least residents and consumers of the area.

We argue that with the majority of employees being members of the local community, owners and consumers at the same time, they are a valuable strategic resource: first, employees can draw upon their knowledge of the community and their proximity to consumers to facilitate understanding of local problems and reduce the information asymmetries vis-à-vis the consumers. Second, employees who are owners have an extra incentive to establish lasting relationships with local consumers. Lasting relationships are an important indicator of trust, which is a good predictor of loyalty; consumer loyalty is important to ensuring economic sustainability, which is typically an objective for the owners of a firm. Third, with the majority of the employees also being consumers, they fall within the target market of BCCs and are likely to have better understanding of consumers' requirements for delivering personalized services (Troisi, 2011).

Starting from such arguments, the main aim of this work is to investigate whether and to what extent such job amenities also affect the utility of the employees.

3. The Survey

The data used for the analysis were collected during a survey conducted as part of a broad research project (the White Areas Project). The commission for this project was awarded by Federcasse to our research group. The aim of the research project was to conduct an in-depth examination of the characteristics of the credit cooperative system, beginning with a pilot study that addressed the experience of a regional network.

Therefore, between October 2009 and March 2010, a study of all 23 Italian BCCs in the Campania region was conducted. All non-managerial employees whose responsibilities included contact with consumers were involved.

3.1 The questionnaire

To elicit employees' preferences for job characteristics in the Italian BCCs, we adopted the conjoint analysis technique. A crucial aspect of a conjoint analysis is the development of an appropriate questionnaire (Mitchell and Carson, 1989). To achieve this objective, we followed the usual steps suggested in the literature.

First, in January 2010, six focus groups (each composed of 10-12 BCC employees) were formed to understand which job characteristics were considered most important by the BCC employees. These focus groups were conducted in six different BCCs in Campania that were randomly chosen after a classification by size (specifically, we selected three small banks, one large bank and two medium size banks). We facilitated the focus groups, and no administrators were present. The employees were told that we were independent researchers and that we were not employed by the Italian BCCs. We received permission from them to tape-record the sessions and assured them that their responses would be kept confidential.

Preliminary hypotheses (drawn from the literature on nonmonetary incentives at work) were offered for discussion, and further nonmonetary factors were suggested by the participants to the focus groups. The job amenities included in the final version of the questionnaire were the following:

1. travel time to work;

2. positive work environment (good relationships with colleagues, as represented by factors such as the availability of help and sharing of objectives and values);
3. the probability of advancement;
4. clear management rules;
5. personal prestige (among colleagues, senior employees, customers and others);
6. possibility of learning on the job and/or training at the workplace;
7. participation in decision-making processes;
8. autonomy and responsibilities on the job;
9. the awareness of contributing, through one's own working activities, to social goals (i.e., local development).

Second, a pre-test was administered to a single random sample in the largest bank among the BCCs in Campania before the final survey. This pre-test was useful to improve the clarity of certain questions and to assess the reasonableness of the time required to complete the entire questionnaire.

The final questionnaire contained three cards describing three alternative job positions in a BCC: alternatives "A", "B", and "C". The three alternatives represented different strategies for managing human resources such that they were defined by different combinations of the 9 job amenities and different wage levels. Alternative "C" was the same for all cards: it offered the maximum wage level and the minimum number of monetary attributes⁵ so it should be preferred by workers mainly interested in monetary returns. Alternatives "A" and B offered more nonmonetary attributes but lower wages.

The job characteristics (1)-(9) were measured as dummy variables with a value of 0 or 1. Four different wage levels were defined as reductions in monthly income of 0, 50, 100, or 150 Euros, whereas the basic level of the monthly wage (1900 thousand Euros) was set with reference to a clerk that was recently hired. In estimating the trade-offs between wage and other job amenities, one delicate issue is the choice of an appropriate interval between the different levels of wages in each alternative: an interval that is too small would induce the respondent to consider the wage differences among the alternatives to be irrelevant, whereas an interval that is too large would lead to a dominant preference for income because respondents would prefer the highest wage without considering the other job amenities (see Scott, 2001). We attempted to manage these difficulties by eliciting combinations of wages and other job characteristics during the focus groups, by testing the suitability of the chosen wage intervals in the pre-tests and by interviewing BCC managers.

Table 1 displays an example of a card: if the respondent chooses alternative A, he demonstrates a willingness to exchange a certain amount of wages for the job characteristics listed in "A".

5 [5] A similar procedure was followed in Riganti et al. (2006) to evaluate the monetary value of museum services.

. TABLE 1 - Example of a card

Job characteristics	Alternative A	Alternative B	Alternative C
Low travel time	YES	NO	NO
Good work environment	NO	YES	NO
Probability of advancement	YES	NO	NO
Clear management rules	YES	YES	NO
Personal prestige	YES	NO	NO
Possibility of learning /training	YES	YES	NO
Participation in decision-making processes	NO	NO	NO
Autonomy and responsibilities	NO	NO	NO
Social aims	YES	NO	NO
Monthly wage*	1,750	1,750	1,900
*In Euros (2010)			

We developed 24 cards, each offering options A and B (that were randomly generated combinations of the 9 job attributes) as alternatives to option “C”⁶.

The final survey was administered in two steps:

1. according to the procedure suggested in literature (Carson, 1995), the research group presented the questionnaire (with respect to the different job amenities characterizing the working activity in a BCC), and the respondents were invited to choose the preferred combination of job amenities;
2. the BCC employees completed the questionnaires online with assistance from the research group available to address any questions.

In order to increase the number of observations, the choice experiment was repeated three times for each individual: more specifically, each respondent had to select the

⁶ We controlled for the appropriateness of the job characteristics and wage levels considered. We eliminated the possibility that the maximum number of job amenities were offered to the maximum wage level. Please see Riganti et al. (2006) for a further explanation of this issue.

preferred option among the alternatives of A, B, and C that were shown on three different cards (randomly chosen out of 24). The card order was regularly rotated during the administration of the questionnaires to avoid ordering bias. At the end of this process, excluding missing observations for the relevant variables, we obtained a sample of 689 individuals (and 2067 observations).

3.2 Job amenities

As mentioned in section 3.1, the job amenities included in the final version of the questionnaire were selected based on the results of six focus groups. Most of these job amenities have been analyzed in the literature on job satisfaction.

For example, according to Ghinetti (2007), Italian workers, in both the private and the public sectors, are generally more satisfied in their jobs if they have close relationships with their colleagues, interest in their job and job security. Social support at work has also been used to predict certain phenomena with respect to human behaviors; for example, it has been associated with health, temperament, psychological symptoms, depression, absenteeism, safety, turnover and occupational stress (Melchior et al., 2006).

According to Sekaran (2006) and Bauer (2004), the main determinants of job satisfaction are skill variety, a sense of competence and job involvement. The possibilities for learning or training on the job are considered important job attributes as well (Bauer et al. 2003; Bauer, 2004). In particular, Rowden (2002) emphasized a positive relationship between workplace learning (including both formal and informal learning) and job satisfaction in the context of small to midsize.

The ninth feature of the questionnaire, the social usefulness of the job, is a novel aspect of the study context. An exception is Borzaga and Tortia (2006), who emphasized workers' satisfaction with public and nonprofit social services.

Regarding participation in decision processes, the results in the literature are quite discordant. A positive relationship has been demonstrated between the introduction of participative mechanisms and organizational performance in a labor-owned firm (Long; 1978a, 1978b, 1980, Hammer et al., 1981). Moreover, some research supports the idea that perceived participation is greater in employee-owned firms than in "non-democratic" firms, although the evidence for this issue is not as strong as it is for other job attributes (Long, 1982). In fact, French (1987) demonstrated lack of specific effects on employees' organizational tendencies due to the introduction of participative mechanisms in labor cooperatives. Overall, accounting for the general need for information appears to lead to more consistent results with respect to the perceived importance of participative mechanisms, possibly because the availability of information offers the ability to monitor the activities of the management and to hold them accountable to the owners of the company, the employees. Furthermore, it is suggested that although authority-based organizations thrive on limiting the flow of information for 'efficiency' purposes, democratic organizations can function only if information is freely available, especially information about management activities (Pendleton et al., 1998; Pierce et al., 1991).

Finally, previous studies underline the importance - both for the success of the organization and for workers' well-being - of achieving the alignment between employees' interests and actions and organizational goals; for example, Colvin and Boswell (2007)

emphasize the role of intrinsic factors associated with the inherent value and meaningfulness of the work to employees).

4. The Model and the Econometric Estimates

4.1 The econometric model

In the standard multinomial logit model, the utility that decision maker n obtains when he faces a choice among J alternatives is specified as:

$$U_{nj} = \beta' x_{nj} + \varepsilon_{nj} \quad (1)$$

where x^{nj} are observed variables that relate to the alternative and the individual, β is a vector of (fixed) parameters to be estimated and ε_{nj} is a random variable that is independent and identically distributed according to the Type I extreme value distribution.

The decision maker chooses alternative i if and only if $U_{ni} > U_{nj}$, with $j \neq i$. The probability of alternative i is then given by the following equation:

$$P_{ni} = \frac{e^{b'x_{ni}}}{\sum_j e^{b'x_{nj}}} \quad (2)$$

If we drop the assumption of fixed taste parameters and adopt the random parameter logit model (or the mixed logit model), the utility of individual n choosing alternative j is specified as:

$$U_{nj} = \beta'_n x_{nj} + \varepsilon_{nj} \quad (3)$$

where β_n is the vector of parameters associated with person n (representing that person's taste), x^{nj} is a vector of characteristics and ε_{nj} is a random term. If $f(\beta)$ is the probability density function of β_n , the choice probability is obtained by computing the expectation of (2) with respect to the density function, which is:

$$P_{ni} = \int \left(\frac{e^{\beta'_n x_{ni}}}{\sum_j e^{\beta'_n x_{nj}}} \right) f(\beta_n) d\beta_n \quad (4)$$

Note that, in estimating a random parameter model, the researcher does not estimate the coefficients β , but the parameters θ of the density function of β_n (e.g., the mean and the variance-covariance matrix of β_n). The integral in (4) cannot be evaluated in closed form, but the probability is approximated through simulation and the simulated log-likelihood function is maximized. The distributions of β_n generally found in the literature are the normal, uniform and triangular distributions (Train 2003).

The model is easily generalized to allow for repeated choices by the same decision maker (see Revelt and Train, 1996). The utility for alternative j in choice situation t by individual n is:

$$U_{njt} = \beta_n x_{njt} + \varepsilon_{njt} \quad (5)$$

Choice probabilities are obtained by multiplying the logit formulas (2), one for each choice situation, and then re-calculating the expected value in relation to the density function:

$$P_{ni} = \int \prod_{t=1}^T \left[\frac{e^{\beta_n x_{nit}}}{\sum_j e^{\beta_n x_{njt}}} \right] f(\beta_n) d\beta_n \quad (6)$$

The probability is computed by simulation methods as before (see Revelt and Train, 1996).

4.2 Results

During the final survey we contacted 709 workers, but, excluding missing information, our final sample contained 689 individuals (and 2067 observations). The respondents were non-managerial employees who engaged in customer contact. Over 85% of the respondents were full-time workers. Nearly 69% of the respondents were male. The majority of the employees were concentrated into two age classes (26 % were between 30 and 40 years of age, and 40 % were between 41 and 50 years of age). Over 65 % of the respondents had been employed by their current bank for more than 15 years. Over 67% had been promoted from their initial position at their bank, and over 60% of the employees in this subset had experienced the same pathway of career development.

Table 2 shows the distribution of choices made for the three alternatives (A, B, and C) that were selected from different cards. For example, option C was chosen only 187 times, accounting for approximately 9% of the cards. This suggests that, on the whole, BCC employees tend to prefer lower wages and more nonmonetary benefits.

TABLE 2 – Distribution of the alternatives chosen.

Cards	Scenario A	Scenario B	Scenario C	Total
Number of times each scenario was chosen	934	946	187	2067
%	45.19	45.77	9.04	100.00

The estimates from the random parameter logit are reported in table 3⁷. For each attribute, an independent distribution is given with a mean and a standard deviation (or spread), which are estimated and reported, respectively, in the first and second row (with the corresponding standard errors); we consider a normal (i), a uniform (ii) and a triangular (iii) distribution. The estimates of the means of β are very similar, whatever the distributional assumptions, but the normal distribution is preferred on the basis of the Bayes Information Criterion (BIC)⁸; the standard deviations of the random coefficients are statistically significant, so that the hypothesis of a high heterogeneity of individual preferences is confirmed.

7 The estimates were based on Limdep econometric software: the random parameter model includes a random effects type of treatment for stated preference survey (see also Revelt and Train, 1996).

8 The BIC is computed as $-2 \cdot \ln(\text{likelihood}) + p \cdot \log(N)$, where p indicates the number of parameters and N the number of observations. The model with the highest explicative power is identified as that with the lowest BIC (Schwarz, 1978). The estimates are based on 100 Halton draws (the estimates based on 1000 random draws are similar but present a lower explicative power; on this point see also Bhat, 2001).

TABLE 3- Mixed logit estimates (or random parameter logit) estimates – s.e. in parentheses

Attribute	Mean β_n	Mean β_n	Mean β_n
	Standard dev.	Spread	Spread
	(i)	(ii)	(iii)
Low travel time	1.291 ** (0.156)	1.294** (0.159)	1.308** (0.160)
	0.0009** (0.0002)	0.0009** (0.0002)	0.0009** (0.0002)
Good work environment	0.719** (0.138)	0.705** (0.143)	0.738** (0.143)
	0.469** (0.037)	1.281** (0.248)	1.554** (0.288)
Possibility of advancement	0.870** (0.142)	0.855** (0.141)	0.870** (0.142)
	0.988** (0.096)	2.132** (0.272)	3.056** (0.422)
Clear management rules	0.101 (0.148)	0.137 (0.152)	0.127 (0.152)
	0.491** (0.182)	1.043** (0.265)	1.635** (0.374)
Personal prestige	0.249* (0.150)	0.244* (0.148)	0.263* (0.149)
	0.838** (0.198)	1.095** (0.388)	1.242** (0.609)
Possibility for learning	0.971** (0.183)	0.910** (0.178)	0.958** (0.184)
	1.432** (0.178)	2.494** (0.297)	3.529** (0.423)
Decision-making	0.458** (0.169)	0.497** (0.167)	0.454** (0.168)
	1.156** (0.211)	1.947** (0.359)	2.611** (0.519)
Autonomy and resp.	0.243* (0.150)	0.213 (0.143)	0.240 (0.152)
	1.258** (0.212)	1.922** (0.336)	3.167** (0.498)
Social aims	0.495** (0.133)	0.449** (0.129)	0.490** (0.134)
	1.272** (0.176)	1.563** (0.153)	2.542** (0.224)
Wage reduction*10	-0.036** (0.014)	-0.037** (0.014)	-0.037** (0.014)
	0.016** (0.002)	0.025** (0.0026)	0.037 (0.004)
Log-likelihood	-1839.24	-1.845.106	-1.840.105
Number of observations	2067	2067	2067
Notes: *statistically significant at 10% level; **statistically significant at 5% level. i) Estimates under the assumption of normal distribution; ii) estimates under the assumption of uniform distribution; iii) estimates under the assumption of triangular distribution			

Under the assumption of a normal distribution, all of the estimates reported in table 3 are statistically significant at the conventional significance level, except for the coefficient for “clear management rules”. All of the estimated coefficients regarding job amenities are estimated with a positive sign, except for the coefficient on wage reduction (confirming the theoretical argument that the utility of workers increases with greater income). The estimated sign for each coefficient indicates the effect of a change in the attribute on the

utility of workers. For example, the results indicate that the marginal utility of “social aims” is, on average, 0.495 (while the corresponding standard deviation is equal to 1.272).

An interesting analysis can be carried out by estimating trade-offs between pairs of job characteristics (using the ratios between the estimated means of the corresponding β)⁹. For example, according to the figures given in table 3, low travel time is the most important attribute, followed by the possibility of learning (but the ratio between the two means is about 0.75); employees attach quite similar values to the possibility of career and to a good work environment (the ratio is approximately 0.83); the pursuit of social aims is as important as participating in decision-making processes (the ratio is 0.92). Finally, the less important attributes are “clear management rules” and “autonomy and responsibility”.

Table 4 indicates the mean marginal willingness to pay (WTP) for the nine job attributes: the extent to which employees exchange income for job characteristics provides an estimate of the strengths of their preferences. The mean WTP for each attribute is obtained by dividing the mean of the corresponding β by the mean of the coefficient (in absolute value) for “wage reduction”¹⁰.

TABLE 4 - Mean WTP under the assumption of a normal distribution

Attribute	Mean WTP*
Low travel time	359
Good work environment	200
Possibility of advancement	241
Clear management rules	28
Personal prestige	69
Possibility for learning	270
Decision-making	127
Autonomy and resp.	68
Social aims	138
*In Euro 2010	

According to our results, low travel time yielded the highest monetary valuation (approximately 360 Euros); BCC employees would be willing to accept a reduction in income of nearly 240 Euros to maintain career prospects, and a reduction of approximately 200 Euros to work in a good environment. BCC employees are also willing to accept a lower income in exchange for possibilities of learning (training) on the job; this result is not surprising as all financial institutions in Europe have the duty to comply with new legal standards to help ensure the stability of the international financial system

⁹ This exercise is not affected by the choice of wage levels (as mentioned in section 3.1, in order to estimate trade-offs between income and job characteristics a delicate issue is the choice of the interval between the different levels of wages in each alternative).

¹⁰ A more appropriate procedure could determine the distribution of the WTP on the basis of the distribution of the numerator and denominator.

during the current financial crisis, and these new standards of prudence must be secured by expanding and evolving via home country regulations.

Particularly interesting is the estimated coefficient for “social aims”: BCC employees would be willing to give up a consistent percentage of their wage to ensure the achievement of social aims (such as local development).

The value of participating in decision-making processes is not particularly high when compared to the other job amenities; this result most likely reflects the finding (addressed in the literature) that certain workers are reluctant to take responsibility on the job.

The advantage of the random parameter model is that it allows parameters to vary across individuals so that one can predict how different job attributes affect individuals with different tastes. More specifically, the estimates in table 3 indicate that not all the estimated WTPs are fully shared among the BCC workers: the estimated means and standard deviations provide information on the share of employees that place a positive or negative value on the job attributes. For example, under the assumption of normal distribution, the proportions of workers placing a positive value on possibilities for learning and the prospects of career are, respectively, 84% and 94%; the distributions of the coefficients on “decision making” and on “social aim” indicate that about the 75% of individuals attach to these job amenities positive values; finally, about the 38% negatively value more responsibility and autonomy on the job.

5. CONCLUDING REMARKS

Generally, the banking objective function is to maximize profits, but the same is not true for BCC’s (Fonteyne, 2007). BCCs, however, are likely to aim for cost minimization as well since they need to meet a survival requirement (Pestieau and Tulkens, 1993, Barra et al. 2011).

A conjoint analysis experiment was used in this study to test hypotheses about BCC employees’ utility functions and to estimate their monetary valuations of non-pecuniary job characteristics. The estimated coefficients are of the expected sign and are statistically significant at conventional levels. We found that low travel time, possibility of learning, prospects of career, and good work environment are the most important nonmonetary job amenities. The pursuit of social aims and participating to decision making processes are important as well; lower values are attached to clear management rules and to the possibility of autonomy and responsibility at work.

The results indicate not only the monetary valuations of job characteristics but also their distribution among employees: for example, a large share of the surveyed employees (about the 75%) share their firms’ goal to contribute to local development (as a social aim).

These results lead us to emphasize the peculiarities of jobs in BCCs (particularly in Campania, where our survey was conducted). The first benefit is the accessibility of the work place. Second, because most coworkers live in the same community, they share the same cultural background and “speak the same language”: unsurprisingly, therefore, they have high expectations for good relationships with their coworkers.

We argue that the position of local worker-owners also strengthens the perception of the usefulness of a bank’s activity. More specifically, employees can appreciate whether and to what extent the BCCs are achieving their objectives of local development given that

they are directly involved in the delivery of financial services to their own communities. In turn, as owners, they can contribute to selecting initiatives that favor the development of local communities. These are important issues in the light of the strengths of BCCs: the closeness to local economies and the network externalities associated with their mutual aid system (see Angelini et al., 1998; Barra et al. 2011).

A main limitation of this analysis could be the hypothetical nature of the conjoint method used; a great deal of literature however confirms the validity of this approach (Mitchel and Carson, 1989; with reference to the valuation of cultural heritage, Navrud and Ready, 2002).

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