

**UNITED NATIONS STATISTICAL COMMISSION
and ECONOMIC COMMISSION FOR EUROPE
(UNECE)**

CONFERENCE OF EUROPEAN STATISTICIANS

**EUROPEAN COMMISSION
STATISTICAL OFFICE OF THE
EUROPEAN COMMUNITIES
(EUROSTAT)**

**INTERNATIONAL LABOUR
ORGANIZATION (ILO)**

Joint UNECE/EUROSTAT/ILO Seminar
on the quality of work
(18-20 April 2006, Geneva, Switzerland)

Topic 2: Measuring the dimensions of quality of work with statistical indicators: current national experiences, relevance and usability of the proposed set of statistical indicators and sources of data collection

MEASURING THE QUALITY OF WORK FROM THE OCCUPATIONS POINT OF VIEW

Supporting paper by Italy

I. INTRODUCTION

1. The Italian Institute of Statistics together with the Italian Institute for the workers training (Isfol) is carrying out a survey on occupations which offers a contribution to the analysis of the work quality topic.
2. The aim of the survey, funded by the Ministry of Labour in order to build a permanent observational system of the occupational needs, is twofold: first, to empirically test the existing classification of occupations; second, to describe jobs, to measure the human capital required to adequately perform job tasks and to gather information on the work context.
3. The theoretical model, which the survey refers to, comes from the U.S. department of Labour experience (Peterson et al., 1999). It gives the opportunity to adequately describe jobs from a number of different perspectives, with a particular emphasis to the characteristics and requirements of both the worker and the work.
4. The aim of the paper is to present the general structure of the survey and to describe its potential contributions to the ongoing discussion on the concept of quality in work and the measurement of its dimensions.

II. THE SURVEY DESIGN

5. The object of the analysis of the Italian survey on occupations is the five-digit code of the classification, i.e. the 810 occupational units, where the term ‘occupational unit’ stands for ‘a set of occupations homogeneous with reference to the skills, abilities, knowledge and activities required’.

6. Substantial effort has to be devoted to obtaining a representative sample of workers employed in a specific occupational unit as a particular drawback one has to face with is the absence of a sampling list.

7. A preliminary analysis of the labour force survey data allows to identify the economic activity of the enterprises where the probability to find a worker of a specific occupation unit is very high. Using the archive of the active enterprises (ASIA, 2005) it is possible to select a stratified sample of enterprises characterized by the identified economic activity. The sampling procedure used is designed to provide 20 incumbents for a given occupational unit, as prior research (e.g. Fleishman & Mumford, 1988) indicates that 15 to 25 incumbents are typically sufficient to obtain adequate inter-rater agreement coefficients, given the type of measure being used in our questionnaire to describe people’s job.

A. Selecting Incumbents: the role of a Contact center

8. Once a sample of establishments likely to employ people in the targeted occupation has been selected, the most important aspect of the data collection effort involves:

- verifying the actual presence of a worker employed in the occupation we are looking for and;
- obtaining the consensus for the interview.

9. Due to the complexity of the negotiations and the high level of expertise needed, a group of 20 people (the Contact center) have been selected and trained in negotiation procedures in order to successfully perform the job. The negotiation involves contacting the human resource personnel at each sampled establishment by telephone, providing information about the study, gaining agreement to participate, gathering some background information related to the worker and making appointments for later interviews.

10. Contact center is required to select incumbents in the designed occupations randomly from among those who had been employed on the job for 3 years or more.

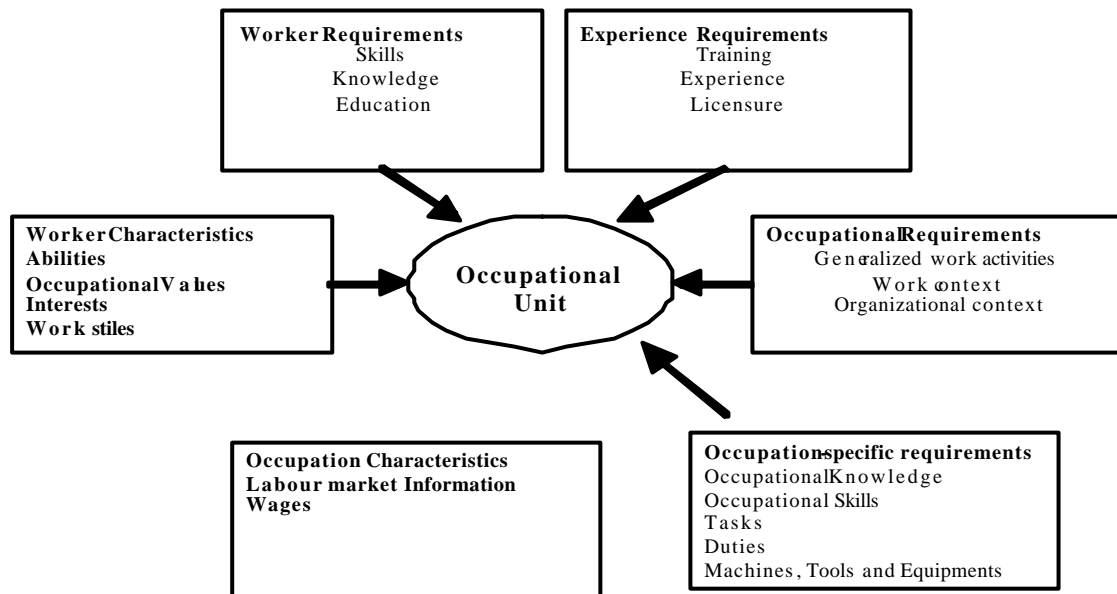
11. The complexity of the survey process, which requires a continuous exchange of information between the Contact center and the interviewers in order to timely reach the respondents, leads ISTAT to implement a Computer Assisted Personal Interview (CAPI) system integrated into a data capturing information system able:

- to distribute the interviews to the interviewers using the information collected by the Contact Center database;
- to manage in an integrated way the electronic questionnaire, the interviewers and the Contact Center agenda;
- to optimize the field-work according to the “actual situation of the field”;
- to receive and transmit data via PSTN (Public Switch Telephonic Network) in a secure way granting the respondents privacy;
- to control and monitor in real-time the quality of field work with a set of indicators generable by the database process survey.

B. The survey questionnaire

12. The survey questionnaire translates in questions and thematic sessions the specific theoretical model adopted to describe job. The model is summarised in Figure 1.

Figure 1.



13. Figure 1. The theoretical model adopted to describe occupations -derived from the U.S. department of Labour experience on O*net (Peterson et al., 1999)- Data related to the 'Occupation Characteristics' will not be collected as other statistical sources provide this kind of information (i.e. the labour force survey and Eu-silc)

14. The theoretical model adopted stems from the need to describe occupations through multiple descriptors drawn from a number of domains that could be applied in describing a number of jobs.

15. The model considers both the worker and the work (Figure 1) as we cannot match people to jobs without considering both the characteristics of the people and the characteristics of the jobs.

16. Moreover when one considers the nature of people and the nature of jobs, there are many attributes of people and their work that are best viewed as pre-existing characteristics outside the control of the individual or the organization for which they are working (e.g. abilities and work styles, economic conditions). Other attributes of workers and their work are more flexible, for instance knowledge and skills people acquire and the conditions of the work that can be modified by organizations.

17. The model stresses the difference between the requirements and characteristics as the reasons why we look at the more controllable characteristics of people and work are different

from the reasons why we look at the givers (e.g. training and development workers versus personnel selection).

18. The reference areas of the model are the following:

- (a) **Worker characteristics** are people's enduring attributes that influence the capacities that they can develop. They are linked to particular personality traits, to cultural characteristics and are responsible to the way in which the worker face the problems and are able to influence either the quality and the level of the work done and the personal performance to gather information;
- (b) **Worker requirements** refer to developed attributes of the individual that might influence performance across a range of work activities. People acquire a variety of attributes that influence performance as a function of education and experience;
- (c) **Experience requirements** refer to the experience required to perform a given job generally acquired through the performance of tasks and duties or through training and licensure;
- (d) **Occupation requirements** refer to information on the work activities structure and on the work context.
- (e) **Occupation specific requirements** are those aspects, which exclusively refer to a specific job.

Table 1 summarises the content of the questionnaire and its linkage to the theoretical model.

Table 1 – Reference areas, questionnaire sections and aim of the session

Reference area	Questionnaire section	Aim of the section
Experience requirements	A – Introduction	Collect general data on training and education and experience requirements.
Worker requirements	B – Knowledges	Collect data on 33 knowledges. Knowledge being defined as a collection of fact and information about a particular domain, acquired through formal education or training or accumulated through specific experience.
Worker requirements	C – Skills	Collect data on 35 skills. Skills being procedures for acquiring and working with information. The skill taxonomies make use of 35 descriptors spreading out the content skills (capability to acquire information and convey thin information to others), the social, technical skills and resource management skills.
Worker characteristics	D – Abilities	Collect data on 52 abilities Abilities being cognitive, psychomotor, physical and sensory characteristics, relatively enduring attributes of an individual's capability for performing a particular range of different task.
Worker characteristics	E – Work value	Collect data on 17 values which describe jobs.
worker	F – Work stiles	Collect data on the work styles that characterize each

characterstics		job, i.e. those personal characteristics used to obtain a good performance.
Occupation requirements	G – Generalized work activities	Collect data on Generalized work activities, i.e. aggregation of similar job activities/behaviours that underlie the accomplishment of major work functions.
Occupation requirements	H – Work context	Collect data on the Work context of the specific occupation, i.e. the non task related factors of work that affect intrapersonal, interpersonal or work outcomes or activities. This includes the interpersonal relationships (communication, Types of role relationships, responsibility for others, conflictual contacts with others) the Physical work conditions (work setting, environmental conditions) and Structural job Characteristics.
Occupation specific requirements	I – Detailed activities	Collect data on the detailed activities and their frequencies.

C. The rating scales

19. The cross-occupation descriptors of the questionnaire provide a basis for measuring the similarities and differences observed among occupations.

20. The most important sections of the questionnaire – i.e. the section devoted to knowledge, skill, ability and generalized work activities - use the same frame of measurement. For each item (i.e. for each knowledge, skill, ability or generalized work activities) the incumbent is asked to answer a double question: “how important is the item to the performance on his current job?” and, if the rate is at least somewhat important, “what level of the item is needed to perform his current job?”

21. The aim of this type of question is to rate two complementary aspects: on the one hand the impact of every item on the working performance and on the other the level of mastery required to carry out the job.

22. To answer the first aspect of the question the incumbent make use of a rating scale from 1 to 5, 1 indicating that the descriptor is not important, 5 indicating that the descriptor is of absolute importance). The second aspect is measured through a 7 point rating scale (1= a very low level of the item is required; 7= a very high level of the item is required).

23. To help the incumbent to appropriately rate, the level scale includes descriptions of activities requiring high, medium and low levels of the item. The examples proposals in the lower points of the scale are drawn from daily activities, while those proposals in the higher scores send back to complex activities.

24. It is important to notice that the importance and the level data provide complementary rather than redundant information. A specific item could assume the same importance for two different jobs, but the level the item is used could be different from one job to the other. As an example, the knowledge of the mathematics is very important either for a cashier and a mathematician but the math level required is very different: similar to give the right change

(rate=1) for the cashier and close to derive one complex mathematical equation (rate=7) for the mathematician.

III. FINAL REMARKS

25. The Italian survey on occupation will give elements to develop a more accurate classification of occupations and to describe the occupational structure, favouring the construction of an information system on occupation. This system will be made available on web and will be particularly useful to:

- the entrepreneurs in order to characterize the professional requirements and the competences in their organizations;
- the workers in order to orient their professional choices;
- the operators of the labour market in order to favour the matching between demand and supply;
- the training operators in order to plan activities in favour of the occupation;
- the politicians in order to fit the training and the job.

26. The system will provide qualitative information on the nature of work together with the quantitative data on the work labour stocks and the short and medium term occupational forecasts. The system is designed to link and disseminate data collected by different statistical and administrative sources on occupation in order to cover the multiple aspects of the work (for example the issues of wages, the industrial injuries).

The final goal will be to offer a wide and detailed view on the work and the workers both from a quantitative and a qualitative point of view.

References

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Web-site:

<http://online.onetcenter.org/>

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