

ELEMENTS TO AN ENLARGED EMPLOYMENT MODULE

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Introduction

The importance of detailed information on the employment in the services sector and the qualifications of the employees was focused upon in a common Scandinavian paper presented at the 8th Voorburg Group Meeting on Service Statistics in Oslo 1993.¹ The paper concentrated on the possibilities of providing employment information from different administrative registers. The paper concluded: *“By more frequent use of registers and by building up statistical systems for the use of administrative data, variables such as sex, age and education can be completed without increasing the respondent burden of the enterprises. On the other hand, information about the external and internal costs for the additional education of the persons employed also ought to be included in the Methodological Manual and tested in the pilot or model surveys, even if this information is only available through direct contact with enterprises.”*

As a result of the discussions following this paper it was agreed that a survey on the availability of statistics on employment qualifications within the service sector in member countries should be undertaken. The results of this survey, presented at the 9th Voorburg Group Meeting in Sydney 1994, showed that in a majority of the respondent countries at least some data exist on employment qualifications.² The most common sources were labour force surveys and population censuses. In the concluding remarks of the paper, it was stated that: *“we could also request these data on employment (qualifications) from the businesses direct which means that the employment module in the model surveys should be enlarged.”*

A first response to the call for enterprise survey data on educational qualifications was given by an Australian paper at the 10th Voorbrug Group Meeting in Voorburg 1995.³ The paper outlined the Australian experiences with collection of linked employer-employee data. The paper *“point to the capability of such a methodology to obtain more detailed*

¹ Peter Bøegh-Nielsen, Heli Jeskanen-Sundström and Berit Olsson: Needs and possibilities of statistical information on employment in the services industries in Papers and Final Report, Voorburg Group 8th Meeting on Service Statistics, Oslo 1993, pp 22-38.

² Samuli Rikama, Peter Bøegh-Nielsen, Heli Jeskanen-Sundström and Berit Olsson: Summary results of the questionnaire on employment qualifications within business services in Papers and Final Report, Voorburg Group 9th Meeting on Service Statistics, Sydney 1994, pp 191-228.

³ Robin Green: Employment qualifications in the services sector: A note on the possible use of a two stage sample survey in Papers and Final Report, Voorburg Group 10th Meeting on Service Statistics, Voorburg 1995, pp 117-120.

information on the qualifications and skills profile of employees engaged by businesses and, more generally, the capacity to relate information about employees, eg. their qualifications, training experiences, occupations etc., to that of employers in the industry in which they work.”

Setting out from the above mentioned experiences related to the possibilities and feasibility of producing statistical information on the qualifications and skills of the employees whether gathered from the use of administrative registers or collected directly from the enterprises themselves the purpose of this paper is to present two new initiatives, ie. a Danish enterprise survey on organisational innovation and competitiveness of the enterprises and qualifications of the employees and an enlarged Eurostat employment module to be tested in winter 1996/97 in a number of EU Member States.

1. Problems of data sources and collection methods

In the model surveys discussed and presented at the previous Voorburg Group Meetings the employment module has consisted of more traditional employment variables as no. of persons employed, employees, full/part time employment and in some model surveys information on occupation. These variables are characterised by consisting of information easily available for the administration of the enterprises.

Information about the qualifications of the employees are information which in more detailed form are not known or easily available to the administration of the enterprises but information which have to be collected from the employees themselves. This is clearly stated in the Australian paper: *“Information on employees’ formal qualifications and training experiences would only be capable of collection if the employer gained the cooperation of the selected employee by arranging, for example, for the detailed information required to be provided by the employee.”*

Especially the Scandinavian national statistical institutes have been in a position to utilize administrative registers containing information about gender, age, occupation and educational level of the population and through their statistical system including the statistical business register been able to merge information on the individuals with information about their place of work - at the enterprise or local unit level. This system of utilization of administrative registers is shown in figure 1.

These possibilities give the Scandinavian statistical institutes wide possibilities of producing statistics on the characteristics of the total number of employees without placing any further respondent burden on the enterprises and thus avoiding the relatively burdensome system of collection of linked employer-employee data as described above.

As stated it puts the Scandinavian countries in a very fortunate position but I find it very important to stress the fact that what can be measured in such a register based system are different formal kinds of qualifications. The informal qualifications such as the skills gained from practise - “learning by doing” - must not be underestimated in the analysis of

qualifications of the employees.

Informal qualifications are very difficult - or almost impossible - to capture from the registers of the public administration. This information can only be collected directly from or via the enterprises themselves. Statistics Denmark has been elaborating on the identification of the most important informal qualifications and testing the feasibility of capturing this information on the employees during 1996.

2. First results from a Danish survey

During spring and summer 1996 Statistics Denmark carried out a survey for the University of Aalborg on the organisation of the enterprises and the qualifications of the employees. A part of this questionnaire was related to the continuous training of the employees in the enterprises. The survey frame included nearly 4,000 enterprises in all activities - except agriculture - and the accepted response rate was 48% or 1,900 enterprises, cf. table 1. The surveyed enterprises employed nearly 400,000 employees or around 40% of the total employment in the private sector in Denmark - excluding agriculture.

Matching of several administrative registers

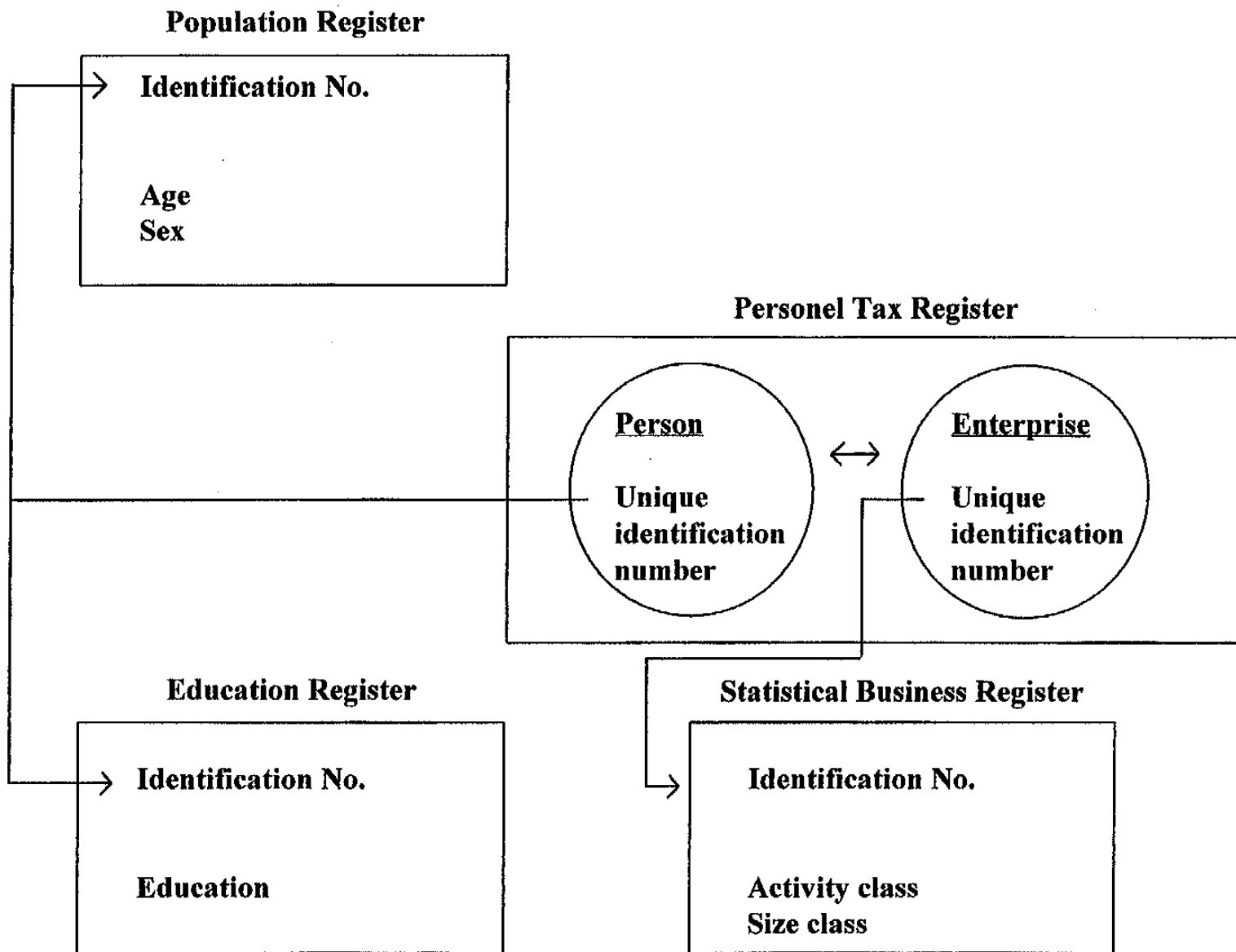


Table 1.

NACE groups	No. of enterprises		No. of fulltime employees	
	Total no.	Response rate	Total no.	Response rate
Manufacturing	1 316	52%	263 891	59%
Construction	615	42%	19 162	46%
Trade	1 295	47%	57 896	48%
Hotel and restaurants	104	46%	4 843	72%
Transport	316	43%	19 665	33%
Computer services	50	64%	3 880	80%
Engineering services	57	56%	5 551	56%
Other business services	176	41%	8 684	58%
Other NACE groups	64	50%	2 979	52%
Total	3 993	48%	386 551	55%

As we have only finished the data validation process it is only possible to present some preliminary results from the survey. The main findings of the survey are that the population is divided into two parts. Little more than half of the enterprises have recently carried out organisational changes often combined with education of the employees.

Another important finding is that nearly all enterprises (95%) find the continuous development of the skills of the employees important to their competitiveness. The result differs across sectors and especially within the knowledge-based services as computer, engineering and other business services the development of the skills of the employees is judged of very high importance, cf. table 2. At the reverse end we find the transport sector which judges the importance of the continuous development of the skills of the employees of relative minor importance to their competitiveness.

Table 2. The importance of the continuous development of skills to the competitiveness

NACE groups	Degree of importance			
	Decisive	Great	Some	None
Manufacturing	188	292	163	24
Construction	58	84	74	17
Trade	188	243	141	21
Hotel and restaurants	12	15	15	1
Transport	23	39	45	14
Computer services	14	15	1	
Engineering services	14	11	3	1
Other business services	25	25	16	1
Other NACE groups	9	13	5	2
Total	531	737	463	81

Cell value= No. of answers

The enterprises (90%) judge that the most important tool for the continuous development of the qualifications and skills of the employees is the task-forcing activity as part of the normal job - in other words stressing the importance of the learning-by-doing-factor. Less than half of the enterprises find standardised education an important tool for the development of the skills of the employees.

Table 3. The proportion of employees in the enterprise who have attended educational courses

NACE groups	None	More than half	Less than half
Manufacturing	48	257	355
Construction	41	50	144
Trade	58	297	237
Hotel and restaurants	13	10	19
Transport	29	34	62
Computer services		22	8
Engineering services	2	14	13
Other business services	7	38	24
Other NACE groups	3	16	10
Total	201	738	872

Cell value= No. of answers

Table 3 shows that 90% of the surveyed enterprises actually have used educational courses within the last year. The importance of continuous development of the skills of the employees within the knowledge based services industries is underlined by the results shown in table 3.

Table 4. Average working days per year spent for education.

	1-5 days		More than 5 days	
	Middle managers/supervisors	Subordinates	Middle managers/supervisors	Subordinates
Manufacturing	354	402	228	153
Construction	102	112	60	49
Trade	277	331	211	133
Hotel and restaurants	16	19	8	4
Transport	56	67	19	17
Computer services	10	11	19	17
Engineering services	18	20	8	6
Other business services	22	34	33	23
Other NACE groups	16	17	10	8
Total	871	1 013	596	410

Cell value= No. of answers

The same pattern can be found if we look at the duration of the courses. Especially computer and other business services - although except engineering services - show a relatively high proportion of enterprises spending more than one work week on average for the group of middle managers and supervisors. In general, nearly two-thirds of the enterprises spent less than one week on average per employee on training and educational courses and this is especially the case for the subordinates.

Table 5. Main subject for the training and education course

NACE groups	Strategy, market and clients	New technology	Quality and standardisation
Manufacturing	364	461	462
Construction	66	118	110
Trade	368	392	261
Hotel and restaurants	19	18	16
Transport	58	61	50
Computer services	18	28	25
Engineering services	18	25	20
Other business services	34	42	37
Other NACE groups	12	23	12
Total	957	1 168	993

Cell value= No. of answers

Not surprisingly, the most frequent subject for the education courses was new technology. This was also the case for nearly all sectors, including the business services. Also quality management and standardisation was a frequent subject for the courses. Changes in the subjects - measured with multi annual frequency- seems to be a good indicator of the dynamics of the conditions of competition in the different sectors and the implications for the demands to the qualifications and skills of the employees.

This project is also intended to be a two step project. The first phase was the collection of the information on the continuous development of the qualifications and skills of the employees, ie the kind of informal qualifications which is not included in the administrative registers. The second phase is to combine this information with information from the administrative registers about gender, age, occupation and education of the employees in the surveyed enterprises. The great advantage of this kind of combined questionnaire and register based data is that the questions can be concentrated on a few subjects and then afterwards be combined with other employment or economic data from the registers and thus diminish the respondent burden on the one hand and increase the response rate on the other hand.

3. Design of an enlarged employment module in new Eurostat Pilot Survey

Eurostat has launched a new generation of pilot surveys on the business services sector, ie. information technology, engineering services, labour recruitment and provision of personnel and cleaning services. These pilot surveys are intended to be carried out in the autumn and winter 1996 for engineering services and provision of personnel and labour

recruitment and cleaning services and the remaining activities in 1997/98. The main idea behind these surveys are in depth surveys with detailed and branch specific questionnaires on the one hand, and on the other hand only a few participating member states in each survey - 4-5 countries per survey.

At this moment the survey on engineering activities is the most advanced one. At the moment a draft questionnaire designed by Statistics Denmark as the coordinating country in this project is being discussed amongst the other participants in this project, France, Germany, Portugal and Sweden. The questionnaire contains a list of questions mainly related to different breakdowns of the turnover but also the employment issue has been treated relatively detailed.

The questionnaire consists of a number of more traditional questions (as total employment, no of employees, full/part time employees) and a number of questions asked more scarcely in enterprise statistics but traditional as part of a labour force survey (as breakdown of no. of employees according to gender, breakdown of employment according to age, breakdown of total employment occupation), cf. the annex. At last the questionnaire also contains two questions of a more innovative kind, ie. breakdown of employees according to seniority and number of days spent in training which also are broken down by purpose of the training.

The level of ambition in this project is very high but deliberately the *pilot* nature of the survey is focused upon. In order to find the limits of the possible elements of a future data collection the questionnaire is designed to include a number of questions not yet tested. I would be surprised if it is possible to collect all the required information in all the EU member states participating in the survey. But I expect the survey to give a constructive input to the future work of elaboration of an enlarged employment module.

4. Items for discussion

The participants are invited to discuss:

- the elements of the proposed enlarged employment module and the feasibility of collecting the proposed variables
- the feasibility of the proposed linked collection of linked employer-employee data
- experiences from other countries with combined survey and register based data
- the importance of the continuous development of the qualifications and skills of the employees is the task-forcing activity as part of the normal job - in other words this paper underlines the importance of the learning-by-doing-factor in the understanding of the importance of the qualifications of the employees for the competitiveness of the enterprises. What is the opinion of the participants?

ANNEX 1. The employment module of the Eurostat pilot survey on engineering activities**4. EMPLOYMENT****4.1. Total Employment**

4.1.1. Total number of persons employed end of September 1995 _____ number

4.2. Breakdown of no. of employees according to full/part time*Full time is defined as more than 30 hours a week.*

4.2.1. Full time _____ number

4.2.2. Part time _____ number

4.3. Breakdown of no. of employees according to sex

4.3.1. Male _____ number

4.3.2. Female _____ number

4.4 Breakdown of no. of employees according to age

4.4.1. <25 years _____ number

4.4.2. 25-39 years _____ number

4.4.3. >39 years _____ number

4.5. Breakdown of no. of employees according to seniority

4.5.1. < 2 years _____ number

4.5.2. 2-5 years _____ number

4.5.3. >5 years _____ number

4.6 Breakdown of no. of employees according to education

4.6.1. Engineers _____ number

4.6.2. Architects _____ number

4.6.3. Other university, technical/natural science _____ number

4.6.4. Other university _____ number

Social science, humanities, economics etc.

4.6.5. Technicians _____ number

4.6.6. Skilled workers _____ number

4.6.7. Administrative _____ number

4.6.8. Others/without qualifying education _____ number

4.7 Training and post-education*The total number of hours spent in training and post-education broken down by purpose.*

4.7.1. Items related to strategy, market and clients _____ hours

4.7.2. Items related to new technology _____ hours

including training in information technology and word processing.

4.7.3. Items related to quality and standardisation _____ hours

4.7.4. Other items _____ hours