Skills in Services
A Study in Denmark
Illeris, Sven

Publication date:
2000

Document Version
Også kaldet Forlagets PDF

Citation for published version (APA):

General rights
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

• Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
• You may not further distribute the material or use it for any profit-making activity or commercial gain.
• You may freely distribute the URL identifying the publication in the public portal.

Take down policy
If you believe that this document breaches copyright please contact rucforsk@ruc.dk providing details, and we will remove access to the work immediately and investigate your claim.
Serviceudvikling, Internationalisering og kompetenceudvikling

Arbejdspapir nr. 12
Working Paper no. 12

January / Januar 2000

Sven Illeris
Skills in Services: A Study in Denmark

Service development, Internationalisation and Competence
The purpose of this paper is to present some preliminary results about skills in services which a study in Denmark has yielded, and briefly to discuss theories of causes and effects.

The study, named "Service development, Internationalisation, and Competences" (SIC), was designed to focus on several problems connected with the application of human resources. In this paper, five questions will be discussed:

1. Are the skills required in service activities different from those required in manufacturing activities?
2. Does an up- or deskilling take place in service activities?
3. Are there regional differences in the skills of service personnel, and if so, what differences?
4. Do the occupations which people actually have in service activities correspond to the skills they have acquired through formal education?
5. Are there different groups of service workers with different mobilities, and are there different groups of service employers with different labour turnover patterns?

As a conclusion, I suggest a model of the most important skills and conditions of work offered and demanded in the labour market.

I use the word "skills" as including both specific professional qualifications, general professional qualifications (e.g. languages), and personal qualities (e.g. stability, ability to work together, ability to understand clients’ needs) - whether acquired through formal education, other courses, or on the job. However, the borderlines between the different types of skills are far from sharp. Computer literacy, which was once a specific professional qualification, is now a general one. For service personnel working directly with customers, the ability to do so is as much a professional as a personal skill. Automation is more likely to take over operations requiring professional than personal skills, which tends to make the personal qualities of the personnel relatively more important over time, ceteris paribus.

Skills are also classified according to their level: Some are high and others low. Fundamentally, these concepts are far from clear: What is easy for one person with one cultural background to learn, may be difficult for another, and vice versa. It is difficult directly to measure the level of skills involved in a certain task, too: Usually proxy variables must be applied. Still, important questions are connected with the dimension of skill levels, it cannot be ignored.

One final remark about vocabulary: I use the words personnel, people, and workers in the same sense: All who work, whether as independent proprietors or as wage- or salary-earners.

Methods and data sources
The SIC-study was financed by a grant from the Danish Social Science Council in 1996. About 10 researchers have been attached to it for 3 years. It is based on a combination of quantitative and qualitative sources:

1. In-depth studies of 6 selected service firms/institutions (a bank, a cleaning firm, an engineering consultancy, an alliance of lawyer firms, a TV- and broadcasting organisation, and a municipal home-care system for elderly), using qualitative interviews and re-interviews as well as documentary materials.

2. Qualitative group interviews and factual questionnaires in 4 firms from the knowledge-intensive business services and the wholesaling sector.

3. A questionnaire survey, focussed on innovation, in the private service sector, from which 637 answers were received.

4. A series of specially constructed tables from the Danish statistical agency Statistics Denmark. All tables in this paper are based on this source. The statistical source is quite good in Denmark: We have for 1993 and 1997 obtained combinations of age, gender, region, sector, education and occupation of all working persons. These combinations are possible through the use of the "personal number" attached to all inhabitants of Denmark, which is used in all official connections - including taxation, through which their employers can be traced. Education and occupation are, of course, interesting proxy variables for skills.

By education is meant formal education giving access to some job. Thus "no education" includes persons who may have a lot of general school education, but no degree or diploma qualifying for specific jobs. Educational achievements are classified into the following levels: (On each level, there is a number of educations for different professions, but in this paper, these will not be scrutinized).
- "no education"
- "skilled": the traditional apprenticeship and similar educations
- "short higher education": 13-14 years (including school)
- "medium higher education": 15-16 years
- "long higher education": 17 or more years.

Occupations are classified according to the 1988 International Standard Classification of Occupations, in which the classes (except management and armed forces) are defined both by type of work and by the formal education usually required for it. In this paper, I shall primarily discuss the levels of the occupations, groupes into (A) those which usually require higher education, (B) those which usually require apprenticeship or equivalent skilling, and (C) semi- and unskilled occupations. Data about occupations were collected for the first time in Denmark in
In 1993 and 1997, information was still lacking for 16 and 10 percent of the working persons, respectively. This makes it hazardous to study the changes over time - if a category has grown, we often cannot know whether the growth is real or due to registration of the occupation of persons from the previous "unknown" category.

**Skills in services and manufacturing**

The conventional wisdom is that services employ relatively more low-skilled and high-skilled, but fewer medium-skilled people than manufacturing industries (e.g. Cohen & Zysman 1987).

Table 1 presents Danish quantitative evidence, in which skill levels are measured by occupations. Since 63 % of the persons with unknown occupation have no education, I have grouped "unknown" together with unskilled occupations.

**Table 1. Occupation 1997 of employed persons, by sector**

<table>
<thead>
<tr>
<th>Percent</th>
<th>Management, professionals, technicians, associate professionals</th>
<th>Clerks, service &amp; sales workers, skilled agricult. craft &amp; related workers</th>
<th>Operators, assemblers, elementary &amp; unknown occupations</th>
<th>Armed forces</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture etc</td>
<td>8</td>
<td>57</td>
<td>35</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Secondary sect.</td>
<td>19</td>
<td>42</td>
<td>38</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Marketed services</td>
<td>36</td>
<td>37</td>
<td>27</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Non-market serv.</td>
<td>47</td>
<td>37</td>
<td>13</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>34</strong></td>
<td><strong>39</strong></td>
<td><strong>26</strong></td>
<td><strong>1</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The table shows that in Denmark, services employ relatively fewer skilled workers than manufacturing. However, they (especially public services) also employ relatively fewer unskilled workers. On the other hand, services employ far more persons in high-skill or managerial occupations than manufacturing. Altogether, the service personnel (especially in public services) is working in higher skill occupations than do the manufacturing personnel.

In table 2, the question is highlighted by data on the level of formal education.

**Table 2. Formal education 1997 of employed persons, by sector**

<table>
<thead>
<tr>
<th>Percent</th>
<th>No education</th>
<th>Skilled</th>
<th>Higher educat. Total=100 %</th>
</tr>
</thead>
</table>

4
Agriculture etc 58 35 7 106 thous.
Secondary sector 41 46 13 623 thous.
Marketed services 42 42 16 983 thous.
Non-market services 31 29 40 808 thous.

Total (incl. unknown) 39 38 23 2551 thous.

The pattern which is revealed in table 2 is the same as in table 1: Services - especially public services - employ relatively fewer skilled workers than manufacturing. They also employ relatively fewer persons with no education. On the other hand, services - especially public services - employ far more persons with higher education than manufacturing. Altogether, the service personnel is better educated than the manufacturing personnel.

Possibly the Danish pattern is, at least to some degree, representative of Western Europe. There is hardly any doubt that the "conventional wisdom" is more valid in the USA than in Western Europe. The difference may be explained by the higher minimum wages in Western Europe which probably have priced a number of low-skill jobs out of the market - with higher unemployment rates than in the USA as the other side of the same coin. (However, in Denmark unemployment was reduced from 12 % in 1993 to 8 % in 1997 to 5-6 % in 1999, at least partly due to government policies to increase the educational level of the labour force in order to make it possible for most people to get jobs which require relatively high skills).

However, occupational and educational data do not reveal all differences between service and manufacturing skills, in particular they do not show anything about the relationship between professional and personal skills. In our qualitative studies, we tried to highlight this question, but we have no manufacturing results to which we can compare ours.

In our study of services, many respondents said that personal qualities are very important, often more important than professional skills. This stands to reason, since most service activities consist in relationships between persons - suppliers and users of services. It was surprising that even in "thing-services" such as cleaning, it was stressed that "service-mindedness" (responsibility for the fulfillment of the client’s needs) and ability to discuss with and adapt to the individual wishes of the clients are important skills. In the technical field of engineering consultancy, it was clear that young respondents expressed the attitude of their educational system (identical with the self-image of the profession) when they stressed the importance of their professional qualifications. But more experienced respondents told us that while technical skills had to be up-to-date, the real competitive edge is based on such personal skills as the ability to understand the needs of clients and to cooperate with them.

**Deskilling or upskilling?**
In recent decades, much academic literature has been devoted to the question whether a general up- or deskilling of work takes place in contemporary western societies. The point of departure for much of this literature was Braverman (1974) who, primarily on the basis of American studies, concluded that a deskilling took place, or at least an increasing polarisation between the few with high skills and the many with low skills.

While Braverman may have been right to some degree in the still largely 'Fordist' American economy around 1970, an increasing number of scholars have rejected his conclusions since then, not least in a European and service context (see discussion in Illeris 1996).

One argument in favour of the bipolarisation thesis has been that this would be the inexorable result of the shift from manufacturing towards service activities. As already shown however, in the contemporary Danish society, skills are not more polarized in services than in manufacturing, but generally higher.

In our statistical analyses, we could compare educational data from 1993 and 1997, which has been done in table 3. (As already mentioned, occupational data were difficult to compare over time). It should be kept in mind that in Denmark, this period constituted the beginning of a strong business cycle recovery, which meant an untypical growth in secondary sector employment.

Table 3. 1993-97 employment change, by sector and education

<table>
<thead>
<tr>
<th>Index 1997, 1993=100</th>
<th>None</th>
<th>Skilled</th>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Short higher</td>
</tr>
<tr>
<td>Agriculture etc</td>
<td>70</td>
<td>99</td>
<td>-</td>
</tr>
<tr>
<td>Secondary sect.</td>
<td>101</td>
<td>107</td>
<td>117</td>
</tr>
<tr>
<td>Marketed serv.</td>
<td>105</td>
<td>105</td>
<td>122</td>
</tr>
<tr>
<td>Non-market serv.</td>
<td>93</td>
<td>112</td>
<td>106</td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>106</td>
<td>111</td>
</tr>
</tbody>
</table>
The table shows a very strong upskilling, as measured by the formal education of the workers. The same tendency prevails in all sectors. If one looks into sub-sectors, the results are the same, except for a few cases where it seems to have become difficult to find educated personnel.

Castells (1996), comparing occupational data from Japan, North American and West European countries, concluded that "the widespread argument concerning the increasing polarisation of the occupational structure of informational society does not seem to fit with the data set". He, too, found that upskilling prevailed.

In our qualitative studies, we posed the question of increasing or decreasing skill requirements. It was clearly difficult for respondents to grasp what we meant - they, too, felt that the concept was not clear. Typically, their first reaction was to talk about the need for different skills than previously. The consulting engineer did not any longer make the calculations for an engineering project he once made - that task has been taken over by a computer programme which the client firm runs itself. Now the consulting engineer works on new and more sophisticated problems, often in a broader context which requires cooperation with other specialists such as biologists and social scientists. But finally almost all respondents concluded that higher skills than previously are now required. Even in cleaning, the worker has to know more about new materials in buildings and how to avoid pollution by the cleaning chemicals.

It may safely be concluded that an upskilling takes place. Even if deskilling may happen in some jobs, one must be blind and deaf - or very dogmatic - not to recognize this.

The mechanisms by which this upskilling works are many: Partly, for the current labour force, through courses and on-the-job learning - which in a learning firm includes interaction with the firm´s partners. Partly through the labour market, by the hiring of better educated young and formerly unemployed persons, and the retirement/firing of elderly and poorly skilled persons.

The forces behind the upskilling are complex, too, and cannot here be analyzed in depth. Suffice it to mention that automation has taken away a good deal of simple, repetitive operations from workers. Other operations, the products of which can be sold over a distance, have been shifted to low-wage countries, such as back-office services. Still other low-skill services have, as already mentioned, simply vanished from Western Europe because of their price. On the other hand, the demand for high-skill services is undoubtedly increasing. The increasing complexity of our societies creates a need for an increasing amount of sophisticated producer services to prepare, manage, and market the production. As Castells says (1996), automated production does not create human robots, on the contrary: Educated workers who can programme and manage production. As regards consumer services, more affluent consumers de-
mand ever more sophisticated services. And increased competition means that even simple services must be delivered by a front personnel with good (especially personal) skills, as stressed by Normann (1984).

One may express the whole process like this: The more the simple work can be done by machines, the more the human skill resources become the decisive factors of production.

This general tendency should not conceal that a good deal of low-skilled service work still exists. There are tasks which cannot be automated or shifted to low-wage countries, and which are demanded even if the price increases, e.g. care for children and elderly, cleaning, and catering.

Increasing skill requirements - including personal qualities - is a reciprocal process, according to our interviews: The personnel also requires more from the management. They will not be treated as Taylorist robots, and demand explanations and regard for their individual situations. It was interesting that our qualitative studies pointed to the strategic significance of the medium management level - people who cannot just be characterized as "supervisors", their job may rather be described as one of "coaching": to activate and optimize the resources of the floor-shop workers. Nowhere did we find such confrontational management practices as those described e.g. in British studies on cleaning and catering (Gabriel 1988, Rees & Fielder 1992). Whether this difference is due to real differences between social practices in our two countries, to different stages in the business cycle (high/little unemployment), or to the inevitable subjective element in qualitative research, I cannot say with certainty. But many details in the British studies - e.g. on turnover and promotion - are so different from what we have found that I suspect that the differences are real.

**Regional skill differences**

Skills have always played a role in theories of location and regional economic development: In big cities and central regions, the supply of higher skills would be better than in rural and peripheral areas. Hence, firms needing high-skill personnel would be attracted to or find competitive advantages in the former areas, while firms needing cheap low-skill labour would thrive in the latter.

The reasons behind the superior supply of higher skills in big cities and central regions would be several. In many countries, higher institutions of education are primarily located in these regions. That is also where the high-skill person finds the largest labour market for his or her often specialized skills. And many of them appreciate the large supply of high-level services (e.g. cultural services) and generally the urban life-style.
One must expect an above-average demand for higher skills in the big cities, too, especially from the service sector. This is where the high-order services of the central place hierarchy are located. It is also where service firms which depend on accessibility to markets rather than on a central place system find optimal locations. Finally, this is where service producers which depend on frequent information from and interaction with knowledge-intensive partners will find the maximum of such partners. And all of these service firms typically demand highly skilled staff.

On the other hand, when in the 1970s the previously uniform concentration of economic activities into big cities in most western countries weakened and in manufacturing even was supplanted by a certain regional decentralisation, skill factors contributed to explain this phenomenon, too: Especially personal skills such as stability and carefulness were quoted in less urbanized areas to increase their attractiveness for firms.

In our statistical analyses, summarized in table 4, we mapped the occupational structure of the employment in Denmark, divided into four major regions:

- The Copenhagen region
- The less urbanized rest of the Danish islands
- The highly urbanized Eastern Jutland (with Aarhus)
- The less urbanized peripheral Jutland

Table 4. Employment 1997 by regions and occupations

<table>
<thead>
<tr>
<th>Percent</th>
<th>Management, professionals, technicians</th>
<th>Clerks, service &amp; sales workers, skilled agricult.</th>
<th>Operators, assemblers, elementary &amp; unknown occupations</th>
<th>Armed forces</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Management, professionals, technicians</td>
<td>Clerks, service &amp; sales workers, skilled agricult.</td>
<td>Operators, assemblers, elementary &amp; unknown occupations</td>
<td>Armed forces</td>
<td>Total</td>
</tr>
<tr>
<td>Copenhagen reg.</td>
<td>41</td>
<td>36</td>
<td>22</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Rest of islands</td>
<td>31</td>
<td>41</td>
<td>27</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Eastern Jutland</td>
<td>35</td>
<td>38</td>
<td>26</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Rest of Jutland</td>
<td>29</td>
<td>41</td>
<td>29</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>39</td>
<td>26</td>
<td>1</td>
<td>100</td>
</tr>
</tbody>
</table>

The table shows that skill levels - as measured by occupations - are higher, the more urbanized the regions are. However, the differences are surprisingly modest, about 10 per-
centage points. If one digs into the detailed data, the modesty of the differences is at least partly explained by the rather different patterns which the crude occupational classes of table 4 cover.

Thus, in the unskilled category, the over-representation in the rural and peripheral regions is primarily caused by the unskilled manufacturing operators. On the other hand, the cleaning workers are very evenly distributed, and the same goes for the "unknown" category.

The skilled category, which as a whole is rather evenly distributed, includes occupations with very different geographical patterns. Craft workers and (of course) agricultural workers are over-represented in the least urbanized regions, clerks in the Copenhagen region, while sales workers and care personnel are very evenly distributed.

In the management and high-skill category, about half of the highest skilled jobs are concentrated in the Copenhagen region, with the exception of teaching jobs which - together with nurses and small-firm managers - are very evenly distributed.

Looking into the sectors and sub-sectors, one finds that in most cases, skill levels are highest in the most urbanized regions. For instance, Copenhagen law firms employ more sophisticated skills than provincial ones. But again, there are many exceptions, and for instance public services, retailing, hotels & restaurants, entertainment & cultural services show no or very small regional skill differences.

As regards personal qualities, our qualitative studies present some evidence of regional differences, in particular in low-skill work. Thus in cleaning, some supervisors expressed that stability and carefulness in Copenhagen is below provincial standards. This confirms the factors mentioned above as contributing to the geographical dispersal of manufacturing. (But of course, cleaning work does not shift geographically, it has to remain where the users are).

**Correspondence between education and occupation**

As already stressed, it is difficult to measure skills, and often the proxy variable of formal education is applied. This of course raises several questions. I shall not discuss the question whether the various educational programmes are suited to the work they are supposed to prepare the students for. I shall, however, take up the question whether people actually work in the occupations they have been educated for. The Danish statistical data make such a study possible, even if the occupational data have the weaknesses mentioned above. I shall first discuss the question for the labour market as a whole, and afterwards focus specially on the service sector.
The occupational categories are partly defined on the basis of the education usually expected:

- Professional occupations usually require long higher educations,
- Technicians and associate professionals are usually supposed to have medium-short higher educations,
- Clerical, sales, care, skilled agricultural and craft & related workers usually are supposed to have skilled or equivalent education,
- Unskilled work requires no education,
- Armed forces personnel (incl. conscripts) and management have no defined educational requirements.

Tables 5 and 6 show the correspondence between formal educations and occupations on an aggregated level. The expected correspondence along the SW-NE diagonal of the tables is marked by bold ciphers.

Table 5. Workers 1997, by education and occupation

<table>
<thead>
<tr>
<th>Education</th>
<th>Percent</th>
<th>Management</th>
<th>Professionals</th>
<th>Technicians, assoc. professionals</th>
<th>Clerks, serv. &amp; sales,-skil. agricul. craft &amp; rel. workers</th>
<th>Operat. element. forces occupations</th>
<th>Armed forces</th>
<th>Unknown</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>38</td>
<td>27</td>
<td>1</td>
<td>17</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Skilled</td>
<td>6</td>
<td>3</td>
<td>13</td>
<td>56</td>
<td>13</td>
<td>1</td>
<td>7</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Short higher</td>
<td>8</td>
<td>6</td>
<td><strong>56</strong></td>
<td>21</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Med. higher</td>
<td>7</td>
<td>49</td>
<td><strong>33</strong></td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Long higher</td>
<td>8</td>
<td>70</td>
<td>8</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>6</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>12</td>
<td>15</td>
<td>39</td>
<td>16</td>
<td>1</td>
<td>10</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Table 6. Workers 1997, by occupation and education

<table>
<thead>
<tr>
<th>Percent</th>
<th>None</th>
<th>Skilled</th>
<th>Short higher</th>
<th>Med. higher</th>
<th>Long higher</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td>34</td>
<td>39</td>
<td>9</td>
<td>12</td>
<td>7</td>
<td>100</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>Management</td>
<td>12</td>
<td>10</td>
<td>3</td>
<td>41</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>Professionals</td>
<td>19</td>
<td>32</td>
<td>24</td>
<td>22</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td>Clerks, serv. &amp; sales, sk. agric. &amp; rel. workers</td>
<td>38</td>
<td>56</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td>Operat. element. occup.</td>
<td>66</td>
<td>31</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>100</td>
</tr>
<tr>
<td>Armed forces</td>
<td>54</td>
<td>29</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>100</td>
</tr>
<tr>
<td>Unknown occupation</td>
<td>63</td>
<td>27</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>39</td>
<td>38</td>
<td>7</td>
<td>10</td>
<td>6</td>
<td>100</td>
</tr>
</tbody>
</table>

The tables show that in the majority of cases, people actually are occupied in work corresponding to their formal education. However, this majority is surprisingly small. If we leave out management, armed forces and "unknown occupation", where no correspondence is involved in the definition of occupations, only 53% of all workers work on the occupational level which corresponds to their formal education. In other words, in all parts of the Danish labour market, very many people work on other occupational levels - higher as well as lower - than they have been educated for.

Undoubtedly, if we break down the "level" data into professional categories, we shall find that even persons who work on the "right" level in many cases work in the "wrong" professions.

In particular, many people work in higher level occupations than they have been educated for. Again leaving out management, armed forces and "unknown occupation", the number to the north-west of the bold diagonals of tables 5 and 6 constitute 38% of all workers.

In this connection, it should also be mentioned that the probability of working in management is almost the same for all educational categories, close to 6%, and that a third of all managers have no formal education. (Detailed data do show, however, that economists and lawyers have higher chances of becoming managers, but not more than 14%). This modest formal education of many managers undoubtedly reflects the domination of small firms in the economic structure of Denmark. It may be interpreted as a sign of high flexibility in the Danish career system, but it may also betray a weakness in management qualifications.

The number of persons working on occupational levels below their formal education is smaller. The south-east part of the tables represent 10% of the total.
The message of these tables is that as regards skills, the Danish labour market is very flexible. Many people escape from the "boxes" into which their formal education have put them.

Let us now disaggregate these data into the main sectors and scrutinize the services, as compared to manufacturing (the agricultural sector is not interesting in this respect, it is small and the variety of skills is limited). Table 7 shows the share of workers who have found work on the level they have been educated for (the above-mentioned diagonal), on higher levels, or on lower levels. Management, armed forces and persons with unknown occupation have been left out.

Table 7. Occupation compared to education, by sector 1997

<table>
<thead>
<tr>
<th>Percent</th>
<th>Occupational level as compared to formal educational level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Higher level</td>
</tr>
<tr>
<td>Secondary sector</td>
<td>26</td>
</tr>
<tr>
<td>Marketed services</td>
<td>43</td>
</tr>
<tr>
<td>Non-market serv.</td>
<td>41</td>
</tr>
<tr>
<td>Total (incl. agricult)</td>
<td>38</td>
</tr>
</tbody>
</table>

Table 7 clearly shows that flexibility is higher in services, in particular in marketed services, than in manufacturing. Clearly the services - even the public ones - lead the labour market flexibility. In particular, the upward flexibility is high in the services: over 40 % of the workers work on a higher occupational level than they have been educated for. On the other hand, persons who are working on a lower level than they have been educated for are more likely to do this in manufacturing than in services.

Our qualitative studies have not much to add. Even when recruiting young people, employers said that they only partly took the formal education of applicants into consideration. People’s later careers depend more on previous work and achievements, experience and on-the-job training, as well as courses taken as adults, than on their original education.

**Mobility**

Mobility in the labour market - the probability of changing job - is one of the classic questions investigated in labour market research. We are able, through our statistical data, to shed new light on it, since we can trace each person from 1993 to 1997: Knowing the job, he or she had in 1993 - if any - what did he or she do in 1997? This information makes it possible to study the mobility according to sector, education, occupation, age and gender (but not the
geographical mobility). Of course, we have to structure our findings into categories, and it must be remembered that the probability of observing mobility is smaller, the larger the category one is studying.

Table 8 shows mobility between sectors (mostly on the 2-digit level), by formal education.

Table 8. Sectoral mobility 1993-97, by education

<table>
<thead>
<tr>
<th>Education</th>
<th>Sector 1997</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Same as 1993</td>
</tr>
<tr>
<td>None</td>
<td>40</td>
</tr>
<tr>
<td>Skilled</td>
<td>74</td>
</tr>
<tr>
<td>Short higher</td>
<td>82</td>
</tr>
<tr>
<td>Medium higher</td>
<td>81</td>
</tr>
<tr>
<td>Long higher</td>
<td>78</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>57</strong></td>
</tr>
</tbody>
</table>

The table shows that unskilled workers are much more mobile than workers with a formal education. This may partly be explained by the narrow applicability of specific professional skills, while persons with low professional skills more easily may move between low-skill jobs in different sectors.

More detailed data show modifications of this general trend. For instance, people with long higher education in technical and social-science disciplines have rather high mobilities.

The share of persons having gone out of work from 1993 to 1997 decreases, the higher the educational level. This is undoubtedly connected with the high mean age of persons with low formal education.

Table 9 shows mobility between sectors, according to age.

Table 9. Sectoral mobility 1993-97, by age 1993

<table>
<thead>
<tr>
<th>Percent</th>
<th>Sector 1997</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Same as 1993</td>
</tr>
<tr>
<td>Under 25</td>
<td>27</td>
</tr>
<tr>
<td>25-39</td>
<td>67</td>
</tr>
<tr>
<td>40-49</td>
<td>77</td>
</tr>
<tr>
<td>50 and over</td>
<td>51</td>
</tr>
</tbody>
</table>
The table shows, not surprisingly, that the least mobile age-group is the mid-aged, and that many elderly people have stopped working. It was not expected, on the other hand, that young people are extremely mobile, and that they not only have moved to other sectors, but also have gone out of work.

Our qualitative studies threw some light on this group of young people, who have not been studied much from a labour market point of view, and of whom many have no completed education. They seem often to shop around for jobs, probably searching for one which they like. Undoubtedly in the Danish situation, many take short-time jobs while pursuing their education in order to supplement their government scholarships. We found them e.g. in cleaning and care for elderly. In Britain (where the scholarship situation is different, however) similar groups have been described by Gabriel (1988) and Lucas (1995). In table 10, mobility is viewed from the employers’ point of view, in other words as a question of labour turnover. Only the sub-sectors with the highest and lowest turnovers are shown (and the tiny sub-sector of technical analysis has been left out).

Table 10. Sectoral mobility 1993-97, in selected sub-sectors

<table>
<thead>
<tr>
<th>Sector</th>
<th>Same as 1993</th>
<th>Different from 1993</th>
<th>Not working</th>
<th>Total=100 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance, insurance</td>
<td>76</td>
<td>9</td>
<td>16</td>
<td>75 thous.</td>
</tr>
<tr>
<td>Utilities</td>
<td>74</td>
<td>10</td>
<td>16</td>
<td>17 thous.</td>
</tr>
<tr>
<td>Health</td>
<td>69</td>
<td>14</td>
<td>18</td>
<td>131 thous.</td>
</tr>
<tr>
<td>Chemical industry</td>
<td>66</td>
<td>16</td>
<td>17</td>
<td>25 thous.</td>
</tr>
<tr>
<td>Education</td>
<td>65</td>
<td>18</td>
<td>18</td>
<td>189 thous.</td>
</tr>
<tr>
<td>Retailing</td>
<td>41</td>
<td>40</td>
<td>18</td>
<td>154 thous.</td>
</tr>
<tr>
<td>Advertising</td>
<td>34</td>
<td>49</td>
<td>16</td>
<td>8 thous.</td>
</tr>
<tr>
<td>&quot;Other business serv.&quot;</td>
<td>31</td>
<td>47</td>
<td>22</td>
<td>17 thous.</td>
</tr>
<tr>
<td>Hotel &amp; restaurant</td>
<td>27</td>
<td>50</td>
<td>24</td>
<td>63 thous.</td>
</tr>
<tr>
<td>Cleaning</td>
<td>26</td>
<td>46</td>
<td>27</td>
<td>31 thous.</td>
</tr>
</tbody>
</table>

The table shows vast differences between stable sub-sectors with low labour turnover (public services, finance) and turbulent sub-sectors with high labour turnover (all in the private service sector). The people who move from the latter may go out of work; or they may go to other sub-sectors, which is more often the case.
Our qualitative studies confirmed these interpretations of the statistical findings. The cleaning firm experienced a high turnover. If the firm wanted a higher service quality, they needed a more stable labour force. In spite of relatively high wages for this unskilled work, it was difficult to reduce labour turnover, for inherent reasons: Hard work, low prestige, and inconvenient working hours. The engineering consultancy had a much more stable labour force; but in spite of work which the staff found interesting, prestigious and skill-developing, stability could not be taken as given as it could in earlier times.

A labour market model

In this paper, I have briefly presented a number of results and discussions from various aspects of our study. Since it has not focussed on one problem, it is not possible to end with one conclusion. Instead of that, I shall try to pull a number of findings - some of them characterizing the workers, others characterizing the employers - together in a model of the Danish labour market. The model will not only be relevant for services, and I shall draw upon results not only of this study. The purpose of the model is to structure our comprehension of the labour market and in particular to discuss the possibilities of fitting together the supply and demand sides of the labour market.

The model may be seen as a reaction to certain current models, in particular the model of a "dual labour market" with a sharp distinction between skill-demanding, stable, well-paid "good jobs" with good career opportunities in large corporations, and on the other hand low-skill, unstable, low-paid "bad jobs" with small career opportunities in small firms. In many ways, our knowledge of the Danish labour market indicates that this dualism is a misleading generalisation of its characteristics. It may be criticized, too, for implying that only the employers influence the labour market. Our Danish findings rather indicate that the labour market is - exactly a market, where two groups of agents both influence results. I have been inspired by Noyelle (1990) who stressed the need for looking both at the demand and the supply side.

I shall show the model as a kind of verbal matrix, in which different categories of workers form the rows, while categories of employers form the columns. I should stress, however, that the borderlines between the categories are not to be understood as being sharp. The typology of employers is not very detailed and could possibly be elaborated along the lines suggested by Gadrey (1991), inspired by Mintzberg.

<table>
<thead>
<tr>
<th>Employers</th>
<th>Employers who are primarily interested in good skills</th>
<th>Employers who are interested in cheap, low-</th>
</tr>
</thead>
</table>
good skills and very stable workers. This is the traditional attitude of the public sector and banks, but in both cases employers now try to soften this tradition. But also in flexibility, they wish to hire and fire according to needs, skill labour and in being able to adapt their staff to rapidly changing needs (e.g. retailing, hotels & restaurants, cleaning firms).

Workers

People who are not very mobile. They are usually not young, and possess good skills

People who are medium mobile. This is the average worker with medium skills, to be found in most of the labour market

People who are highly skilled and very mobile. They are found in pockets (computer experts, engineers etc) where some skills are broadly applicable and very much in demand

Women who are interested in part-time or temporary work (not examined in this study). They largely enjoy the same rights as other workers, they usually prefer this type of work, and there is little debate about it

Young people with (still) limited skills, wishing short-time jobs as a supplementary income or as
People who are weak physically and/or mentally (not examined in this study). Not being able to find work on the normal labour market with increasing skill requirements, they constitute a major societal problem.

In the complete model, the idea is of course to match groups of workers with groups of employers, as a basis for a discussion of mismatches. I do not feel ready to do this categorically, but only to conclude that on both sides, there is a variety of wishes as regards high and low skills, long and short duration of employment, promotion etc. If these wishes are to be fulfilled, the labour market clearly has to be flexible. But there is a serious problem about employing the weakest group of workers.

The model suggested here, stressing the differentiated character of the labour market, attempts only to describe the Danish situation and does not claim universal validity.
References


