

Underrepresentation of Women and Vertical Segregation by Gender in Purchasing Departments

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Abstract. The purpose of this paper is to investigate the underrepresentation of women in Purchasing Departments and to reveal possible causes of segregation as well as measures against segregation by gender. On the basis of expert interviews and a quantitative online survey, the situation of women in Purchasing Departments is examined. Based on these results, approaches to counteract gender segregation are recommended for politicians, organisations and women. The main causes for an underrepresentation of women in purchasing are problems due to difficulties in reconciliation of work and family life and the lack of technical knowledge of women. Recommendations for action include adequate public child-care infrastructure, all-day school and measures promoting paternity leaves. Organisations should offer flexible working schemes and appraisal systems based on performance rather than on physical presence.

Keywords: Women, Purchasing Department, Underrepresentation, Segregation by Gender.

1. Introduction and Research Background

Various articles and studies recently published corroborate that women are still underrepresented in the logistics sector. According to the study, the percentage of women amounts to between 20 und 30 percent. Furthermore, at management level this is significantly lower, with only about 10 percent (Irving et al, 2010; Europhia Consulting, 2009).

This so called vertical segregation reflects the phenomenon that, despite the increase in female qualifications and increasing labour-market participation by women, decision-making positions and power roles are still in the hands of men (Poggio, 2010). Segregation by gender does not necessarily imply inequality between men and women, because overall segregation consists of invidious and non-invidious components that ought to be identified separately (Bridges, 2003). Another important point is to distinguish segregation within occupations from that between occupations, firms or industries. This distinction matters for the selection of a proper policy against gender segregation. If, for example, priority lies on the within-occupation hierarchical component, then comparable worth policies might not be appropriate. Or if between-firms segregation is more important than segregation across occupations, then attention should focus on the institutional process of wage bargaining (Bettio, 2008).

Nevertheless, a survey conducted by Cooper & Santosa & Burgos-Dominguez, 2007, finds that the opportunities for women to build a professional career in logistics are better today than ever before. In Austria labour market participation of women as well as their academic qualification has been rising over the last years (BKA, 2010). Simultaneously, women are more and more interested in taking up a profession in the transport and logistics industry.

At present women are still underrepresented in Purchasing Departments, especially at middle and high management levels (Fitzgerald, 1999; Fuchshuber, 2006). Therefore, the purpose of the study “Women in Purchasing” is to investigate whether there is not only an underrepresentation in numbers of women but also in the perception of Directors of Purchasing Departments and Purchasing Department Staff. Furthermore, this study aims to reveal possible causes for the underrepresentation of women in Purchasing Departments in Austrian and German companies, particularly in high-level management. These questions are discussed in the following paper. Other parts of the study “Women in Purchasing” deal with the remuneration and the

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filling of vacancies in Purchasing Departments, as well as with general questions about work-life-balance and equality between men and women in the labour market.

Hypothesis

- The percentage of women at management level in Purchasing Departments is lower than the percentage of men.
- Men and women have different perceptions of the proportion of women working in Purchasing Departments, of the reasons for underrepresentation of women in Purchasing Departments as well as of the instruments which should help to increase the proportion of women in Purchasing Departments.

The rest of this paper is organised as follows. Section 2 presents the methodological approach used, while Section 3 discusses the results. Finally, Section 4 gives some concluding remarks and recommendations for action.

2. Methodology

As a first step, expert interviews were conducted with eight Directors of Purchasing of large companies based in Austria. The interviews were evaluated using the text reduction method (Froschauer & Lueger, 2003) in order to summarise the key messages of the expert interviews. The results of the interviews were included in the questionnaire design for the quantitative survey.

The quantitative survey was conducted using an online questionnaire. It was distributed via newsletter to all members of the Austrian BMÖ (Austrian Association Materials Management, Purchasing and Logistics) as well as to all subscribers of the newsletter of the “Forum Beschaffung” in Germany. Thus, the participant pool of the study is a convenience sample. The questionnaire was addressed primarily to Directors of the Purchasing Department, but also to all other members of the Purchasing Department in order to reveal differences in responses by gender and by position in the department. A total of 119 survey recipients in Austria and Germany responded. SPSS was used to analyse the data collected from the surveys.

The survey was split in two parts: a demographic section (related to the company as well as the respondent) and an opinion section. The opinion section consisted of thirty-seven questions, including yes/no-questions, five-point Likert-type scale questions, multiple choice questions, and open-ended as well as semi-open-ended-questions where respondents had to write down their answers.

3. Findings

3.1. Vertical Segregation

Of the total 119 survey respondents, 58 (48.7 percent) are men and 61 (51.3 percent) are women. The high number of female respondents may be due to women’s higher interest in the topic of this survey. More than half of all respondents (54.6%) are Directors of Purchasing in their companies, 10.1% have a position in the field of strategic purchasing, 24.4% are commodity managers or purchasing managers, 5.9% are assistants to the Director of Purchasing and another 5% have other positions.

Figure 1 shows the positions of the respondents in the Purchasing Department by gender.

Position in Purchasing Department	Male (%)	Female (%)
Director of Purchasing	69.2	30.8
Strategic Purchasing	50.0	50.0
Commodity/Purchasing Manager	13.8	86.2
Assistant to the Director	14.3	85.7
Other Positions	33.3	66.7
All Respondents	48.7	51.3

Fig. 1: Positions in Purchasing Department by gender

The statistical significance test (Fisher's exact test = 29,988, $p < 0.000$) confirms the hypothesis that there is a significant association between the position in the Procurement Department and gender. Figures show the so-called vertical segregation: the more influential the position in the Purchasing Department, the lower the proportion of women in this position. Of the surveyed Directors of Purchasing 69.2% are men,

only 30.8% are women. On the other hand, while 86.2% of all surveyed Commodity and Purchasing Managers are women, only 13.8% are men.

3.2. Perception of Underrepresentation of Women in Purchasing Departments

All respondents were asked whether they thought that the proportion of women working in Purchasing Departments is too low (1), low (2), sufficient (3), high (4), or too high (5). Figure 2 shows the results in total and by gender.

„The proportion of women working in Purchasing is in your opinion ...”	Male (%)	Female (%)	Total (%)
too low	12.1	8.2	10.1
low	12.1	21.3	16.8
sufficient	60.3	55.7	58.0
high	8.6	6.6	7.6
too high	1.7	1.6	1.7
don't know	5.2	6.6	5.9

Fig. 2: Perceived (under-)representation of women in Purchasing

According to Fisher's exact test ($p = 0.801$) the hypothesis, that men and women have different perceptions of the proportion of women working in Purchasing Departments has to be rejected. Male and female respondents show no significant differences in the subjective perception of the proportion of women working in Procurement Departments. Of all respondents 26.9% think, that the number of women in Purchasing Departments is (too) low. According to 58% there is a sufficient number of women. The number of respondents who think that the proportion of women working in Purchasing is high/too high (in total 9.3%), seems to be quite high, but it is derived from the lower positions these respondents have in the Purchasing Department. This means that they have positions where women are predominant. On the other hand, respondents who think that the proportion of women working in purchasing is “too low” or “low” tend to be more highly educated and to be found in more powerful positions.

3.3. Reasons for Underrepresentation of Women in Purchasing Departments

All respondents who think that the proportion of women working in purchasing is “too low” or “low” were asked about the possible reasons for the underrepresentation of women in purchasing. A semi-open-ended-question allowed the respondents to select up to four responses (lack of technical knowledge, difficult job in addition to family and children, too little creative development opportunities, lack of negotiating skills). There was also an “other” response that allowed them to answer in their own words. Figure 3 shows the results in total and by gender.

„Why are women in your opinion underrepresented in Purchasing”	Male (%)	Female (%)	Total (%)
difficult to reconcile with family/children	71.4	72.2	71.9
lack of technical knowledge	50.0	44.4	46.9
lack of negotiating skills	7.1	11.1	9.4
no interest in Purchasing	7.1	11.1	9.4
too little creative development opportunities	7.1	5.6	6.3
lack of self-confidence	7.1	5.6	6.3

Fig. 3: Reasons for underrepresentation of women in Purchasing

There are no significant differences in the responses of male and female respondents (difficult to reconcile with a family and children: Fisher's exact test =0,960; lack of technical knowledge: Fisher's exact test =0,755). The main reason for an underrepresentation of women in purchasing lies - according to 71.9% of all respondents - in the fact that a job in purchasing is hard to reconcile with family and children. A lack of technical knowledge as a reason for there being few women in purchasing was mentioned by almost half of all surveyed members of Purchasing Departments. Other reasons mentioned are: the lack of negotiating skills; the lack of interest in purchasing, the fact that jobs in purchasing offer too little creative development

opportunities for women; and the argument that women often have too little self-confidence to work in this sector.

3.4. Instruments to Increase the Proportion of Women

All respondents were asked about possible instruments to increase the proportions of women in their companies. A semi-open-ended-question allowed the respondents to select up to four responses (legal framework, quotas, sanctions, financial incentives). There was also an “other” response that allowed them to answer in their own words. Figure 4 shows the results in total and by gender.

„Which instruments are in your opinion suitable to increase the proportion of women	Male (%)	Female (%)	Total (%)
financial incentives	56.9	70.5	63.9
legal framework	32.8	37.7	35.3
quotas	10.3	14.8	12.6
sanctions	10.3	8.2	9.2
others	12.1	11.5	11.8
it is not necessary to intervene	15.5	4.9	10.1

Fig. 4: Suitable instruments to increase the proportion of women

Financial incentives are regarded as the most suitable instrument to increase the proportion of women in Purchasing Departments. Again, there is no gender-related significant difference (Fisher's exact test=0,088). According to more than a third of all respondents, a legal framework, already implemented widely in society, should help to increase the proportion of women in companies. Quotas and sanctions, although generally applied, are considered as less appropriate than other instruments. Other instruments mentioned include: flexible working hours, expansion of child-care services and better technical qualification of women. It is of note that 15.5% of all male respondents believe that no intervention at all is necessary, because the job applicants for a vacancy in their companies are selected according to their qualifications, not their gender. The proportion of women surveyed who are of the same opinion is lower at 4.9%, but once again there is no significant difference (Fisher's exact test=0,164).

3.5. Limitations

The survey was not distributed to a representative sample of the population, but the participant pool was a convenience sample. Thus, the extent to which this sample represents the opinions of the general population is not known.

4. Concluding Remarks and Recommendations for Action

Results show that the underrepresentation of women perceived by Directors of Purchasing Departments and Purchasing Department Staff is not as high as the actual underrepresentation in numbers and that there are no gender-related differences in the results. Nevertheless the percentage of women at management level in Purchasing Departments is significantly lower than the percentage of men. Therefore, recommendations for action will concentrate on measures affecting the vertical segregation in general as well as in Purchasing Departments.

Existing policies regarding gender segregation show several shortcomings. The focus on the female component with the purpose of supporting women’s entry into occupations where women are under-represented is often counter-productive. Some women overestimate their actual chances of entering male-dominated contexts, often producing further frustration when they encounter the exclusion practices often present in these workplaces (Poggio, 2010). A further critical factor is that actions aimed at promoting the work-life-balance are targeted mainly at women. As a consequence, the dominant gender stereotypes have not been questioned, but instead reproduced and consolidated (Poggio, 2010). The following recommendations for action will take these shortcomings into account.

At a political level, it is necessary to destabilise the prevailing gender models. As child-care is often attributed only to women, an adequate public child-care infrastructure, all-day school and measures

promoting paternity leave would reduce obstacles in women's professional careers. There is already a legal framework that should prevent gender-related discrimination and segregation of the labour market by gender, but politics still have to reinforce further activities to raise awareness.

At an organisational level, it is necessary to point out an organisation's benefits resulting from eliminating vertical segregation by gender. The study "Women Matter" by McKinsey & Company suggests that the companies where women are most strongly represented at board or top-management level are also the companies that perform best (McKinsey & Company, 2007). Organisations should provide child-care facilities and flexible working schemes, for both men and women including appraisal systems based on performance and not on physical presence. It is necessary to implement coaching and mentoring programmes for men and women, ensuring that women can also manage their careers in a predominantly masculine environment.

At an individual level, women should set up (logistics) networks, which offer support and mentoring, help young women identify with professional female role model, and provide advice and encouragement.

Only by implementing a balanced package of measures will it be possible to deal efficaciously with the issue of labour market segregation, regardless of industry or department within an organisation.

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