

Demographic Factors Influencing Employees' Salary Expectations and Labor Turnover

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Abstract—Thanks to informational technologies development every sphere of economics is becoming more and more data-centralized as people are generating huge datasets containing information on any aspect of their life. Applying research of such data to human resources management allows getting scarce statistics on labor market state including salary expectations and potential employees' typical career behavior, and this information can become a reliable basis for management decisions.

The following article presents results of career behavior research based on freely accessible resume data. Information used for study is much wider than one usually uses in human resources surveys. That is why there is enough data for statistically significant results even for subgroups analysis.

Keywords—Human resources management, labor market, salary expectations, statistics, turnover.

I. INTRODUCTION

HUMAN resources management nowadays is becoming an essential part of any business. Unlike documents flow processing that HR function used to be now it is more similar to marketing and public relations targeted employees instead of customers. That means HR managers need to know current and potential employees better than ever to succeed in recruitment, employer branding, or talent management.

According to [1], costs associated with staff turnover of an average organization in the United States reach at least 12 per cent of the profit before tax. Direct costs for employee replacement are about 50-60 per cent of his annual earnings, and the total costs can be up to 200 per cent of his annual earnings. Therefore, organizations are trying to reduce turnover and, to make it real, traditionally prefer to hire experienced mature workers, because such decision seems to cost less

However, stereotypes do not always reflect the reality accurately, and in [7] researchers found a negative correlation between an average age of employees and profit of an organization and non-linear functional dependence between turnover and financial results. That means instability of staff negatively influences the financial results, but for small values of turnover, financial result reduces too, and there is some optimum level of turnover maximizing profit of an organization. Results of [7] show why turnover forecasting is a vital problem for any business, and human resources managers do need statistics in their work.

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To sum up, human resources management involves turnover and future labor costs forecasting, and that is impossible without appropriate statistics. However, though data mining in marketing field has become quite a common practice, HR data mining is just appearing, and business suffers lack of concrete career behavior data.

II. MATERIALS AND METHODS

As a rule, career behavior is researched via surveys conducted among employees ([2]-[7]), but by asking questions a researcher influences results of his study [9]. Furthermore, respondents' answers tend to reflect not the respondents' personality "who they are" but their vision of themselves "who they think they are" or even "what they think the others are expecting them to be". That is why surveys' results cannot accurately reflect the reality. However, surveys help scientists to understand the trend in general.

In [3] authors conducted a wide research and build a number of regression models of turnover, depending on the demographic characteristics of workers and the factors associated with their work in the organization based on the results of the study in Singapore organizations. In addition, the following relationship has been identified and substantiated:

1. Men are more likely to change jobs than women are.
2. Salary satisfaction has a significant stabilizing effect on the turnover.
3. Employees holding higher positions are less inclined to change jobs.
4. More experienced workers have a higher propensity to change jobs.

Results of research [4] are quite similar to [3] despite some differences in mentality of Singaporean and Japanese.

This particular research bases on data collected from job-search web sites popular in Russian Federation and the CIS.

This data set contains depersonalized information from resumes including demographical data (such as age, gender, level of education), candidates' work experience, salary expectations, and desired position.

Although it seems not to be a good idea to use salary expectations as indicator on the labor market, a survey described in [8] showed that, at least at the CIS, salary expectations are almost equal to labor cost.

The main advantages of researching these data sets are the following:

1. Available data set contains information on 359 980 people – that is enough sample size to provide accuracy 0.2% with probability 99% (that means research results extrapolation on the general population would lead to

error not exceeding 0.2%);

2. Large sample size allows analyzing subgroups of data;
3. The dataset contains the same information that is available for human resources managers during resume screening.

However, there are some limitations in the collected dataset usage:

1. People involved in agriculture do not use the internet to find job. That is why their career behavior cannot be studied in this way.
2. Employees are not seeking for new jobs continuously; therefore, a part of the most stable workers might be excluded out of a research.

III. HYPOTHESIS

Considering results of researches [2]-[6], it is supposed that men are more likely to claim for higher salary and to change jobs more often than women do. In addition, workers that are more educated are expected to be more ambitious.

In order to make hypothesis more concrete a preliminary survey was conducted for deeper understanding of employees' expectations on their future career development and factors influencing it. The survey results proved the following gender differences:

1. Rising stability of experienced female workers (Fig. 1);

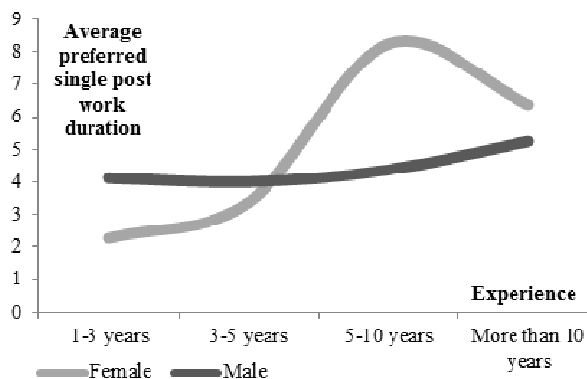


Fig. 1 Average preferred single post work duration depending on gender and tenure according to the survey

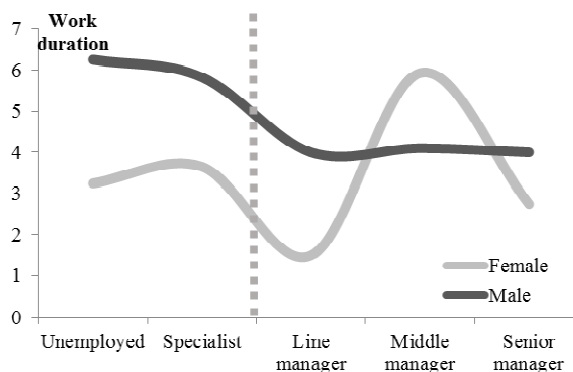


Fig. 2 Average preferred single post work duration depending on gender and post according to the survey

2. According to the survey, male employees are stable line staff but once they become managers they tend to become more likely to change jobs (Fig. 2). Female workers, visa versa, start their careers with a fast career growth and job-hopping, but once they take managerial position they start to appreciate their job and become stable.

Finally, the hypotheses are the following:

1. Generally, women tend to work at a single post more time than men do;
2. Women working at managerial positions stay at a single post for a significantly longer time period than ones working at line positions do;
3. As for men, staying at a single post duration does not depend on the position level;
4. As level of education increases, employee's salary expectations rise too;
5. High-educated people take managerial positions more often than employees with a lower qualification level do.

IV. RESULTS

Speaking about gender differences, we should start with career ladder attitude. As Fig. 3 represents, though there are almost equal quantity of both – men and women – working on line positions, the managerial ones belong men three times more often.

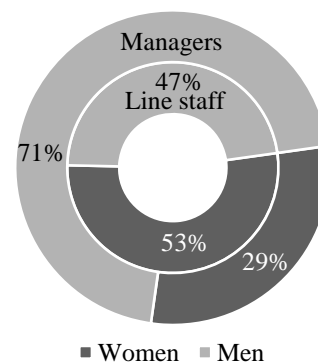


Fig. 3 Men and women working at managerial and line positions ratio

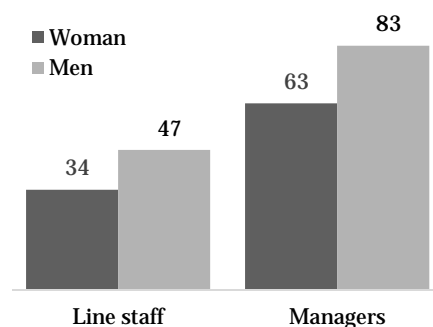


Fig. 4 Salary expectations in thousands of rubbles depending on gender and position level

Regarding to salary expectations level, as a rule, men claim for higher wages than women do: for line positions, salary expectations vary by 39 per cent while for managerial ones the

difference is about 31 per cent. That means taking managerial positions men claim for 74 per cent extra in wages and women – for 86 per cent. Fig. 4 illustrates post impact on salary expectations.

Thus, women are more likely than men tend to seek a new job without terminating the current employment. Moreover, career growth makes this trend stronger (Fig. 4).

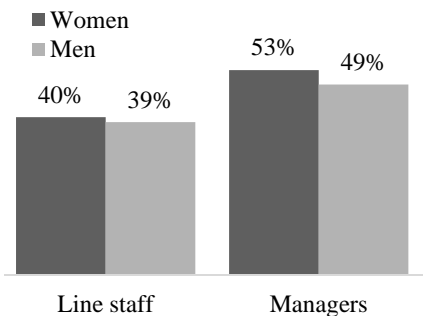


Fig. 5 People seeking a new job without terminating the current employment ratio depending on gender and position level

Despite a stereotype that generally men change jobs more often than woman do, gender differences in this career behavior aspect are not significant, but position level influences it: women tend to work at managerial positions 13 per cent longer than at line ones, while men are more likely to work at managerial positions 18% longer (Fig. 6).



Fig. 6 Working at a single position duration in years depending on gender and position level

So, the hypothesis that for men staying at a single post duration does not depend on the position level is refuted. Moreover, the difference between staying at a single post of men taking managerial positions and ones working at line positions is larger than the same indicator for women.

In addition, significant factor influencing career behavior is level of education. The majority of job seekers using the Internet for job-search have a university degree. Nevertheless, the applicants for linear and managerial positions by education level ratio (Fig. 7) is different: one-third of applicants for the line posts have not graduated higher educational organization, while among the contenders for managerial positions share of such candidates is less than half. On the other hand, 0,9 per cent of line staff have a degree, and so do 1,9 per cent of

managers. Therefore, the level of education of managers, in general, is higher than line staff level of education.

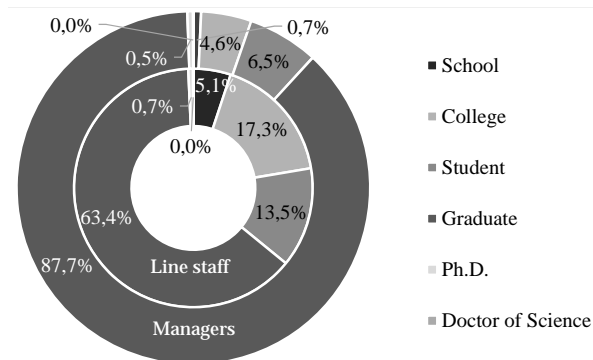


Fig. 7 Employees with different educational background working at managerial and line positions ratio

In terms of career preferences of applicants with the level of education increases interest, ability and capacity for leadership positions (Fig. 8): managerial positions applicants' ratio of non-higher education applicants is 2-6 per cent, while that among graduates it reaches 16 percent and among Ph.D. it is more than 20%.

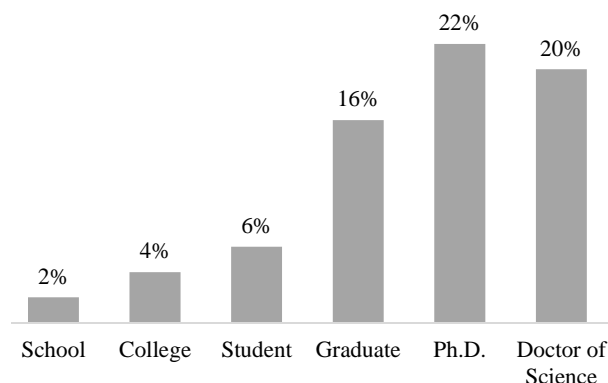


Fig. 8 Managerial positions applicants ratio depending level of education

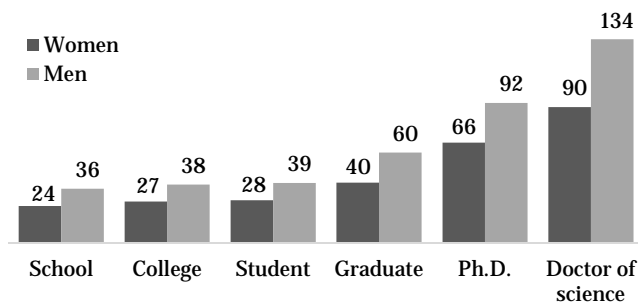


Fig. 9 Salary expectations in thousands of rubbles depending on gender and level of education

Furthermore, with increasing level of education and salary expectations are growing. Completion of the higher education increases salary expectations of women by 42 per cent, of men – by 51 per cent. Getting PhD degree leads to the growth of

the desired wage of women up to 66 per cent, men – 55 per cent. And getting Doctor of science degree increases salary expectations of women by 50 per cent, of men – by 46 per cent (Fig. 9).

Thus, raising the level of education increases the employee his salary expectations exponentially.

As Fig. 10 represents, working at a single position duration depends on level of education, but the functional relationship between them is far from linear. College graduates are more stable workers than recent students of school, but studying at a higher education institution, a person becomes a kind of job-hopper trying to combine study with work. And the further educational level raise correlates with working at a single position duration.

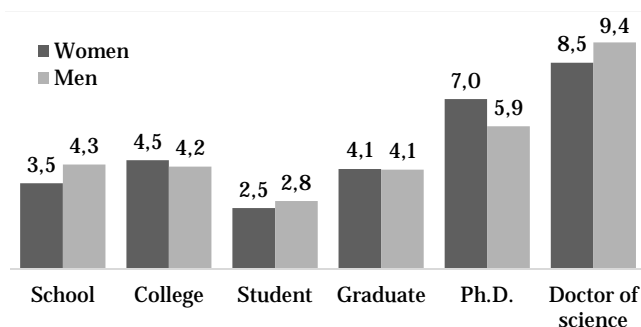


Fig. 10 Working at a single position duration in years depending on gender and level of education

Employees with secondary or complete higher education change jobs with somehow normal periodicity that is a common working at a single position duration. Students are changing jobs more often as they cannot work fulltime and want to understand their career preferences.

Employees having PhD or Doctor of science degree tend to work at a single position twice longer than the others, and that can be explained with their ability to work on complex long-term projects on the one hand, and with extremely stable full-time placement in universities and scientific organizations.

V. CONCLUSION

Returning to the hypothesis mentioned in the third paragraph of this paper, we should admit that three of them were proved.

The first hypothesis is refuted as women tend to work at a single position almost as much time as men do.

The second hypothesis is proved: women working at managerial positions stay at a single post for 6 months longer than ones working at line positions do

The third hypothesis is refuted as men taking managerial positions work at a single post for 8-9 months longer than ones taking line positions.

The fourth hypothesis is proved: as level of education increases, employee's salary expectations rise too

The fifth hypothesis is proved: high-educated people take managerial positions more often than employees with a lower qualification level do.

According to the research results the following recommendations can be made.

Employees with incomplete higher education are changing jobs more often than others so in case organization is interested in long-term cooperation with a comparable level of training it should prefer college graduate to university student. In addition, if the organization has no need for highly skilled labor and there is no possibility of providing career development, taking into account the increase in the cost of skilled labor, it makes sense to refuse the mandatory requirements of higher education.

With the increasing level of qualification of applicants their salary expectations and in the quest for leadership positions are rising too; wherein candidates with higher-level qualifications tend to be rare changing jobs, so they are worth to recruit for the implementation of complex long-term projects.

At work, the performance of which requires specific knowledge and creativity, it is better to hire candidates with secondary or college education: excessive candidate qualifications concomitant increase in the need for self-actualization and big ambitions. Therefore, any organization to retain valuable specialist will have to satisfy his needs in material rewards, career development or specific conditions of work, or it will gradually build up resentment that later will cause worker demotivation, reducing his productivity and increasing turnover. In any case, a person with excessive qualifications will cost more.

Ceteris paribus usually hiring a woman is more profitable for the employer because of their lower salary expectations, but for leadership positions, they apply three times less often than men do.

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