

# COMPARING OCCUPATIONAL AND GENDER DIFFERENCES ON MOTIVATIONAL STRUCTURE

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## Abstract

The most important driving force behind efficient and successful work as well as academic studies is motivation. This determines what proportion of their resources people use for active learning and working, how enduring they are at it, and what kind of preconditions are needed to be met. A highly motivated person can achieve better results than a talented, but unmotivated person.

Students need strong motivation to study at university, and later as employees they will need internal stimulation to achieve high quality and intensive work. They join an organization to fulfil their needs and they remain with the company if this is successful on the long run. If the company is able to motivate them to achieve their private goals and those of the corporation at the same time, then it can keep its existence on the long term. The leaders of a company should be clear about the factors which affect their employees' motivation.

In this research, the interviewed students will become the engineers and economists of the future, and will be at work in a few years. Therefore, it is crucially important to get to know the driving forces which stimulate and maintain their performance towards the highest efficiency.

*Keywords:* motivation, questionnaire, expectation, survey.

## 1. Introduction

Correctly influencing people's behaviour working in organizations is of vital importance in terms of the successful and effective operation of the organisation. People at work are not only considered as labour force, but rather as individuals willing to know the reason and goal of their work, wishing to be successful at work, therefore they would like to participate in exercising power, making decisions, setting goals and reaching results alike. Workers, feeling well and comfortably at their places of work will more likely work for organisational goals as well as have high quality performance compared to those present at their places of work for the sole reason of supplying their direct needs or demands [5].

It is the interaction between the situation and needs and motives which forms the basis of most theories of motivation [16]. All motivational theories search for the answers, what defines people's behaviour. If leaders would like to effectively

influence the behaviour of their employees, they should be aware of the characteristic features of human needs. Although theories were never present in their pure forms but rather in certain complex variations, it is still worth highlighting some important motivational theories very briefly [15]. The two most important model groups are as follows: content and process theories [5].

## 2. Motivational Theories

Content theories examine the factors and their influences on motivation.

1. Maslow's Hierarchy of Needs [10], [11].  
Maslow differentiates biological basic needs (physiological and safety needs as well as social expectations) and needs of higher grade (a need to be appreciated (esteem) and self-actualization). According to Maslow's law of hierarchy, needs at a higher level of hierarchy will only have an effect on people if those at a lower level are met. The principle is that the need next in line which is not yet met will dominate. The weakness of the theory is that in real life needs will not appear at the same time but rather gradually, so none of them can be fully met. Maslow's theory is of high importance when developing organisational human resource policies, even if the practical application of the theory has only been proved reliable regarding basic needs.
2. Herzberg's Motivation-Hygiene Theory  
According to Herzberg, factors causing work satisfaction (motivators) are rather in connection with the content of work, while those causing dissatisfaction (hygiene) are in connection with work environment. Good examples of the first factors are taking responsibility, career advancement, recognition and the possibility to develop (achievement), while salary, status, inter-personal relations, company policy and administration as well as work conditions are examples of factors of dissatisfaction [6].
3. Identification of McClelland's needs  
This theory aims to define motives pointing towards relatively closer connection with behaviour resulting in good performance. McClelland examined three motives: achievement, power and affiliation [12].

The common feature of process theories is that they focus on basic processes creating motivation. The best-known of these theories are as follows [5]:

1. Expectancy Theory,
  2. Equity Theory,
  3. Goal Setting Theory and
  4. Social Learning Theory.
1. Expectancy Theory explains employees' motivation plotted against expected compensation. It is based on the assumption that people make rational decisions based on economic benefits.

2. The basis of Equity Theory is that people continuously monitor how equity prevails at their work environment and compare the ratio of their efforts (inputs) and rewards for the efforts (outputs) with that of the others. The feeling of fairness and equality considerably increases their willingness to make efforts.
3. Goal Setting Theory is based on the observation that performance originates from the intention to act. People first notice environmental phenomena, then evaluate them, finally they set goals. They want to reach their goals, so they act. Understanding and accepting organisational goals will stimulate greater efforts.
4. People have a strong inclination to imitate. Behaviours observed and evaluated positively are considered models and are imitated. People imitate their colleagues/leaders considered best and outstanding in organisations.

Porter-Lawler's dynamic motivational model incorporates the majority of the significant and important motivational theories [9] and provides valuable conclusions for leaders. Some of these pieces of advice are as follows [5]:

1. to offer valuable reward
2. to hire skilled employees
3. to introduce performance-based reward systems
4. to have measurable performances
5. to provide fair and just rewards.

### 3. Questionnaire Surveys

We distinguish four main ways of gathering quantitative data: interviews, questionnaires, tests/measures, and observations. Information can also be gathered from archives and databanks, although this seems more straightforward because the data are already in existence and do not need to be 'created' by the researcher in the same way as the responses to an interview are created [3].

Questionnaires are very widely used in large scale investigations of political opinions and consumer preferences. Although they may seem simple to be used and analysed, their design is by no means simple. A number of sources are worth consulting. The 'classic' books by OPPENHEIM, [14] and MOSER and KALTON, [13] still give very good advice, even if their examples are looking a bit dated. A very practical guidance is provided by YOUNGMAN, [17]. The main decisions to be made in questionnaire design relate to the type of questions to be included and the overall format of the questionnaire.

A questionnaire survey is the most frequent primary research method with which you can collect data from a predetermined group of the population, and which can be evaluated relatively quickly, reliably and precisely [1], [2]. In this case, the group consists of students of the Budapest University of Technology and Economics

(BME) and also of those of the Budapest University of Economics Sciences and Public Administration (BKE), who are in their undergraduate education.

When surveying expectations on labour market, I set up the following steps:

1. Choosing the method of the survey: a questionnaire
2. Formulating the questionnaire
3. Selecting the representative sample
4. Verifying the questionnaire (with the assistance of a tutor and with the help of some experimental surveys)
5. Finalising the questionnaire
6. Preparing the necessary number of copies
7. Surveying (distributing and collecting the questionnaires)
8. Summarizing the collected information as well as data analysis
9. Conclusions.

#### **4. Collecting Data about the Expectations of the Students**

These students would like to attain their first degrees, therefore they have not got professional experience yet. Their labour market expectations develop during the following short periods [8]:

1. *Compulsory professional internship*  
(Required once in five years, lasts for one month, specifically related to academic studies, generally organised by a Faculty of BME or BKE.)
2. *Summer internship*  
(Organized by the University or acquired during a university career-expo, related to the chosen topic or professional interest of the student.)
3. *Company internship*  
(Candidates usually find an opportunity for themselves at a company or with the help of an organization which supports students to spend a few weeks together with a top manager of a market-leading company and to acquire the know-how and the experience.)
4. *Occasional/seasonal work*  
(Does not require university level knowledge or degree, it is aimed at financing university expenditures.)
5. *Career forum*  
(Experiences acquired in interviews, trainings, different consulting sessions during which the students get a general view of the expectations of the firms and their own opportunities.)
6. *Foreign work experiences*  
(Generally important for mastering or learning a second language; usually involves language courses or occasional jobs, such as au-pairing or babysitting, working in restaurants; sometimes it is possible to get professional experience as an exchange student or as a guest at a foreign company.)

7. *Foreign education*

(Studying at a foreign university with a scholarship provides convertible and useful knowledge.)

8. *Participating in a conference*

(Valuable experience and relationships through networking and writing student essays for the university contest ('TDK work'))

9. *Special Colleges*

(They collect students with identical interests and provide active social life.)

The above mentioned opportunities give the students only limited experience since during their studies they have no time for a job, but they gain some experience and good advice from their families and friends and they develop a preconception or attitude to life.

Generally, the more senior the students are the more realistic feedback we can expect since during their studies undergraduates gain more experiences and gather more information.

## 5. Questionnaire about Motivation

The objective of the questionnaire survey was to ask questions to gain relevant information about the general topic. In our case, the questionnaire was a one-page paper, which included two exercises. First, the students had to evaluate 15 factors. It was a scoring exercise, where the students could use a nine-grade scale. The scale, however was not from 1 to 9, but from 1 to 5 with half grade steps like the grading structure in the Hungarian educational system. This way, it was easier for the students, because they could have a better understanding of the relevance and importance of the factors. The second exercise was providing some personal data (e.g. sex, age, faculty and specialization, class).

The following factors were mentioned [8]:

- *Healthy working conditions*  
(clear, modern working equipment and buildings in good condition)
- *Career opportunity*  
(promotion, personal improvement and learning opportunities)
- *Supportive boss*  
(helping subordinates)
- *Unambiguous and definite goals*  
(clear-cut and easy-to-understand objectives)
- *Competitive compensation*  
(high salary compared to other companies)
- *Stable place of work*  
(long-term stability)
- *Interesting job*  
(exciting, challenging exercises and tasks)

- *High prestige*  
(social status and appreciation of the job)
- *Good performance evaluation*  
(objective, reliable with fast feedback)
- *Pleasant working atmosphere*  
(friendly and discreet colleagues)
- *Peaceful private life*  
(no home-working)
- *Competent leadership*  
(confident and strong-minded boss)
- *Appreciation*  
(acknowledgement of quality work)
- *Participation in decision-making*  
(planning and corporate decisions)
- *Fringe benefits*  
(company car, mobile phone, lunch voucher, holiday programmes).

These factors were not numbered or marked in any ways, in order not to influence the students who filled in the questionnaires.

## 6. Distribution of Respondents

212 students of BME and 191 students of BKE filled in the questionnaire. 83 per cent of the engineers were men, 17 per cent were women, whereas this percentage, in the case of the economists, turns in the favour of women, (58 per cent women, 42 per cent men.) The number of those students who answered to the questionnaire (212 + 191 = 403 people), the majority were men (63.5 percent), and only 36.5 per cent were women.

You can find the distribution of respondents according to gender in *Table 1*.

*Table 1.* Distribution of respondents according to gender

	Engineers	Economists
Male	176 (83%)	80 (42%)
Female	36 (17%)	111 (58 %)
Total	212 (100%)	191 (100%)

The division among the university students made by years can be found in *Table 2*. As it is seen in the table, the vast majority of the engineers questioned are higher-class students (51 per cent are fourth or fifth year students), while the majority of the economist students who were questioned attend the lower classes (78 per cent are freshmen or sophomores).

Table 2. Distribution of respondents according to classes

	Engineers	Economists
I.	24 (11.32 %)	45 (23.56 %)
II.	58 (27.36 %)	105 (54.97 %)
III.	23 (10.85 %)	8 (4.19 %)
IV.	61 (28.77 %)	29 (15.18 %)
V.	46 (21.70 %)	4 (2.10 %)
Total	212 (100%)	191 (100%)

## 7. Observation by Professions

You can find the results in the *Table 3* [8].

Table 3. Evaluation of the scoring exercise

BKE-Economists (191)			BME-Engineers (212)		
Factor	Score	Place	Factor	Score	Place
Interesting job	4.40	1.	Competitive compensation	4.38	1.
Competitive compensation	4.38	2.	Stable place of work	4.29	2./3.
Career opportunity	4.34	3.	Pleasant working atmosphere	4.29	2./3.
Pleasant working atmosphere	4.32	4.	Interesting job	4.28	4.
Appreciation	4.18	5.	Career opportunity	4.24	5.
Healthy working conditions	4.06	6.	Healthy working conditions	4.21	6.
Supportive boss	4.04	7.	Supportive boss	4.16	7.
Stable place of work	4.03	8.	Appreciation	4.09	8.
Peaceful private life	3.86	9.	Competent leadership	4.02	9.
Good performance evaluation	3.84	10.	Peaceful private life	3.96	10.
Competent leadership	3.83	11./12.	Good performance evaluation	3.87	11.
Participation in decision-making	3.83	11./12.	Unambiguous and definite goals	3.80	12.
High prestige	3.65	13.	Fringe benefits	3.72	13.
Fringe benefits	3.55	14.	High prestige	3.67	14.
Unambiguous and definite goals	3.50	15.	Participation in decision-making	3.63	15.

Observation by professions:

1. Both target audiences evaluated 'Competitive compensation' as high as 4.38 on a 5.00 grade. In cases of Engineering target audience this factor was the first in the rankings, while the economists ranked this factor as second on the list.

2. 'Interesting job' was ranked first by the economists with 4.40 but the engineers had this factor ranked only at the fourth place with 4.28 on a 5.00 grade.
3. 'Stable place of work', with its 4.29 grade, came in as second in the Engineering target audience but the economists placed it only as the eighth with 4.03.
4. 'Participation in decision-making' got only a score of 3.63 thus fell back to the least important position in the case of engineers but at the same time it was ranked as the eleventh by the economists averaging a score of 3.83.
5. 'Career opportunities' are more important for the economists; with an average score of 4.34 it was placed third, but the engineers only gave 4.24 and ranked it fifth.
6. 'Supportive boss' is ranked seventh in both target audiences although the engineers valued its status higher than the economists.
7. 'Appreciation' was more important for the economists than it was for the engineers – the first group ranked it fifth, with 4.18, while the engineers gave this factor a lower ranking of eighth.

As a summary, the following can be stated:

1. In cases of both target audiences 'Competitive compensation', 'Pleasant working atmosphere' and 'Interesting job' are ranked very important.
2. The categories 'Fringe benefits', 'High prestige' and 'Unambiguous and definite goals' are at the bottom of the motivational structure scheme.
3. For the interviewed students of engineering and economics the following factors are all regarded equally important: 'Healthy working conditions' (ranked sixth place), 'Supportive boss' (ranked seventh place), 'Peaceful private life' (ranked ninth and tenth place), and 'Good performance evaluation' (ranked tenth and eleventh place respectively).
4. The factors 'Interesting job' and 'Career opportunity' are more important for the undergraduates of economics while the engineers prefer 'Competitive compensation', 'Stable place of work', and 'Pleasant working atmosphere'.

## 8. Gender Comparison

Female students at BME consider 'Career opportunity' the most important (4.39), while male students rank 'Competitive compensation' first (4.37). Both sexes evaluate 'Interesting job' as the second most important factor, but in cases of females a score of 4.35 is given, whereas males evaluate this factor with a slightly lower score of 4.33. 'Competitive compensation' is ranked third for females. On the contrary, males consider it most important. 'Career opportunity', ranked most important by females, is ranked only fifth by males. A score of 4.24 puts 'Stable place of work' in fourth place for males, whereas a score of 4.16 given by females ranks it only the eighth. As visible from *Table 4*, the same ranking applies for factors from eleventh to fifteenth in cases of both sexes.



Table 4. Comparing male and female students at BME

BME-male			BME-female		
Factor	Score	Place	Factor	Score	Place
Competitive compensation	4.37	1.	Career opportunity	4.39	1.
Interesting job	4.33	2.	Interesting job	4.35	2.
Pleasant working atmosphere	4.30	3.	Competitive compensation	4.31	3.
Stable place of work	4.24	4.	Pleasant working atmosphere	4.29	4.
Career opportunity	4.21	5.	Healthy working conditions	4.24	5.
Healthy working conditions	4.16	6.	Supportive boss	4.20	6./7.
Supportive boss	4.11	7.	Appreciation	4.20	6./7.
Appreciation	4.08	8.	Stable place of work	4.16	8.
Peaceful private life	4.04	9.	Competent leadership	4.12	9.
Competent leadership	4.02	10.	Peaceful private life	4.00	10.
Good performance evaluation	3.84	11.	Good performance evaluation	3.86	11.
Unambiguous and definite goals	3.79	12.	Unambiguous and definite goals	3.85	12.
High prestige	3.68	13.	High prestige	3.79	13.
Participation in decision-making	3.66	14.	Participation in decision-making	3.58	14.
Fringe benefits	3.66	15.	Fringe benefits	3.46	15.

To sum it up, evaluating the comparison made by males and females, it can be stated that females at BME consider the factors 'Career opportunity', 'Healthy working conditions', and 'Appreciation' very important; males, on the contrary, rank 'Competitive compensation', 'Pleasant working atmosphere' and 'Stable place of work' first. Both sexes consider the following factors almost equally important: 'Interesting job', 'Good performance evaluation', 'Unambiguous and definite goals', 'High prestige', 'Participation in decision-making' and the 'Fringe benefits'.

Female students at BKE consider 'Interesting job' the most important. A score of 4.45 is given to this factor, making it the one with the highest score in the survey comparing it with all the factors. Males rank this factor only third. Their top-position factor, 'Competitive compensation' with a score of 4.40, was only the second for females with a score of 4.36.

To sum it up, evaluating the comparison made by males and females, it can be stated that females at BKE prefer 'Interesting job', 'Supportive boss' and 'Competent leadership', whereas males consider 'Career opportunity', 'Competitive compensation' and 'Participation in decision-making' most important. Both sexes consider the following factors almost equally important: 'Appreciation', 'Stable place of work', 'Peaceful private life', 'Good performance evaluation'.

It is important to highlight that the majority of the females at BME are engineering managers and economists attending the Faculty of Economic and Social Sciences. Only an insignificant minority attends the Faculty of Engineering. On the contrary, males are almost exclusively engineers, only a few of them are either economists or engineering managers. This factor fundamentally exercises influence

Table 5. Comparing male and female students at BKE

BKE-male			BKE-female		
Factor	Score	Place	Factor	Score	Place
Competitive compensation	4.40	1.	Interesting job	4.45	1.
Career opportunity	4.37	2.	Competitive compensation	4.36	2.
Interesting job	4.34	3.	Pleasant working atmosphere	4.35	3.
Pleasant working atmosphere	4.28	4.	Career opportunity	4.31	4.
Appreciation	4.09	5.	Appreciation	4.24	5.
Participation in decision-making	3.94	6.	Healthy working conditions	4.16	6.
Healthy working conditions	3.93	7.	Supportive boss	4.14	7.
Stable place of work	3.92	8.	Stable place of work	4.11	8.
Supportive boss	3.91	9.	Competent leadership	3.99	9.
Peaceful private life	3.78	10.	Peaceful private life	3.92	10.
Good performance evaluation	3.77	11.	Good performance evaluation	3.89	11.
Competent leadership	3.62	12.	Participation in decision-making	3.75	12.
Fringe benefits	3.56	13.	High prestige	3.73	13.
High prestige	3.53	14.	Unambiguous and definite goals	3.55	14.
Unambiguous and definite goals	3.44	15.	Fringe benefits	3.54	15.

on their decision making.

The students at BKE, compared to those at BME, make up an absolutely homogeneous group since all of them (both males and females) will graduate as economists, thus they will try to meet the requirements of the same profession.

Evaluating the comparison made by males and females, it can be stated that in cases of students at both universities males rank 'Competitive compensation' first, with economists ranking it slightly higher than engineers (4.40 compared to 4.37). In cases of females it can be stated that female students at BKE consider 'Interesting job' with a score of 4.45 most important, while those at BME rank 'Career opportunity' the highest with a score of 4.39.

## 9. Summary

These days both society and economy are changing continuously and very frequently. This change may have an ambiguous effect on the employees' expectations, motivation and their chances in the future. It is especially true in cases of undergraduates who, depending on their positions in the future, might have different approaches towards their academic studies; they may think differently about their careers in the future, and also may articulate diverse expectations regarding their future places of work.

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