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## THE SOCIAL POSITION AS AN IMPORTANT DIMENSION OF ENGINEERS' QUALITY OF LIFE IN THE SOCIETY OF POST-SOCIALIST TRANSFORMATION

**Abstract:** *Quality of life may be analyzed from different perspectives. In compliance with that, it may be assumed that the social position of the profession has significant impact on quality of life. The paper presents the analysis of the research which aim was to examine the three dimensions of the social position of the engineering profession in the society of post-socialist transformation: material status, social power, and social reputation. We compared the results of the current study with the results of the research that we had conducted in the period when socialist relations still exist in organizations. Moreover, we studied how the engineers perceive these three aspects of the social position of their profession. The first research was conducted in 1998 and the second in 2015. 200 engineers were questioned in 146 companies. The results indicate that the dimensions of social position, such as the material standard and the social influence of engineers in Serbia today are a little more favorable than they used to be at the end of the 90s. Finally, a majority of the engineers from our research believe that their expectations regarding the engineering profession have not been fulfilled and in future, their quality of life may be enhanced in terms of social importance and recognition.*

**Keywords:** *engineers, engineering profession, the society of post-socialist transformation, social position*

### 1. Introduction

The previous two decades in Serbia have been marked by intense and dramatic changes which have, at the same time, equally affected all social subsystems, and left profound consequences. Imposed changes have influenced the quality of life of society. At the end of the 1980s, there was a

surprisingly sudden crash of socialism as a social, political and economic system. Then, in the 90s the transformation was blocked by four years of civil war, international isolation, sanctions and massive impoverishment of a majority of the population. After 2000, a process of post-socialist transformation started with systematic changes in the society (Lazić, 2005). The economic crisis that has begun at the end of 2008 slowed down the process of transformation and led to the rapid fall in industrial production and quality of life.

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According to the official statistical data, the rate of industrial production in 2012 was only 38.4% of the rate of industrial production in 1989. Such a deindustrialization has not been seen in any European country after the Second World War (Sojić, 2014, pp. 319). In the last 12 years, the employment in the industry of Serbia has been halved, and the unemployment rate in 2016 was 19,7% (Serbian Association of Employers 2017). All these factors affected the fall of the living standards of the citizens of Serbia and the rise of poverty rate (Arandarenko, 2011). The poverty rate in 2012 was 24, 6% (Poverty and Social Inequality in Republic of Serbia 2014) (Because of such a low poverty rate (24,6%) Serbia was at the first place among the poorest countries in Europe. The poverty rate in heavily debt Greece was 23,1%, in Romania 22,6%, in Spain 22,2% and in Bulgaria 21,2% (Poverty and Social Inequality in Republic of Serbia 2014)) and 2016 that percent increased to 26%, while the poverty risk rate was 41,3%. (Serbian Association of Employers 2017).

It is evident that in order to overcome the growing poverty and to enhance the quality of life, the contemporary Serbian society urgently needs to revive the economic activities, approach the reindustrialization, increase the level of industrial production and reduce the unemployment rate. In this new period of development, knowledge must have the crucial significance. Since the engineers possess creative and innovative knowledge which is the key factor for economic development, this professional group must be given an adequate social importance and recognition.

All social circumstances mentioned above have affected the social positions of certain professions in the society of post-socialist transition. The profession is still one of the central sociological categories, which is frequently used in the analyses of social stratification. The stratification model of the analysis of social inequalities comes from the fact that each social role, each activity

determines the criteria for evaluating the individual's position on the stratification ladder. One of the relevant elements for evaluating and determining the person's position in contemporary societies comes from his or her position in the social work division. The work division is a differentiation of various activities and functions, and each differentiation is being followed by a stratification which establishes a particular hierarchy among occupations and professions. The following three characteristics are essential for the analysis and understanding of privileges and prestige among professions in a modern society, and those are: material standard, reputation, and power. Stated in this way, those characteristics have very significant impact on quality of life.

The core subject of this research is the study of the social position of a modern organizational engineering profession in the period of post-socialist transformation in Serbian society. In the study of the social position of engineers in the contemporary Serbian society we analyzed the material standard, social influence and perception of the social reputation of engineering profession from the viewpoint of the respondents who were engineers. In this way the quality of life the targeted group may be discussed through the paradigm of profession.

## 2. Methodological framework for the research

The basic aim of this research was to examine the three dimensions of the social position of the engineering profession in the society of post-socialist transformation: material status, social power, and social reputation. The motivation for this kind of research is originated in the fact that those characteristics have very significant impact on quality of life. The authors compared the results of the current study with the results of the research which we had conducted in the period when socialist relations still exist in organizations. Authors have also

investigated how the engineers perceive these three aspects of the social position of their profession. Thus, the subject of this research were less 'objective' and more noticeable indicators of the social status of the engineering profession in the contemporary Serbian society. The following narrow aims were set considering the goal of this research: to examine the material status of engineers; to examine the social influence of engineering profession in the contemporary Serbian society, and to explore the self-perception of the social status of engineering profession from the viewpoint of the engineers in Serbia.

Authors have assumed the following: the unfavorable social position of the engineers in the contemporary Serbian society is reflected in low incomes, insufficient social influence and low social status of the engineering profession. The named issues impact the quality of life of engineers in the following: feeling depressed by material awards and unfulfilled on the professional level, engineers leave the profession and transfer into managerial structures to provide a better social position for themselves.

The information for this research was collected by the method of questioning. With the use of a standardized anonymous questionnaire in two periods (the first research in 1998 and the second one in 2015) 200 engineers were questioned in 146 companies. The research in 1998 included engineers from 50, mostly large state-owned companies. Although Serbia left socialism as the political and economic system at the end of the 80s, socialist labor relations still existed in public organizations in which the engineers from our sample worked in 1998. In the second research period, at the time of post-socialist transformation of the Serbian society (2015), the engineers were from 96 mostly small and medium private companies. The professional structure of the sample consisted of machine engineers (53%), construction engineers (29%) and electrotechnical engineers (19%). Data obtained in the study was processed within

statistical package SPSS. In the data processing of the information received by the questionnaire, we used comparative methods and statistical methods: the  $\chi^2$  test of independence of two attributes and descriptive statistics were designed by convention as  $P=0.05$ .

### 3. Research results

Regarding research goals and tasks, research results consist of several relevant thematic scopes:

- the material standard of engineers in contemporary Serbian society
- the social influence of engineers in modern Serbian society
- the attractiveness of a managerial position for engineers
- the perception of the social influence of engineering profession from the engineers' perspective.

#### 3.1. Material standard of engineers

The material standard indicates the type and the average incomes achieved by profession in the society. In terms of quality of life, it is assumed that when a material standard of a profession is high, then it delivers higher salaries for its expertise and, with safe and stable incomes, the prestige of a profession is greater. Safe and stable work and incomes for professions depend on the strategies of the country's establishment, and on the country's economic development. Numerous examples confirm both influences. The Great Britain, for instance, in 1979 made a turning point in the country's strategy regarding its economy privatization in order to reduce public expenditures. This privatization affected all those professions which organized all their activities in public sector until then. Those were, firstly, health and social institutions which employed doctors, nurses, and social workers. Until that time those professions had regular incomes and stability of employment. By reducing the state money for the work of these

institutions, the professions mentioned above were forced to turn to private practice which significantly influenced their material status (Šporer, 1990).

The economic and technological development of the society also has a large influence on the material standard of professions. Industrially developed societies oriented towards the improvement of work productivity, for example, provide relatively high incomes to the engineers since they do creative and innovative work.

The salary and the residential status were the indicators that we observed in the analysis of the material standard of the engineering population in our research.

In order to examine the material standard of engineers in Serbia, we gave respondents a list of questions and we compared their answers to the information gathered from the respondents from 1998.

The answers to the question “How much was your personal income in the previous, 2015,

year?” provided us with the following information:

- salaries of 11,5% of the respondents were below the average salary in Serbia
- salaries of 2,5% were identical to the average salaries in Serbia
- salaries of 14,5% were 120% of the average salary
- salaries of 10,5% were 140% of the average salary
- salaries of 3% were 160% of the average salary
- salaries of 32,4% of the respondents were more than 160% of the average salary in Serbia

Comparative overview of the answers given by the engineers studied in 1998 and 2015 is presented in Figure 1.

There are statistically significant differences at the level  $p < 0.01$ .

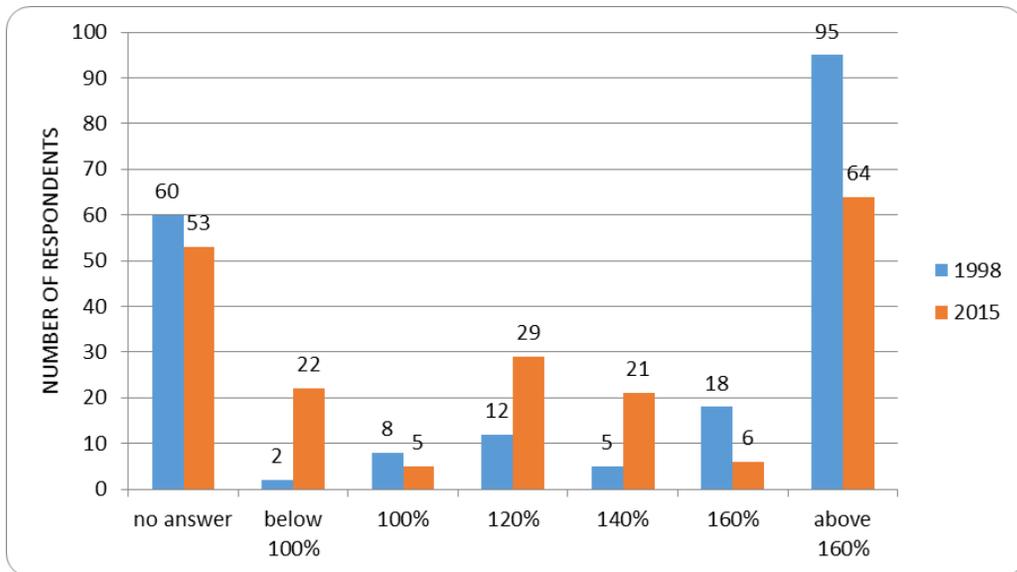


Figure 1. Structure of the sample in relation to the average salary in Serbia

As you can see in Figure 1, the engineers in 1998 belonged to a better-paid category of the population based on the average personal

income in the Serbia’s economy in 1997. The salaries of the 71% of the respondents were higher than the average personal

income in Serbia's economy, while even 48.5% of the engineers had salaries which were 160% higher than the average personal income in Serbia's economy. However, considering the fact that average salaries in Serbia's economy that year, as well as in many previous years, were relatively low, this data does not show that engineering profession was adequately paid in that period. (The average income in the economy of the Republic of Serbia was 133\$ in 1997, while it was necessary to give more than two average salaries for the basic needs of a four-member family. (Survey on Income in Serbia from 1965 to 2005, 2006). The engineers in 2015, on the other hand, have salaries which are lower than the average income. Even 11.5% of the respondents had salaries below the Republic's average, while the salaries of 32.5% were higher than 160% of the Serbia's average (The average income in the Republic of Serbia was 379\$ in 2015, and it was necessary to spend 1.5 average salaries for the needs of a three-member family (Central Registrar of Compulsory Social Insurance, 2016)). The results of the research in the USA also show that engineers are not best-paid professionals (Johonston, et al., 2000). The best-paid engineers in the USA earn twice less than doctors and 25% less than lawyers. However, on the scale of 22 occupations, engineering professions are among the first half of the occupations based on their annual incomes. Research conducted in Australia showed that engineers' consumer life roles can also influence the quality of their work life (Arndt, et al., 2017).

The important dimension of measuring the quality of life is self-evaluation of personal material well-being (Diener and Suh, 2016). Thus, we asked the respondents whether they were satisfied with their salaries. The engineers who were respondents in both periods expressed their dissatisfaction with the salary, and the engineers in 2015 have expressed less dissatisfaction (41%) when compared to the engineers from the public companies in 1998. The statistically

significant difference between those two groups regarding the question about (dis)satisfaction with salaries is on the level  $p < 0.01$  (Figure 2).

The answers to the question about the perception of engineers regarding their salaries and the salaries of other experts in organizations do not differ in 2015 research from those received in the 1998 research.

- 10% of the respondents believe that their salary is better than the salaries of other professionals in the organization,
- 62% of the respondents said that their income is similar to the incomes of other professionals in the organization and
- 24% of them said that their salary is worse than the salaries of other experts in the organization.

The engineers' dissatisfaction with incomes has been confirmed in other research. Raudsepp, E. (1988) concluded in his study that for the engineers it is more important that the salary they receive is proportional to the work they do and that it is equal to the salaries of their colleagues' engineers within the organization than the amount of the money they receive. An engineer is aware that according to the standards of today's society a person is successful based on the sum of money he earns. We can say that a salary is a tangible evidence of how an employee is rated in his organization. Therefore, a salary is a crucial symbol of success and status. When an engineer asks for a certain salary, he, in fact, asks for recognition for what he believes he deserves due to his qualifications, performance and professional zeal.

Regarding the residential status, it can be noticed that engineers in 2015 had a better position than those in 1998 (statistically significant difference is at the level  $p < 0.01$ ). More than a half of the respondents (53%) possessed their residential space. In the research in 1998, there were 41% of engineers with their residential space. 33.5%

of the respondents lived with their parents, while 12% of them were subtenants. In the period of the first research more than a quarter of the respondents (25.5%) did not have their residential space.

The answers to the question regarding the land possession reflect statistically significant differences (at the level  $p < 0.01$ ) between two samples. A higher percentage of engineers in 2015 (16%) stated that they own some land, while only 6% of engineers in 1998 said the same thing.

Besides the salary, 39% of the respondents had additional sources of income, with 7% of them who had land rent, 2% with flat or house rent, 19% had an additional job, while 7% of the engineers provided additional income with part-time work in another company. In the 1998 research, only 8% of the respondents had additional sources of income with additional work.

### 3.2. The social influence of engineers

In the terms of quality of life, the social power of engineers, like other professions, can be observed at two levels:

- a) the participation of engineers in the political elite of our society
- b) the participation of engineers in the circles of power within the organization where they work.

Besides the former USSR (Shoup, 1990) where the engineers were 70% of the members of the Politburo of the USSR, the members of this profession most frequently cannot be found in political organizations. During the period of the socialist system of the Socialist Federal Republic of Yugoslavia (Serbia was a federal unit of the SFRY), engineers were members of the only political party in the country, but they were not among the leaders of the party. The party leaders were mostly economists. The professional structure of the actual political elite shows that engineers do not do comprises. Out of 73 members of the political elite with the president of the

country and the prime minister, and also including the ministers, vice presidents and presidents of the board of the National Parliament, the president's advisers and mayors, 8.32% of them are engineers. Economists (25.2%) and lawyers (20.2%) are dominant in the professional structure of the political elite in Serbia.

Authors assume that the reason for the distance of engineers from the political elite can be found in the characteristics of the professional work. The research (Becker, 1956) of professional socialization of the engineers in the USA show that they aspire towards managerial positions on all levels of decision making in organizations, considering it a part of their professional work, but they do not aspire towards political careers. The system is restrictive to them so that their knowledge is not enough for their break into the political institutions.

The power of engineers in organizations is the expert one. This fact can increase the quality of work life. It is legitimate and relates to the possibility of working within their expertise. There are deformations in two possible directions due to the legitimate status of engineers' power. The first direction is the reduction of the engineers' power through the interference of bureaucratic or some other authority. Managerial, political or another type of authority interferes into the area which is the field of the professional work of engineers. The other direction is when the legitimate professional power of engineers starts to spread into the areas that are not within the domain of their expertise, which is when the engineers take over the organizational power. The engineers' need for decision making and their break into the areas of management, for which they are not professional enough, is widespread among the engineers in all societies. The managerial function has the elements of force (due to the power) which impose the will or extorts obedience of all the participants in work organizations. The central or marginal position of engineers in business

organizations relates primarily to their participation in the circles of power in the organization.

According to the results of international research (Gouldner, et al., 1967) and the research done in SFRY (Županov, 1969), engineers have aspirations to managerial position. There was a relatively small number of the respondents from the first sample (1998) who performed managerial roles in their organizations, while there was a significantly larger number of engineers in 2015 that were in managerial positions in their organizations. In 2015 there were 16.5% of the engineers in the highest circles of power in organizations, with 10 of them as top managers, while in the research in 1998 only 9% of the respondents were in these positions, and only 2 of them were top managers. The highest managerial roles had 6 engineers from the second sample (twice more than in the 1998 research), while most of the respondents (28%) had lower managerial positions. A little more than a half of the respondents (51.5%) were not in the managerial circles in their organizations. We believe that the size of the organization (small and medium companies) in which the

respondents from the 2015 research were employed, influenced the fact that a higher percentage of engineers from this sample had managerial roles, while the engineers from the 1998 research were mostly employed in large enterprises.

When in 2015 we asked the engineers – managers which factors had the significant influence so that they should be chosen for managerial functions, we have received the following answers: the engineers – managers mentioned a social-political activity, university education, and organizational skills as the most important factors. Comparing to the respondents in 1998 (Table 1) we can notice that for the respondents in 2015, the social-political activity was a more important factor for the managerial functions, while that factor was almost insufficient in the 1998 research. Statistically significant differences at the level  $p < 0.01$  were also established with the university education and manager's recommendation factors. As you can see in Table 1, a larger number of the respondents from the first sample stated those factors as the key factors for their managerial positions.

**Table 1.** The degree of influence of different factors on the selection of engineers for managerial function in 1998 and 2015

	factors	IMPACT EVALUATION MEAN value 1998	IMPACT EVALUATION MEAN value 2015
1	University education	2,62**	2,32**
2	Manager's reference	2,33**	2,03**
3	Professional reputation (professional skills)	2,33	2,28
4	Work experience	2,05	2,04
5	Organizational skills	2,18	2,32
6	Demonstrated entrepreneurial skills	1,95	1,91
7	Reputation of your company	1,74	1,74
8	Language skills	1,34	1,41
9	Social and political engagement	1,17**	2,33**
**The differences between the interviewed groups of engineers are at a significant level of $p < 0,01$ .			

As the most important motives for accepting the managerial function, the interviewed engineers-managers mention: the opportunity for expressing creativity, social influence, social reputation, and salary. Comparative overview of the answers received in 1998 and 2015 is presented in Table 2.

As you can see in Table 2, the engineers from the second sample were more motivated by high salaries for taking a managerial function (the salary occupied the fourth place in the first research). On the other hand, the possibility of expressing creativity (which was the most significant motive in the first sample) was ranked on the third place. It is important that for the both groups of engineers – managers, the dimensions such as the income, social

influence, and social reputation were very significant for accepting a managerial position. The interesting fact is that the engineers – managers from both samples put the motive of social usefulness at the last, ninth place which indicates a poorly developed sense of social responsibility. A research conducted in Johannesburg shows that engineers believe that money, fancy titles or status are not as important for accepting managerial position and for career success. They believe that it is more important to have a meaningful and fulfilling role and position where they continually influence other people's lives, and consequently, contribute and add value to the organization (Visagie & Koekemoer, 2014:51).

**Table 2.** The importance of the motives for accepting the managerial function in 1998 and 2015

	MOTIVES	THE LEVEL OF IMPORTANCE MEAN value 1998	THE LEVEL OF IMPORTANCE MEAN value 2015
1	opportunity for expressing creativity	2,35	2,24
2	social influence	2,27	2,28
3	social reputation	2,25	2,18
4	Salary	2,03*	2,29*
5	self-actualization	2,00	2,01
6	independence at work	1,86	1,67
7	opportunity for broader communications	1,87*	1,58*
8	possibility for further advancement	1,79	1,95
9	being a useful member of society	1,65	1,43
*The differences between the interviewed groups of engineers are at a significant level of $p < 0,05$			

Regarding the motives for their transfer into managerial structures, it is necessary to take into account the engineers' answers to the question whether their expectations from the engineering profession were fulfilled. 95% of the engineers from 2015 research and 90% from 1998 research gave negative answers. As the reasons for not meeting

expectations from engineering profession, the respondents from both samples emphasized: inadequate use of engineers' skills (25%), low salaries (38.6%), low social reputation (14.1%) and a little influence on decision making within a company (22.3%).

Some more recent research (Bigliardi et al., 2005) has shown that the feeling of the engineers that their professional knowledge is not used, and that they are forced to do some routine work, has a strong influence on their work. Engineers feel, according to these authors, great disappointment when they see that their knowledge is underestimated and not used. This kind of a work position breaks the professional pride of engineers and strongly influences their estrangement from professional work. According to the results of the same research, inadequacy of an awarding system is highly related to the dissatisfaction with engineering career and with the commitment to the company. These authors concluded that engineers, dissatisfied with material awards, are committed neither to work nor the organization. In addition to this, engineers want to take part in the decision-making process which determines the technical and technological direction of the company's development. They want to be asked, and not to feel like a trivial part of the organization.

The transfer into a managerial position carries a lot of advantages that influence the fact that professionals transfer into managerial structures. Those are, above all, a higher salary, higher reputation, and a possibility for further career advancement (within and out of a company), and also the impression that the managerial position enables innovative work. All, mentioned advantages are closely connected to the enhanced quality of life. However, the transfer from engineering into a managerial position also has some disadvantages. It is primarily the change of a profession, which implies a practically wasted effort invested in gaining specific knowledge (unless this is a previously planned activity for achieving managerial position), as well as the problem due to the lack of professional autonomy because of the particular role of managers.

### 3.3. The social reputation of engineers

Many things can influence the status of engineering profession, and among them, the attitude of the public towards the role of engineers in creating positive or negative social consequences of technological innovations. This attitude may significantly impact the quality of life of engineers. The growing significance of the primary role of technology in the society has probably raised the reputation of engineers in recent years.

The reputation of engineers varies from country to country (Johonston et al, 2000). Engineers have a high reputation in France and Germany. However, in Great Britain, the reputation of engineers is marked by some surprisingly widespread prejudices against all applied technical activities (Visagie and Koekemoer, 2014). The information collected in the surveys in the USA have been done with a whole spectrum of suggested professions from doctors as the most prestige profession, with the score of 86, till the lowest ranked occupation, a janitor with 22 points. The respondents gave 72 points to aero-engineer and dentists, 64 points to electro engineers and medical staff, accountants, economists, and professors and teachers in primary and secondary schools. The engineering profession as an organizational profession is not enough recognized with the public and this influences the fact that its social reputation is lower than the reputation of traditional professions like doctors or lawyers (Vuckovic, 2012).

In the 70s of the last century in the period of intense industrial development after the war in the former SFRY, according to the results of research (Treiman, 1977), the most prestigious profession was a machine engineer profession. It was at the same time the profession with the highest rate of growth in former Yugoslavia. However, contrary to expectations, this increase did not have an adverse effect on the reputation. Sporer (1990) explains this with the fact that an engineer is a symbol of progress, complex

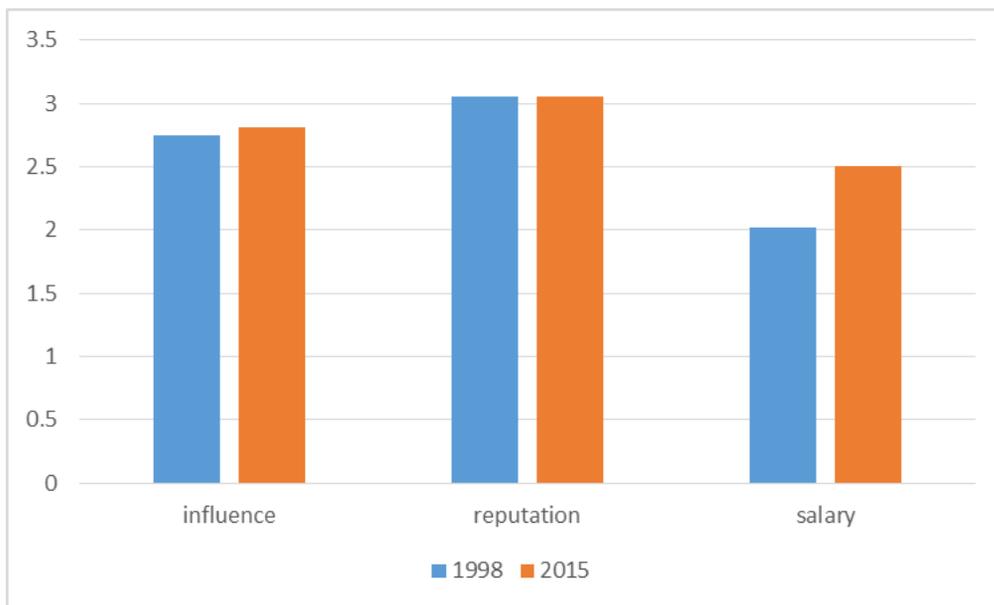
industrialization, and rational approach.

Authors estimated the social reputation of engineering population in this research by using the answers to the questions about awards and social recognitions that our respondents received from the company and other social organizations. Moreover, we examined the answers to the questions which referred to how the engineers saw the social position of the engineering profession and the social reputation of the engineers in relation to the other professions in the contemporary Serbian society.

Regarding the awards and social recognitions in the 2015 research, there were fewer engineers than in the first sample that received awards for their professional work. Only 11.5% of the respondents said that they had received one award for their work during their professional careers. There were 15%

of such respondents in the first sample. Regarding the social recognitions, the answers of the two groups of the respondents are the same. Only 4% of them received one social recognition during their professional careers.

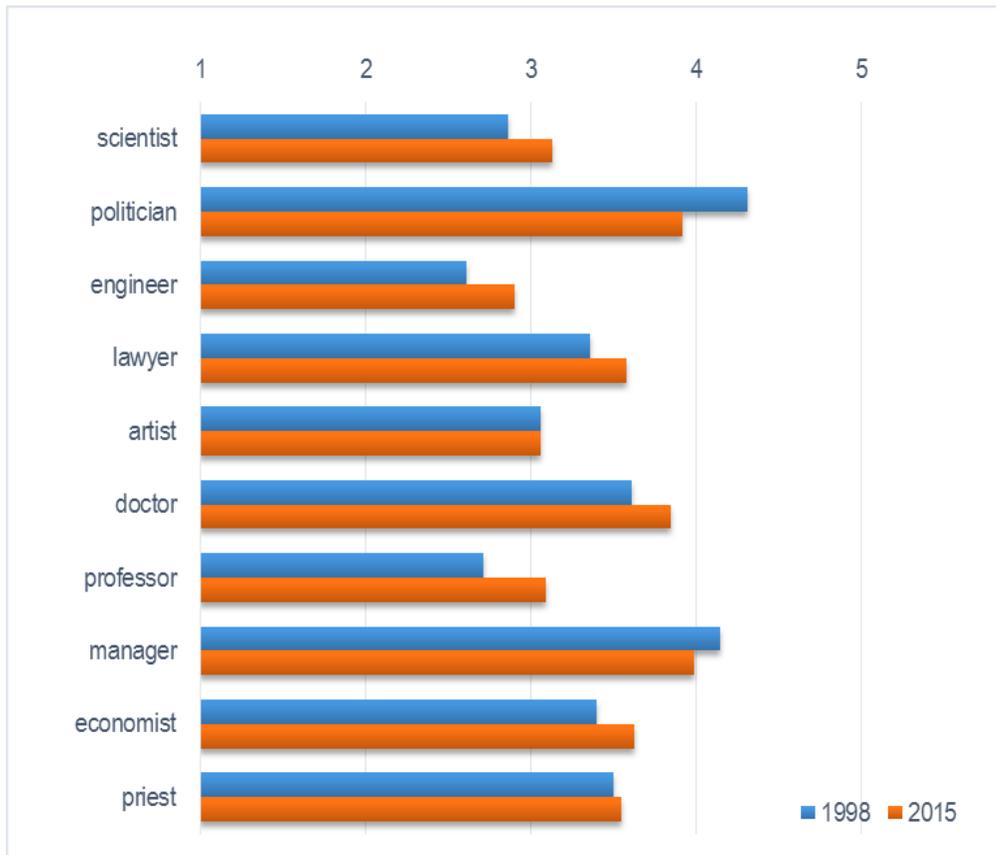
Authors have received the following answer distribution to the question: “How would you rank your profession (1 to 5) according to the criteria of influence, material incomes, and social reputation”. Out of three dimensions of social position, the respondents marked most positively the social reputation of their profession, although they didn’t give it a high mark (3.05), while the lowest marks were given to the material incomes (2.51). The distribution of the answers for the 1998 and 2015 research is presented in Figure 3.



**Figure 3.** The structure of the sample related to the rank of the engineering profession

As you can see in Figure 3, the respondents from the second sample ranked engineering profession higher regarding the material incomes, than the engineers from the 1998 research. This fact statistically relates to the fact that a larger number of engineers in

2015 expressed their satisfaction with the salaries in their organizations than those in 1998.



**Figure 4.** The structure of the sample related to the assessment of reputation of specific professions in Serbian society

According to the answers to the question: “Please rank 1 to 5 your opinion about the reputations of certain professions in your society?”, it may be concluded that the respondents ascribed the highest social reputation to managers (3.99), politicians (3.92) and doctors (3.85). The lowest ranked professions based on the social reputation are engineers (2.90), artists (3.06) and scientists (3.13). In Figure 4 can be seen the data received in the 1998 research 2015.

As you can see in Figure 4, the respondents from the second sample attributed higher social reputation to professors, engineers, economist and lawyers. On the other hand, engineers interviewed 1998 attributed higher social reputation to politicians and managers.

## 5. Conclusions

The Serbian society in the period from 2000 until today, in the years of intense processes of post-socialist transformations, has been an inadequate ambience for the professional satisfaction of engineers and their quality of life. The privatization as the key factor in the transition of the Serbian society has slowly brought the expected benefits such as the growth of social product per capita, the employment growth, the reduction of unemployment and poverty, a higher standard and the general welfare of the citizens.

The results of this research show us that the social position of engineers and their quality of life was not favorable in the last decades

in Serbia. The results of this research indicate that the dimensions of social position, such as the material standard and the social influence of engineers in Serbia today are a little more favorable than they used to be at the end of the 90s in the last century.

A majority of the engineers from the presented research have not achieved their expectations regarding the engineering profession, and they believe that the main causes for this are, besides inadequate work roles that do not allow creativity and creation, also low incomes, low social influence and low social reputation of engineers in the contemporary Serbian society. The dissatisfaction with their positions within organizations, low incomes and no opportunities for innovative and creative work motivate engineers to leave the engineering profession and take managerial positions expecting that the organizational power will provide them a better social position and the conditions for the creative engineering work.

The engineers in Serbia achieve the social influence in the organizations only if they are in managerial positions. There are almost no engineers in the political elite in Serbia. Nowadays in Serbia, the engineers who are employed in small or medium companies are more frequently found in the circles of power than their colleagues in big state companies. These facts represent the potential areas for future research in terms of social analysis and quality of life.

It was shown in the 1998 research that university education and manager's recommendation were significant factors for the selection of engineers on the managerial positions. However, we concluded that important factors for the selection of engineers on the managerial positions in the society of post- socialist transformation were a social – political activity.

Although the engineers ranked the dimension of engineers' reputation in the first place, comparing to the reputation of

other professions in the contemporary Serbian society, the engineering profession is positioned on the last place.

The results of our research show that today, like 15 years ago, the profession scientist was the lowest ranked profession regarding the social reputation. Therefore, this conclusion, as well as all the previous results of our research show that it is necessary to introduce a model for creating a social ambience in which the knowledge, including the engineering one, will contribute to the social development and the rise of the welfare of all people. The final consequence of this new model should be increased level of quality of life. Recent research showed that majority of companies when hiring engineers take more in consideration their Soft Skills than their Hard Skills (Cimatti, 2016). This trend happens because the companies in order to be competitive needs to create good and efficient teams and collaborative working atmosphere (Cimatti, 2016).

At the same time it is very important to keep in mind that in the turbulent economic conditions in which the Serbian economy subjects are today, there is a real danger from the limiting factors such as the risk of business. According to the research (Matotek and Regodic, 2015), the main source of risk in every business system is the human factor that endangers the stable functioning of the company with his intentional or unintentional behavior, from the aspect of business success and the survival of the organization. In this regard, it is important to stimulate the ethical behavior of engineers in order to reduce this kind of a risk to the minimum and to improve the economic efficiency of business.

Recent research showed that satisfaction with social and economic indicators of the quality of life is the strongest predictor of engineers' happiness (Michalos, 2017). It can be concluded that social position of Serbian engineers, which consists of material status, social power, and social reputation,

considerably influence engineers' quality of life. If they had higher material status, they would have better health care insurance, living conditions, etc. If Serbian engineers' social power was stronger, they would be able to participate in the creation of harmonious political and economic environment. Finally, if their social reputation was higher, different cultural contents and health care services would be more available to them. If the engineers in Serbia had a better social position, it would not only influence the quality of their life,

but of the general public as well. Once engineers' quality of life improves, it would have a positive impact on the society as a whole. If engineers are contempt with their social position they will be more satisfied and motivated at their work which will lead to higher productivity.

The future research on this topic should analyze the engineers' perception of the influence of the quality of life dimensions on their personal life and the level of their satisfaction with the quality of life.

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