

## Public Procurement Employees' Perception on Legal Changes, Perceived Red Tape and Job Stress: Evidence from Serbia

Predrag Jovanovic<sup>1</sup>, Tatjana Ivanovic\*<sup>2</sup>, Milica Maricic<sup>3</sup>, Sonja Ivancevic<sup>2</sup>

<sup>1</sup>*Department of Business Systems Organization, Faculty of Organizational Sciences, University of Belgrade  
Jove Ilica 154, Belgrade, Serbia  
E-mail. predrag.jovanovic@fon.bg.ac.rs*

<sup>2</sup>*Department for Human Resource Management, Faculty of Organizational Sciences, University of Belgrade  
Jove Ilica 154, Belgrade, Serbia  
E-mail.tatjana.ivanovic@fon.bg.ac.rs; sonja.ivancevic@fon.bg.ac.rs  
\*Corresponding author*

<sup>3</sup>*Department for Operations Research and Statistics, Faculty of Organizational Sciences, University of Belgrade  
Jove Ilica 154, Belgrade, Serbia  
E-mail.milica.maricic@fon.bg.ac.rs*

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*Public servants play an important role as guardians, guarantors, and promoters of the regime values who are in frequent contact with the citizens. Having that in mind, it is of high importance to understand their behaviour and attitudes on legal changes, perceived red tape and job stress. The aim of this paper is, therefore, twofold: firstly, to explore the influence of red tape and perceived red tape on public procurement officers' (PPOs) and managers' (PPMs) perception of the new Public Procurement Law in terms of its benefits to public procurement process and to their jobs and job stress, and secondly, to explore the differences between PPOs and PPMs regarding the examined statements. To answer the first question, we proposed a conceptual model which was tested using structural equation modelling (SEM), while to answer the second question we used the Mann-Whitney test. Both analyses were done using the data collected from 115 PPOs and PPMs in Serbia. The results show that PPOs and PPMs share similar attitudes regarding the existence of red tape, perceived job stress, and the influence they expect the new legislation will have on their jobs. Their expectations of the new legislation as well as their perception of job stress are found to be partially influenced by red tape. As PPOs are not that convinced that the new law will improve their job, it may be concluded that the changes the new law will bring are not substantial enough.*

**Keywords:** *Public Procurement; Red Tape; Employees; Job Stress; Structural Equation Modelling.*

### Introduction

The increasing interest in investigating red tape has begun with Buchanan's (1975) and Kaufman's (1977) studies, which later inspired numerous other studies that followed (Rainey *et al.*, 1995, Pandey & Moynihan, 2006) making it one of the most researched issues in the public management literature (Brewer & Walker, 2010a).

Bozeman's (1993, p.283) accepted definition refers to red tape as "rules, regulations, and procedures that remain in force and entail a compliance burden for the organization but make no contribution to achieving the rules' functional objectives". Both the literature and practice have shown that higher levels of red tape exist in the public sector than in the private sector due to stricter external control, the necessity for liability, and the transfer to inter-institutional control systems for the public services' conveyance (Brewer & Walker, 2010b). Red tape's negative implication on public companies' performance is probably the pivotal argument in the literature, with the explanation lying in its onerous rules (Jacobsen & Jakobsen, 2018).

In the public sector, managing public procurement represents the central point of delivering public services (Fagbadebo & Dorasamy, 2021), while procurement policies

are a usual source of red tape (Davis & Stazyk, 2013). Approximately 12 % of global GDP is spent annually on public procurement, while developing countries spend even up to 25 % of their GDP on public procurement (Bosio *et al.*, 2020). Such a high cost highlights the crucial importance of effective public procurement for government functioning as well as economic development (Fazekas & Blum, 2021; Kumar *et al.*, 2017).

Having in mind that the majority of studies on red tape have been conducted in highly developed Western countries (Brewer & Walker, 2010b), we believe that the investigation of procurement red tape in a non-Western milieu, that is to explore the Western management theory's relevance in a developing country of South-East Europe, is a worthwhile endeavour.

In the public administration literature various studies may be found dealing with public procurement legislation in different countries around the world (e.g. Bosio *et al.*, 2020; Czarnitzki *et al.*, 2020; Kumar *et al.*, 2017; Gaprindashvili, 2015; Amemba *et al.*, 2013; Ateljevic & Budak, 2010). In Serbia, the regulation of public procurement based on the EU directives started in 2002. The last change in regulation occurred in December 2019 when the new Public Procurement Law (PPL) was enacted (Public Procurement Law, 2019).

Due to the significant volume of changes, the new law started with implementation on July 1, 2020, thus providing public procurement officers six months to get acquainted with the new regulation. According to the European Commission's Serbia 2020 Progress Report: "*The new law on public procurement is an important positive step towards alignment (with directives)*" (European Commission, 2020, p.73). One of the significant changes that the new PPL brought was the reduction of administrative burden realized by widening the use of electronic means.

This paper will not explore red tape in the existing law, as it is often the case in the research of this topic, but will shift the focus to the expectations from the new law, which had been, at the time this research was conducted, adopted but its implementation did not start yet. The timeframe between the date when the new law is adopted and the date it becomes effective is important (in the case of herein examined Public Procurement Law in Serbia it is 6 months) and particularly demanding to officers because during that period they have to operate by the existing law and at the same time to prepare themselves to act under the new law. Such a situation is expected to create additional pressure on public procurement officers, which could generate additional job stress. The perception and the resulting attitude of public employees during that period may have a direct impact on their success to master the new rules.

In this research, our approach to the red tape issue is to treat it as a perceived phenomenon. Since employees' perception of the company's procedures and rules have confirmed direct and substantial consequences on their performance (DeHart-Davis & Pandey, 2005), it is of the utmost importance to examine the impact of red tape on their work as well. Having in mind that red tape is an organizational problem that affects everybody in the organization from the top management to the lowest level of service providers (Yousaf *et al.*, 2014), our research intended to measure red tape based on the perception of both public procurement officers and managers.

Being also linked to job stress, red tape may have a deteriorating effect on public workers' well-being (Giauque *et al.*, 2012a). The negative effects of job stress and red tape have often been highlighted (Belle & Cantarelli, 2017; Kouchaki & Desai, 2015). However, job stress has been investigated the least in the public administration literature (Kroll & Vogel, 2021), while most studies on job stress have been conducted in companies operating in private sector (Giauque *et al.*, 2012b). That is the reason why we investigated the impact of red tape on the job stress of public employees and managers.

The paper aims to investigate whether red tape and procurement red tape influence public procurement employees' (PPOs and PPMs) perception of the new law's effects on public procurement practice (EP Law) and their respective jobs (EP Job). We suspect that the PPOs' and PPMs' perception of the new law's influence both on public procurement in general as well as on their work would differ from the outcomes expected by the creators of the new law that were used to justify its implementation. Furthermore, we intend to determine the relations between EP Law and EP Job with other aspects of work, such as job stress. More generally, we will explore whether red tape, procurement red tape, EP Law and EP Job influence the job stress of

public procurement employees. Additionally, the paper aims to investigate whether there are differences in the PPMs' and PPOs' attitudes regarding the red tape, procurement red tape, job stress, EP Law, and EP Job.

## Literature Review

The necessary bureaucracy or formalization encompasses those rules which, despite possibly entailing an increased compliance burden, attain the rules' goals (Van Loon *et al.*, 2016). A large degree of formalization referring to justified and effective written rules, regulations, and procedures reduces risks and makes the work of public procurement officers easier. However, red tape is not equivalent to the formalization in the companies - it does not refer to the existence of procedures and rules per se (Moynihan, 2007). It refers only to the pathological and damaging elements of bureaucracy in contrast to healthy formalization (Davis & Stazyk, 2013). Therefore, the red tape includes only the rules entailing an increased compliance burden but lacking functionality (Van Loon *et al.*, 2016) or "*burdensome administrative rules and procedures that have negative effects on the organization's performance*" (Yang & Pandey, 2009, p.355).

With this background, it may be inferred that red tape is a negative phenomenon (Sharma *et al.*, 2019; Cooke *et al.*, 2019; Kaufmann *et al.*, 2018; Van den Bekerom *et al.*, 2017; Brewer & Walker, 2010b; Scott & Pandey, 2005;) affecting performance for both employees and organizations.

**Procurement red tape.** A significant source of red tape in public organizations is the procurement function. Studies have shown that public companies are exposed to extensively restraining purchasing regulations which can comprise red tape (Davis & Stazyk, 2013). Laws and rules connected to purchasing that are imposed by external authorities most frequently entail red tape (Rainey *et al.*, 1995). Furthermore, research has provided proof that the legalistic approach to public procurement with the emphasis on control contributes significantly to red tape in public companies (Davis & Stazyk, 2013). Therefore, Pandey and Scott suggested that the red tape concept should be expanded to encompass different activities in the organization, such as procurement, thus creating the term 'procurement red tape' (Pandey & Scott, 2002). Since procurement red tape has been recognized as widely spread in the public sector and investigated extensively (e.g. Scott & Pandey, 2005; Cooke *et al.*, 2019), for its relevance it has become the subject of our research.

**Job stress** Job stress can be defined as one's feeling or awareness of a specific dysfunction resulting from different demands, constraints, or opportunities related to presumably significant outcomes connected to work (Parker & DeCotiis, 1983). Individuals experience job stress when they perceive that the job requirements exceed the knowledge, skills, ability, and resources they possess (Bao & Zhong, 2021). A large number of job-related factors may induce stress and gradually affect employees' well-being (Quratulain & Khan, 2015). Extensive workload, the lack of work-life balance, workplace conflicts, and also procedural restrictions are positively related to the perception of job stress (Hamann & Foster, 2014). The emotional status and actual working capacities of employees depend to large extent on

job stress. In addition, fatigue and energy loss, the feeling of pressure, enervation, and burnout stem from job-related stress (Quratulain & Khan, 2015; Ivancevic *et al.*, 2020; Ivanovic *et al.*, 2020).

### Conducted Research

**Hypotheses and proposed conceptual model.** In attempt to increase efficiency of public administration, many governments designed and implemented public sector reforms worldwide. The reforms aimed to reduce and even eradicate the roots of procurement red tape. However, the attempts to curtail red tape intrinsically require governments' procurement procedures and processes to be updated (Davis & Stazyk, 2013).

European Union (EU) regulation on public procurement reduces administrative burden and bureaucracy thus creating prerequisites for higher efficiency of procurement processes. By incorporating EU directives into national legislation, Serbia is creating preconditions for red tape reduction and increasing efficiency of public procurement. For example, the new Public Procurement Law enables wider use of electronic means of information and communication thus diminishing officers' burden to keep and manage documentation in paper form. However, real life effects of legal improvements in public procurement area depend on several factors, such as organisational decision-making process, reward structure, motivation, etc. (Jovanovic *et al.*, 2021).

In order to estimate how successful regulatory reforms would be in fulfilling the goals of reducing unnecessary administrative burden and diminishing bureaucracy in practice, the perception of both public procurement officers and their managers should be examined and compared. Since both categories have a crucial role in the implementation of the new solutions, their perception and the resulting attitudes regarding the benefits as well as the influence of the new PPL on their jobs are significant factors that should be taken into account. Thus, we hypothesize:

*Hypothesis 1: There is a statistically significant difference between PPOs' and PPMs' perception regarding the benefits of the new PPL for public procurement practice.*

*Hypothesis 2: There is a statistically significant difference between PPOs' and PPMs' perception regarding the influence of the new PPL on their respective jobs.*

Red tape analyses usually consider managerial perception of the issue. However, Walker and Brewer emphasize relevance of the hierarchical approach in the red tape perception adding that it is influenced by different factors across different levels of organizational hierarchy (Walker & Brewer, 2008). As they pointed out, employees at managerial positions pay more attention to wider organizational aspects, while employees at lower positions dominantly focus on the specific tasks they perform. It could be assumed that professionals at the lower level of execution are faced with the additional red tape coming from internal organization sources. Due to that, it could be expected that officers' perception of red tape would differ from their superiors' perception (Quratulain & Khan, 2015). Therefore, we hypothesize:

*Hypothesis 3: There is a statistically significant difference in the perception of red tape between PPOs and PPMs.*

Recent research that analysed the influence of the PPL provisions on the duration of purchasing procedure proved that only 23 % of the actual duration could be explained by legal deadlines, while the remaining share should be attributed to other factors (Cudanov, 2018). Therefore, the success of the new PPL implementation in practice largely depends on the PPMs' and PPOs' perception of the new law. A more positive perception of the legal novelties in terms of reducing red tape should result in better attitudes of those who have to implement them, their better performance, and the outcomes of the process. Despite the fact that red tape's perception changes with the level of hierarchy and that officers and their superiors have a different scope of work and responsibilities, we assume that both PPOs' and PPMs' perception of red tape will shape their perception of the new PPL's effects on the procurement process and their respective jobs. Thus, we hypothesize:

*Hypothesis 4: The perception of red tape and procurement red tape has a significant impact on PPOs' and PPMs' perception of the new PPL benefits for public procurement practice.*

*Hypothesis 5: The perception of red tape and procurement red tape has a significant impact on PPOs' and PPMs' perception of the new PPL effects on their everyday job.*

As previously stated, different job demands and constraints influence employees' work-related stress (Parker & DeCotiis, 1983). Public administration employees' stress can be induced by various factors. For those working at lower levels of hierarchy, formalism and rules they need to comply with are even more numerous and burdensome due to additional internal procedures. On the other hand, their managers have wider areas of responsibilities which can also be potential sources of job stress. For example, the head of a procurement department is responsible for all the procurements plus a wider set of activities such as the proper planning of procurement processes and their alignment with the budget, the alignment of procurement timing with stocks, etc. Due to the conspicuous differences between their jobs, we presume the following:

*Hypothesis 6: There is a statistically significant difference between PPOs' and PPMs' job stress level.*

Empirical studies have also explored the relationship between one's feelings and red tape (Giauque *et al.*, 2012a; Brewer & Walker, 2010a). Research examining both red tape and formalization discovered that formalization decreases managers' alienation, while red tape increases it (DeHart-Davis & Pandey, 2005). Higher formalization in form of detailed prescription and rules should not be considered a priori negative from PPOs' perspective. If procedures were well designed, an officer would perceive them as useful because they reduce his/her job stress coming from dilemmas and risks on how to proceed in certain situations. Having in mind that both PPOs and PPMs are exposed to different sources of job stress, it is useful to gain

information on the red tape's impact on job stress on each of the two employee groups. We hypothesize the following:

*Hypothesis 7: The perception of red tape and procurement red tape has a significant impact on PPOs' and PPMs' job stress level.*

It could be intuitively expected that the changes in legislation will increase the level of stress of those who have to implement them for at least two reasons. The first one arises from the fact that PPOs and PPMs are not familiar with the changes since they did not participate in the law's preparation actively. The second reason for the increased stress is associated with the potential penalties in case of breaching the new rules practitioners are not familiar with yet. The paper will try to explore the effects of the perception of something relatively "unknown" (the new law) that should become the reality in the near future on the job stress. It could be assumed that if the new law is perceived as having a positive influence on diminishing administration and

bureaucracy, it may lead to reduced job stress and more positive employees' attitude. In other words, the study will attempt to determine whether the negative effect of legal changes on job stress prevalent in public administration is overestimated or not. Therefore, we hypothesize:

*Hypothesis 8: The perception of the new PPL's effects on the public procurement process as well as PPL's impact on public procurement employees' everyday job impacts PPOs' and PPMs' job stress level.*

Having the above mention in mind, we propose a conceptual model which encompasses hypotheses 4, 5, 7 and 8 (Figure 1).

The conceptual model and the individual hypotheses 1, 2, 3, and 6 have been tested on empirical data collected especially for this study..

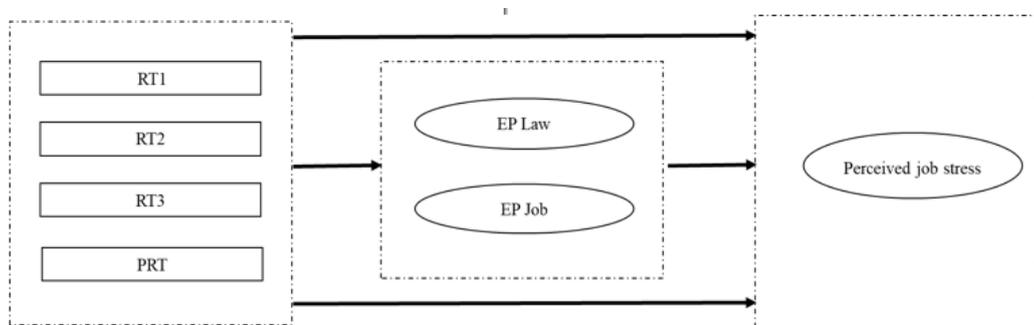


Figure 1. Proposed Conceptual Model

## Research Methodology

**Data analysis.** As our analysis is twofold - we aim to observe the differences in behaviour and opinion of PPMs and PPOs and to observe the relationships between opinions on different aspects, we employed two different statistical analyses. To verify hypotheses 1, 2, 3, and 6 we used the nonparametric Mann-Whitney test, the most commonly used statistical test to assess whether two independent samples come from the same distribution (Nachar, 2008). To verify the proposed conceptual model, we opted for the structural equation modelling (SEM) analysis. The SEM analysis stands on the principles of factor analysis on one hand, and multiple linear regression on the other (Kline, 2005). The SEM analysis can be classified as an advanced statistical multivariate analysis which allows the researcher to test relationships among multiple predictors and outcome variables and to conduct confirmatory analyses of conceptual models (Chin, 1998). Therefore, the analysis allows to reduce the dimensionality of the phenomenon by creating latent constructs and to observe the relationship among them using a single test, like an omnibus analysis (Asparouhov & Muthen, 2009). The quality of the SEM model is measured by the differences and deviation of the collected data from the proposed conceptual model (Bentler, 1990). The more the data deviates from the proposed model, the model is less acceptable and should be improved and altered. Due to the above-mentioned benefits of the analysis and several software developed for its easier application, the

SEM analysis became a widely used tool in business, economic, social, environmental research, and other fields of study (Hair *et al.*, 2014).

So far, SEM analysis has been used to verify the validity of conceptual models in the field of public procurement. For example, Grandia (2016) proposed a model where knowledge and affective commitment to change impact sustainable public procurement behaviour which eventually impacts the application of sustainable public procurement. A couple of years later, Grandia and Voncken (2019) explored how ability, motivation, and opportunity impacted the implementation of sustainable public procurement. Sarawa & Mas'ud (2020) explored how certain personal characteristics and ethical behaviour impact the compliance with public procurement regulations. Lead by these recent studies, we also used SEM analysis in our research.

**Conducted survey and used measures.** To collect the empirical data on which the devised hypotheses will be tested, a questionnaire was created and distributed. Having in mind that the new public procurement law in Serbia was enacted in December 2019, and started with implementation in July 2020, the online questionnaire was distributed to public procurement officers and their managers from January to June, 2020. As can be noticed, the questionnaire was distributed before the implementation of the new Public Procurement Law. The goal was to encompass respondents who have experience in working in the public procurement and were at the moment acquainted, informed, and educated

on the new public procurement law. To increase the validity of the sample, the respondents were only those public procurement employees who participated in the online workshops, trainings and webinars that the Public Procurement Office of the Republic of Serbia organized aiming at informing and educating the stakeholders to implement the new Public Procurement Law (Serbian Public Procurement office, 2020). Based on the available report, there were around 400 participants on all seven organized events (Serbian Public Procurement office, 2020).

The questionnaire consisted of six parts: the part related to basic demographic questions (age, gender, educational attainment, experience in the field of public procurement, and position held) and five parts related to each of the five constructs which make the proposed conceptual model. In the paragraphs to come we provide insights on the statements and questions used to quantify RT, PRT, EP Law, EP Job, and Job stress.

**Red tape (RT).** The measurement of red tape was taken and adapted from (Wright, 2004), and it consists of three items on a five-point Likert-type scale (with “1” used for “strongly disagree” to “5” used for “strongly agree”). The goal was to examine how much the respondents felt restricted in their everyday tasks as a consequence of the internal regulations and rules of organizations’ and managers’ practices, e.g. “The organization seems much more concerned that I follow procedures than that I do a good job” (RT1), “I have the freedom to change my work processes to get the job done.” (RT2), and “Strict administrative rules make it difficult to implement new ideas and initiatives” (RT3).

**Procurement red tape (PRT).** The scale was adapted from (Pandey *et al.*, 2007) and uses a five-point Likert-type scale, e.g. “I believe that the new law will enable me and my colleagues to perform procurement of goods and services in a timely manner.”

**EP Law.** The construct was measured by seven items assessed on a five-point Likert-type scale aiming to check if the new PPL will simplify the public procurement procedure (EP1), reduce unnecessary administration (EP2), accelerate public procurement procedure (EP3), increase the efficiency of the process (EP4), reduce irregularities (EP5), increase competition (EP6), and contribute to more efficient control of the process (EP7).

**EP Job.** The construct was measured by four items assessed on a five-point Likert-type scale in order to check if the new PPL will make employees’ work easier (EP8), simplify his/her work (EP9), increase the efficiency of his/her work measured by the time necessary to perform public procurement (EP 10), and contribute to higher flexibility and initiative in his/her work instead of administration (EP11).

**Job stress.** The job stress scale was adapted from (Crank *et al.*, 1995) and the statements regarding the perceived job stress were rated on a five-point Likert-type scale. The statements assessed were the following: “When I’m at work I often feel tense”; “A lot of times working in public procurement makes me very frustrated or angry”; “I am usually calm and at ease when I’m working in public procurement”; “There are a lot of aspects of my job that make me upset”; “I am usually under a lot of pressure when conducting the process of public procurement”.

## Results

**Sample characteristics.** The sample consists of 115 public procurement managers and officers and includes 81 female respondents who make 70.4 % of the sample and 34 male respondents who make 29.6 %. We can observe a disproportion in the gender of the covered respondents. However, such a result could have been expected as more females are employed in administration than men according to the study of Serbian Statistical Office (Serbian Statistical Office, 2021). The mean age of respondents covered by the sample is 46.374 with the standard deviation of 10.229. The youngest respondent employed in public procurement is 26, while the oldest is 69. The median age is 46.00, indicating that half of our sample consists of individuals who are older than 46. With regard to the highest level of educational attainment, the majority of the respondents have a Bachelor’s degree (46.1 %), followed by those with a Master or Magisterium (30.5 %), the rest have high school, college, or specialist studies degree. Regarding the respondents’ experience in public procurement, it ranges from one month to 38 years. The mean value of the years of experience is 13.827, with the standard deviation of 9.356. Most of the respondents have the position of public procurement officer (64.3 %), while the rest have managerial position (35.7 %). We can conclude that we have covered individuals working in public procurement with multiple years of experience and high educational attainment.

**Exploration of differences between PPOs’ and PPMs’ attitude towards the new PPL.** The first direction of our study is to explore how public procurement managers and officers perceive the new Public Procurement Law. As all the questions were measured on the five-point Likert-type scale, to observe the differences between the two groups, we used the Mann-Whitney test.

The first set of questions that was analyzed was the one related to the respondents’ opinion on how the new law would impact public procurement. Seven statements were observed, while statistically significant differences were found for two of them. The detailed results are presented in Table 1: the statement observed, the mean and standard deviation per observed group, the value of the Mann-Whitney (MW) test, the direction of the found difference and the overall sample mean. Namely, the PPMs believe that the new Law will reduce unnecessary administration, with the mean of 4.073. On the other hand, PPOs are less convinced, with the mean agreement 3.635. Also, PPMs think that the new law on public procurement will increase the efficiency of the process, while the PPOs are not that sure. For all other questions in the set, no statistically significant differences were found.

Nevertheless, additional valuable insights could be found in the inspection of the mean values of the statements related to EP Law (Table 1). The mean values of the statements range from 2.930 (EP6) to 3.791 (EP2). Taking into account that for five out of seven statements in this construct the mean is above 3.500, it can be said that the employees in the public procurement believe that the new law will influence public procurement practice positively.

Table 1

**Mean and Standard Deviation per Held Position, Mann Whitney Test Statistics, Absolute Mean Difference and the Direction of the Observed Difference**

Construct	Question	Position	Mean ± SD	MW test	Difference	Overall mean
EP Law	EP1	PPM	3.707 ± 0.955	-1.354	/	3.557
		PPO	3.473 ± 0.996			
	EP2	PPM	4.073 ± 1.010	-2.224*	PPO < PPM	3.791
		PPO	3.635 ± 1.054			
	EP3	PPM	3.756 ± 1.067	-1.637	/	3.565
		PPO	3.459 ± 0.939			
	EP4	PPM	3.823 ± 0.863	-2.122*	PPO < PPM	3.565
		PPO	3.419 ± 1.034			
	EP5	PPM	3.659 ± 1.109	-1.789	/	3.383
		PPO	3.230 ± 1.245			
	EP6	PPM	3.049 ± 0.973	-0.919	/	2.930
		PPO	2.865 ± 1.114			
	EP7	PPM	3.683 ± 1.011	-0.296	/	3.643
		PPO	3.622 ± 1.094			
EP Job	EP8	PPM	3.341 ± 0.990	-0.334	/	3.270
		PPO	3.230 ± 1.117			
	EP9	PPM	3.317 ± 0.960	-0.820	/	3.183
		PPO	3.108 ± 1.093			
	EP10	PPM	3.415 ± 0.921	-1.479	/	3.191
		PPO	3.068 ± 1.077			
	EP11	PPM	3.512 ± 1.028	-1.422	/	3.296
		PPO	3.176 ± 1.025			
RT	RT1	PPM	2.512 ± 1.227	-1.322	/	2.339
		PPO	2.243 ± 1.191			
	RT2	PPM	3.317 ± 1.293	-1.732	/	3.009
		PPO	2.838 ± 1.471			
	RT3	PPM	3.293 ± 1.365	-0.783	/	3.330
		PPO	3.351 ± 1.418			
PJS	PJS1	PPM	3.488 ± 1.207	-0.576	/	3.548
		PPO	3.581 ± 1.314			
	PJS2	PPM	3.439 ± 1.097	-1.009	/	3.557
		PPO	3.622 ± 1.235			
	PJS3	PPM	2.976 ± 1.107	-0.819	/	2.861
		PPO	2.797 ± 1.314			
	PJS4	PPM	2.854 ± 1.062	-0.598	/	2.965
		PPO	3.027 ± 1.170			
	PJS5	PPM	3.098 ± 1.091	-0.310	/	3.165
		PPO	3.203 ± 1.193			

The second set of questions that was analyzed was related to the respondents' opinion on how the new law would impact their everyday job. Interestingly, for four statements, no statistically significant differences were found, indicating that both PPMs and PPOs share the same view on the impact of the new law on their everyday job (Table1). As for the previous construct, the mean agreement for the overall sample was observed. The mean values of statements range from 3.183 (EP9) to 3.296 (EP11). Taking into account that for all four statements in this construct the mean is below 3.500, it can be said that the employees in the public procurement are not that convinced that the new law will have benefits for their everyday job.

Regarding the RT, three questions were taken into account. However, no statistically significant differences were found, indicating that PPMs and PPOs have the same view of the RT (Table 1). The mean values of RT statements range from 2.339 (RT1) to 3.330 (RT3). For all three statements in this construct the mean is below 3.500.

Interestingly, no statistically significant differences in the perceived job stress were found. This indicates that both PPMs and PPOs are equally stressed on their job.

**Validation of the proposed conceptual model.** The initial step in the conceptual model verification using SEM analysis is to inspect the internal consistency of the proposed constructs which make the model. The most commonly used metric to do so is the Cronbach's alpha (Cronbach, 1951). The acceptable levels of Cronbach's alpha are in the range from 0.70 to 0.95 (Tavakol & Dennick, 2011). Besides Cronbach's alpha, Average Variance Extracted (AVE) and Composite Reliability are used (Fornell & Larcker, 1981). The closer these indices are to 1, the better the internal consistency is. The threshold for the acceptable level for AVE is above 0.5, while for Composite Reliability above 0.7 (Kwong & Wong, 2013).

Next, we present the calculated indices and the number of items (statements) per construct (Table 2). EP Law has an alpha of 0.886, EP Job 0.927, and finally, Job stress 0.869. All Cronbach's alphas are above the 0.70 threshold.

The same accounts for AVE and Composite Reliability, which are above 0.5 and 0.7, respectfully. We can conclude

that all three constructs have high internal consistency that allows us to continue with the SEM analysis.

Table 2

**Obtained Cronbach’s Alpha, AVE, and Composite Reliability per Construct and the Number of Items per Construct**

	<b>EP Law</b>	<b>EP Job</b>	<b>Job stress</b>
No. of items	7	4	5
Alpha	0.886	0.927	0.869
AVE	0.602	0.820	0.660
Composite Reliability	0.913	0.948	0.905

One of the issues we faced prior to conducting SEM analysis was the small sample of only 115 respondents. Namely, the usually conducted covariance-based SEM (CB-SEM) requires strict assumptions to be fulfilled, such as multivariate normality of data and minimum sample size above 300 (Diamantopoulos & Siguaw, 2000; Ruso *et al.*, 2019). As an alternative, a non-parametric SEM, partial least squares SEM (PLS-SEM) which often produces more robust estimations of path coefficients has been proposed (Hair *et al.*, 2011; Reinartz *et al.*, 2009). Therefore, in our study we opted for the PLS-SEM using the SmartPLS 3 software. In the next paragraphs we will present the model validity on the whole sample, on PPMs, and on PPOs.

The first model we assessed was the model on the overall sample. The initial model had a solid fit to the data (SRMR=0.069). In the next steps, we modified the model, by removing the paths which were not statistically significant. To assess the significance of the paths we employed bootstrapping with 5000 samples. We first removed the paths which had the highest p-value. The final model had a slightly better fit to the data (SRMR=0.060). The model assessment after 5000 bootstrap replications is given in detail in Table 3. In the table, we can see the dependent construct, its predictors (independent constructs), the estimated standardised regression coefficient, the mean estimated standardised regression coefficient based on 5000 bootstrap samples, the value of the statistics which assesses the statistical significance of the regression coefficient, the p value, and the R square which provides information on how well the predictors explain the dependent construct.

The first construct, EP Law proved to have two predictors, PRT and RT3. If the respondents think the

existing rules favour strict formalism over procurement outcome (PRT), their perception on the benefits of the new law will be positive. However, if they believe that strict administrative rules make it hard to devise new ideas and initiatives (RT7), their expectations on the benefits of the new law would be less positive. The two predictors explain 43.7 % of the variability of EP Law. We can say that the created model is of good quality since only two predictors are used.

The second construct, EP Job proved to have two predictors, PRT and RT3. Again, if the respondents think the new law will make it easier for them and their colleagues to conduct public procurement procedures (PRT), their opinion on the benefits of the new law on their job will increase. On the contrary, if they believe that strict administrative rules of the existing law make it hard to devise new ideas and initiatives (RT3), the public procurement professionals’ perception of the new law benefits for their job will decrease. The two predictors explain 38.4 % of the variability of EP Job. We can say that the created model is of solid quality, having in mind that only two predictors are used.

The final construct, Job stress, has only one statistically significant predictor – PRT. The obtained coefficient indicates that the more the respondents believe the new law will make it easier for them and their colleagues to conduct public procurement procedures, the less stress will they perceive on their job. The model explains only 4.5 % of the variability of job stress, but having in mind that job stress is a complex phenomenon, the model is more than satisfactory.

Table 3

**Assessment of the Model on the whole Sample: Construct, Predictors, Obtained Standardized Coefficients Mean Standardized Coefficients, T Statistics, and R Square**

<b>Construct</b>	<b>Predictors</b>	<b>Sample</b>	<b>Mean</b>	<b>T statistics</b>	<b>P value</b>	<b>R<sup>2</sup></b>
<b>EP Law</b>	PRT	0.629	0.631	10.998	0.000	0.437
	RT3	-0.194	-0.198	-2.412	0.016	
<b>EP Job</b>	PRT	0.673	0.672	12.471	0.000	0.384
	RT3	-0.175	-0.175	-2.560	0.011	
<b>Job stress</b>	PRT	-0.231	-0.255	-2.536	0.011	0.045

Observing the final model, it can be concluded that the two variables were removed from the model, RT1, and RT2. These two variables proved not to have a statistically significant impact on any construct in the model.

The second model we assessed was the model on the PPMs. The initial model had a low fit to the data (SRMR=0.124). In the next steps, we modified the model, by removing the paths which were not statistically significant. To assess the significance of the paths, again we

employed bootstrapping with 5000 samples. We first removed the paths which had the highest p-value. The final model had a slightly better fit to the data (SRMR=0.110). The model assessment is given in detail in Table 4.

In this case, the first construct, EP Law, proved to have just one predictor, PRT. If the respondents think the new law will make it easier for them and their colleagues to conduct public procurement procedures (PRT), their opinion on the benefits of the new law for public procurement practice will

increase. One predictor explains 45.1 % of the variability of EP Law for PPMs. We can say that the created model is of good quality, having in mind that only one predictor is used.

The second construct, EP Job, as the EP Law, proved to have one predictor, PRT. The predictor explains 39.1 % of the variability of EP Job. We can say that the created model is of solid quality, having in mind that only one predictor was used.

The final construct, Job stress, has three statistically significant predictors – PRT, RT2, and RT3. The obtained coefficient indicates that the more the respondents believe the new law will make it easier for them and their colleagues to conduct public procurement procedures (PRT) and if they have more freedom to change work processes (RT2), the less stress they will perceive on their job. The three predictors explain 32.5 % of the variability of Job stress.

Table 4

**Assessment of the Model for PPMs: Construct, Predictors, Obtained Standardized Coefficients Mean Standardized Coefficients, T Statistics, and R Square**

Construct	Predictors	Sample	Mean	T statistics	P value	R <sup>2</sup>
EP Job	PRT	0.669	0.675	6.935	0.000	0.451
EP Law	PRT	0.638	0.653	7.626	0.000	0.391
Job stress	PRT	-0.438	-0.440	-3.133	0.002	0.325
	RT3	0.378	0.362	1.997	0.046	
	RT2	-0.472	-0.467	-2.959	0.003	

The final model we assessed was the model on the PPOs. The initial model had a low fit to the data (SRMR=0.078). We modified the model in the same manner as the previous two models. The final model had a better fit to the data (SRMR=0.070). The model assessment after 5000 bootstrap replications is given in detail in Table 5.

In this case, constructs EP Law and EP Job, as in the model on the overall sample, proved to have the same two predictors, PRT and RT3. The direction of the impact of these predictors is the same if the respondents think the new law will make it easier for them and their colleagues to

conduct public procurement procedures (PRT), their opinion on the benefits of the new law on their job will increase, while the perception of strict existing rules that make it difficult to implement new ideas and initiatives (RT3) reduce the PPOs' level of satisfaction with both EP Job and EP Law. The obtained models are of good quality: 48.2 % of the variability of EP Job is explained, while that percentage is 40.9 % for EP Law.

Interestingly, for PPOs, the construct Job stress, proved not to have any statistically significant predictors.

Table 5

**Assessment of the Model for PPOs: Construct, Predictors, Obtained Standardized Coefficients Mean Standardized Coefficients, T Statistics, and R square**

Construct	Predictors	Sample	Mean	T statistics	P value	R <sup>2</sup>
EP Job	PRT	0.650	0.648	8.821	0.000	0.482
	RT3	-0.292	-0.294	-3.707	0.000	
EP Law	PRT	0.589	0.595	7.754	0.000	0.409
	RT3	-0.308	-0.321	-3.331	0.001	

Next, we provide a comparison of the three models. Regarding the construct EP Job, PRT was used as a predictor in all three models and it has a strong, positive impact. In the overall model and the model for PPOs, beside PRT, RT3 acted as a predictor, with a negative impact. The R square of the models ranged from 0.437 (overall) to 0.482 (PPOs). The results are somewhat similar for EP Law. Again, PRT was used as a predictor in all three models and it has a strong, positive impact. In the overall model and the model for PPOs, beside PRT, RT3 acted as a predictor, with a negative impact. The R square of the models ranged from 0.384 (overall) to 0.482 (PPOs). The construct Job stress draws attention. Namely, in the overall model, it has one predictor (PRT), but the model was of very low quality with R square close to 5.0 %. However, in the PPMs model, 32.5 % of the variability was explained with three predictors, while in the model for PPOs, no predictors were identified. This might indicate that, although there were no differences in the stress levels between PPMs and PPOs that are statistically significant, different factors influence their levels of stress.

## Discussion

Examining Hypothesis 1, our research has shown that both PPOs and PPMs recognize positive changes that the new law will bring to public procurement practice. From the majority of aspects, officers and managers share positive views to the same extent indicating that PPMs and PPOs share the same level of agreement on the impact of the new law on the simplification of public procurement, speeding up the process, the reduction of irregularities, the increase of competition, and more efficient control. However, a significant difference has been detected in terms of the perception of the reduction of unnecessary administration in public procurement as well as in the increase of the efficiency of the procurement process where officers express less optimism than their superiors. Therefore, it may be claimed that Hypothesis 1 is partially confirmed. The difference in the perception between the PPOs and PPMs may be explained by the fact that managers have wider areas of responsibilities than their officers so in their evaluations they can capture broader aspects of legal changes' influence on the system. For example, a head of a procurement

department is not responsible just for the purchasing process but also for coordinating that process with other processes within an organization, such are budgeting, management of stocks, etc. The positive effects of new legal provisions may not be limited to the procedure itself, which is PPOs' primary concern, but they should also bring broader benefits to the procurement system, which could be better recognized by managers.

Regarding Hypothesis 2, the results have shown that the employees in the public procurement (both PPOs and PPMs) are not that convinced that the implementation of the new law will bring positive changes to their everyday jobs. Our research found no statistically significant differences between the opinion of PPOs and PPMs, indicating that both public procurement officers and their managers share the same view on the impact of the new law on their respective jobs. Therefore, Hypothesis 2 is rejected.

Furthermore, the analysis has shown that PPMs and PPOs share the same view of red tape. In spite of the difference in the perception of red tape between public procurement officers and their managers (since the former focus on their specific tasks, whereas the latter primarily deal with broader organizational aspects), the levels of their perception of red tape do not differ significantly. Thus, Hypothesis 3 is rejected. That means that both groups of employees feel hurt by bureaucracy to the same extent. Our findings confirm the findings of Quratulain and Khan (2015), but differ from the conclusions of Ponomariov and Boardman (2011) who found that managers tend to handle red tape better than their subordinates. According to our research findings, employees in public procurement are not that convinced that the red tape they are facing is high. Our results are aligned with the findings of Stazyk et al. (2011) who found that a number of public managers are highly immune to procurement red tape's effects, but contrary to the results of Feeney and Rainey (2010) who found that public managers reported high perceived red tape.

Red tape's perception has been found to be positively linked to job-related stress of public administration employees (Giauque *et al.*, 2012b). However, our research has found no statistically significant differences in the perceived job stress among public procurement officers and their managers, indicating that they are equally prone to stress in their respective jobs. Thus, Hypothesis 6 is rejected.

Further, in order to investigate Hypotheses 4, 5, 7, and 8 within our conceptual model we assessed three models - the first one included the whole sample, the second one included only public procurement managers, and the third one only public procurement officers.

If we look at the whole sample, it has been found that PRT and RT3 impact the perception of the public procurement employees on the benefits of the new law (EP Law). If the respondents think the new law will make it easier for them and their colleagues to conduct public procurement procedures (PRT), their opinion on the benefits of the new law on public procurement practice will be improved. However, if they believe that strict administrative rules make it hard to implement new ideas and initiatives (RT3), their expectations on the benefits of the new law for public procurement practice would be less positive. The same has been found if we look at the public procurement officers only. However, the analysis of public procurement managers has

found that only PRT has a significant influence on their perception of the benefits of the new law. Therefore, it can be claimed that Hypothesis 4 is partially confirmed.

The literature states that the public managers' perception of red tape negatively affects their attitudes (DeHart-Davis & Pandey, 2005). If we look at the whole sample, it has been found that PRT and RT3 impact the perception of public procurement employees on the influence of the new law on their everyday job. If the respondents think the new law will make it easier for them and their colleagues to conduct public procurement procedures (PRT), their opinion on the benefits of the new law on their job will be more positive. By contrast, if they believe that strict administrative rules of the existing law make it hard to devise new ideas and initiatives (RT3), the public procurement professionals' perception of the new law benefits for their job will aggravate. The same has been found if we look only at the PPOs. In the case of public procurement managers, only PRT has been found to have a significant influence on their perception of the influence of the new law on their everyday job. Therefore, it can be claimed that Hypothesis 5 is partially confirmed.

According to our research, PPOs consider strict rules that make it difficult to implement new ideas and initiatives to be a significant predictor that reduces the level of satisfaction with both the law as well as their jobs. The same predictor appears not to be significant for PPMs. Obviously, PPOs appreciate the opportunities for new ideas and initiatives more than their supervisors. It could be explained by the fact that personnel at the lower level of the organizational hierarchy are faced with more regulation (including internal ones) and constraints than their managers. Provisions in the new PPL that enable more initiatives to the PPOs will increase the level of their satisfaction with the new law which in turn increases chances for the success of the PPL's implementation.

Examining Hypothesis 7, the research results have found huge differences in the three models assessed. On one hand, research results have shown that public procurement managers are sensitive to constraints to change work processes, unnecessary administration, and the limitations of new ideas and initiatives. The results indicate that the more the respondents believe the new law will make it easier for them and their colleagues to conduct public procurement procedures and allow them more freedom to change work processes they participate in, the less stress they will perceive regarding their job. In addition, the strict rules which make it difficult to implement new ideas and initiatives increase the PPMs' level of job stress (RT3). By contrast, no statistically significant predictors of public procurement officers' job stress have been found. If we look at the whole sample, only PRT is found to have a significant impact on all public procurement employees' job stress. Therefore, it may be concluded that Hypothesis 7 is partially confirmed. Our results are partially aligned with the findings of Giauque et al. (2012a) who found that there is a great likelihood for employees in public service who experience large amounts of red tape in their everyday tasks and routines to experience high levels of job-related stress.

Hypothesis 8 is not confirmed. This interesting finding indicates that the perceived job stress of public procurement employees is not influenced by the implementation of the new Law.

## Conclusions

The red tape represents an unnecessary burden on the organization (Cooke *et al.*, 2019), which constrains organizational performance (Bach *et al.*, 2021), and the procurement function is a significant cause of red tape in the public sector. Even though reforms in the public sector have been introduced in many countries around the world since the 1980s (Pollitt & Bouckaert, 2017), they have often been facing difficulties in implementation (Hung, 2021). Bosio *et al.* (2020) explored public procurement laws and practices in 187 countries around the world and found that heavier regulation in this field is more effective in the countries with lower public sector quality, i.e. they concluded that well-motivated public employees need fewer rules in their work. The same was confirmed by other authors (e.g. Coviello *et al.*, 2018, Decarolis *et al.*, 2020). Efficient public procurement is particularly significant for the Western Balkan countries, including Serbia, in order to enable further economic growth and progress towards the EU membership (Ateljevic & Budak, 2010).

Prior studies indicate that the perception of red tape may cause frustrations and decrease public employees' motivation (Moynihan & Pandey, 2007), negatively influencing their commitment to the organization, their work satisfaction and team spirit, and psychological connection to the work environment (DeHart-Davis & Pandey, 2005). Specific reforms, entailing the efforts to reduce red tape, are expected to increase the levels of motivation of public sector officers and their managers (Perry & Hondeghem, 2008) optimizing the work process in terms of the outcomes and employees' work routines. Satisfied and motivated public employees will face less stress at work (Bakker, 2015). The same effects were expected from the new Public Procurement Law.

However, challenges at work can have both stimulating and exhausting effects on workers (Cooke *et al.*, 2019) and the implementation of the new law can be seen as a challenge for employees in different positions. Our research proves that there are no significant differences in the PPOs' and PPMs' perception regarding the new law's benefits to the public procurement process. However, some differences in the expectations between the two groups of employees have been found regarding the reduction of unnecessary administration in public procurement as well as in the increase of the efficiency of the procurement process, where PPOs are less optimistic than their superiors.

When it comes to the difference in PPOs' and PPMs' perception of the influence of the new law on their jobs, there is no statistical evidence of any significant differences. Moreover, the research has confirmed that officers and their managers share the level of perceived job stress and have the same perception of red tape.

The relevance of unnecessary formalism, the existing limitations to change working procedures and to implement new initiatives have all been recognized as PPMs' job stress predictors. This could serve as a justification for policy

makers' efforts to reduce red tape in public procurement in the future.

Our research confirms that PPOs' perception that the new law will facilitate their job depends on their perception that it will simplify and reduce the administration and smooth the whole process of public procurement. Taking into account the results showing that PPOs are not that convinced that the new law will improve their everyday job, it may be concluded that either the changes the new law will bring are not substantial enough or that they are not perceived by the PPOs as such. This finding of the research points out the importance of establishing a good communication between policy makers and practitioners during the process of amending the law in order to provide full understanding of the PPOs and to minimize the risks of their incorrect perceptions.

The widely accepted belief in public administration on the significant differences between the PPOs' and PPMs' perception of red tape and job stress is not confirmed by this research. Moreover, it has proved that red tape is not a significant predictor of PPOs' job stress. Our research indicates that the impact of red tape reduction on PPOs' job stress is limited and that the influences of other factors that are more significant should be explored.

Further efforts on diminishing red tape driven by the reduction of its negative effects on PPMs' job stress must not be limited to the changes of the law and the level of formalization (Mikkelsen *et al.*, 2017). They have to include internal organization measures connected to the elements of inclusion and different modes of motivation. In that way, PPMs' perception of red tape may be transformed to necessary bureaucracy as it was defined by Van Loon *et al.* (2016). Even though this study is limited to the public procurement area, we believe that its findings may have wider implications for the governance and management in public administration.

Regarding limitations, even though the sample size is statistically appropriate, it is limited by the public procurement officers' willingness to participate in the survey. Namely, the majority of them still have a defensive attitude full of distrust towards external organizations and individuals, based on their fear that someone may attempt to influence them or misuse the extracted information, which may have affected their willingness to take part in the survey.

Future research should explore which factors related to PPOs' and PPMs' red tape and job stress perception affect the objectively measured performance of the organization they work for. This could be measured by the duration of the purchasing process or the level of the use of the qualitative selection criteria, such as Most Economical Advantageous Tender (MEAT) criteria, that take into account quality, durability, low environmental impact and other relevant characteristics of products and services beside the price offered. Some studies have already been done in this direction (e.g. Jacobsen & Jakobsen, 2018), but broader exploration is needed as a part of wider efforts in the exploration of the factors that determine organizational performance in public procurement.

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### Authors' Biographies

**Predrag Jovanovic** is an Associate Professor for Management in the public sector at the University of Belgrade, Faculty of Organizational Sciences. He published more than 80 scientific papers with 16 years of working experience in public sector management serving as director of the Public Procurement Office.

**Tatjana Ivanovic** is an Associate Professor for HRM at the University of Belgrade, Faculty of Organizational Sciences. Beside PhD in HRM, she also holds Master in Public Management degree from SDA Bocconi, Italy. Her research interests are in the field of HRM and International HRM.

**Milica Maricic** is an Assistant Professor of Computational Statistics at the University of Belgrade, Faculty of Organizational Sciences. She specializes in the field of applied statistics and data analysis. Her research interests include the development and evaluation of ranking methodologies, structural equation modelling, and multivariate analysis.

**Sonja Ivancevic** is a Teaching Associate at the Human Resource Management (HRM) department, at University of Belgrade, Faculty of Organizational Sciences. She holds an M.A. in HRM and she does research in the fields of employee motivation, engagement, generational differences, heavy work investment and burnout syndrome.

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