# THE BPM IN SERVICE ORIENTED COMPANIES: EXPIRENCE OF SERBIA

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## Abstract

The purpose of paper is to assess business process maturity in service companies in Serbia (according to CMMI model), to identify main drivers and challenges for business process management (BPM) practice in these companies and to propose further efforts in BPM initiatives which can be useful for practitioners and researchers on this field. Questionnaire was used as survey instrument for data collection. The research instrument was sent to 600 companies operating in Serbia Total of 61 used responses were received, out of which 34 were from service companies. The data were statistically analyzed through SPSS statistical package. Results show that for the most companies, process maturity is at the second level of CMMI model, that the main business drivers for BPM practice are productivity/efficiency improvement, and coordination and control improvement, and that the main challenges are

obstacles in new technology implementation. The results suggest that BPM is a viable option for service companies to improve their operations, and paper proposes ways for companies to streamline their efforts regarding BPM.

**Keywords**
BPM, process maturity, service companies

## 1. Introduction

Every company can be seen as a system comprised of business processes that aims to create value for the customer. Business processes should be considered a part of a network of interdependent entities, where each process has a role to play (in value creation, value creation management, or value creation support) (Tomašević et al, 2017). Processes are more than just company resources, they constitute a business system (Stojanović et al, 2011), and that's why it's crucial for companies to manage their processes in order to achieve sustainable performance (Simeunović et al, 2020). Business process management (BPM) is a management discipline focused on using business processes as a significant contributor to achieving an organization's strategy and business objectives by significantly and sustainably improving performance (Jeston, 2014). So, the objective of BPM is to provide consistent execution of the processes and to find room for further improvements (Dumas, 2013).

Given the impact of BPM implementation on gaining a competitive advantage, BPM stands out as a sustainable solution for improving company performances in economies in transition (Stojanović et al, 2017, Stojanović et al, 2019). Althouth BPM concept was developed more than 20 years ago, very few authors (e.g. Gabryelczyk et al., 2016; Pilav-Velic & Marjanovic, 2016; Stojanovic et al, 2019, Gabryelczyk & Roztocki, 2018) explored BPM practice and it's cricial success factors or main drivers in transition economies. Furthermore, as a labor force of service industry has grown significantly and a portion of service industry in gross domestic product has increased, services are increasingly important to the economy (Pyon et al, 2011). In accordance with the above, the paper is focused on researching the state of BPM practice only in service companies in Serbia.

Remainder of paper is organized as follows: after the brief literature review, the research methodology as well as process of collecting survey data is presented. The main results are then given in chapter 4 and discussed in chapter 5. The paper closes with conclusions and future research directions.

## 2. Theoretical background

BPM concept was developed in the 1990s, and today it is a core task of organizational design (Gošnik et al, 2016, Harmon & Wolf, 2012; Sidorova &Isik, 2010). According to Butt (2020, p.27) it is "one of the most comprehensive and encompassing concepts available for businesses to generate a competitive advantage through cost reduction, process excellence, and continuous process improvement". Dumas et al (2013, p.1) defined BPM as "the art and science of overseeing how work is performed in an organization to ensure consistent outcomes and to take advantage of improvement opportunities". Rummler et al. (2010) emphasized that effective business process management can be secured through continuous work on process improvement which is the part of business process management. BPM has become a key organizational competence for all types of organizations, so it is very important for business success (Beverungen et al, 2021).

Although the BPM concept has considered as "a way of life for organizations" (Rummler & Brache, 2004), BPM approaches "do not reflect the specificity of transition economies" (Gabryelczyk, Jurczuk, & Roztocki, 2016). Companies in transition economies experience some very unique BPM-related challenges due to very challenging contexts they operate in (Pilav-Velić & Marjanović, 2016). The number of authors dealing with this topic has increased in the last decade (e.g. Stojanović et al, 2017; Stojanović et al, 2019; Pilav-Velic & Marjanovic, 2016; Gabryelczyk, & Roztocki, 2018; Gošnik et al, 2016; Vukšić et al, 2017). These authors considered success of BPM implementation and factors or main drivers that contribute to

success, gaps in BPM research and its practice in transition economies, etc., but, according to Gabryelczyk and Roztocki (2018) those publications are fragmented and incomplete. Few studies of this type have been conducted in Serbia, and related to the state of BPM in companies in Serbia. One of the latest (Stojanović et al, 2019) revealed the level of BPM adoption in companies in Serbia and identified main factors contributing the most to the success in BPM. Based on that research and the fact that service sector contributes significantly more than manufacturing to world economy, because it generates large revenues and increase employment (Alemán, 2022; Lizarelli et al, 2022; Setiawan &Tumanggor, 2021; Tornjanski, 2016; Vadivel et al, 2021;...) it has been decided to explore the level of adoption of BPM practice in service companies operating in Serbia.

In order to recognize the level of process maturity of BPM practice in Serbia, CMMI model, as one of the most popular organizational maturity assessment tool (Gibson et al., 2006; Humphrey, 1988) was used. A key assumption of the CMMI model is that immature companies cannot provide the consistency of their performance, while mature companies make quality products at effective and consistent manner (Stojanović et al, 2014).

## 3. Research methodology

The purpose of this paper is to determine business process maturity in service companies in Serbia, according to CMMI model and to identify main drivers and challenges for BPM practice in these companies. Paper also aimed to propose further efforts in BPM initiatives which can be useful for practitioners and researchers on this field.

In order to fulfill the aim cited above, questionnaire, as survey instrument, was used. Questionnaire included 27 questions divided into three sections. The first section contained questions about business process improvement practice, the second section included questions about companies' capabilities, goals and competitive advantage and the third section of questions refers to company and respondents. Most questions required single or multiple choice. Some questions included an open form in case when offered answers couldn't reflect the views of the respondents. I order to face validity and comprehensibility, the questionnaire were test on a group of academics, before being launched.

The questionnaire was mailed randomly to 600 companies operating in the Serbia. It was addressed to general managers and (where applicable) department managers or business and process analysts. Authors also used social professional network group LinkedIn to contact potential respondents. The cover letter accompanying the survey contained a note guarantying complete anonymity of respondents. In addition, the letter explained the nature of the study, and provided brief descriptions of the BPM. Respondents were asked to either complete the questionnaire or pass it on to the officer in the company that would have oversight of or responsibility for implementing business process management. Data collection was conducted from February to May 2019.

Finally, a total of 61 usable responses were received, which represents a response rate of 10.16 percent, out of which 34 were from the companies with service orientation. Only those companies were included in the results presented in this paper.

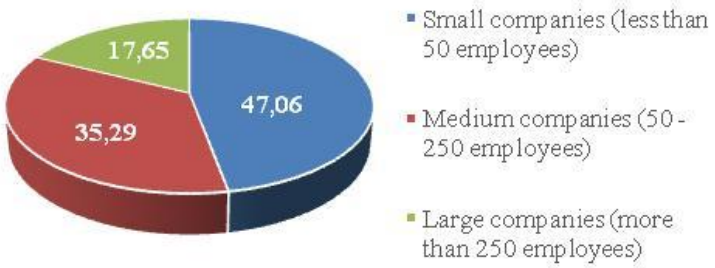
The statistical package SPSS was used which automatically calculates frequencies and conducts $X^2$ test (with significance set to 0.05).

## 4. Results

Among 34 respondents, 2.94% were general managers and also executive officers and researchers, 47.06% were business function/department managers, 5.88% were business analyst, 23.53% were process analyst, consultants 11.76%, while 2.94% of respondents stated that their position was something else.

Distribution of the respondents according to the company's size is given on the Figure 1.

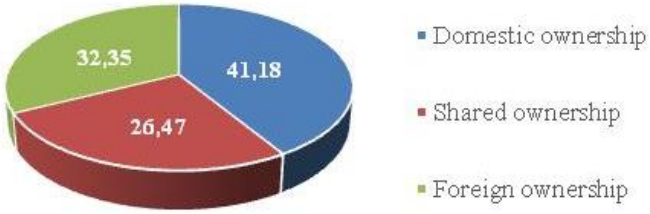
**Figure 1. Survey respondents by companies' size [%]**




Source: authors

Distribution of the respondents according to the company's ownership is given on the Figure 2.

**Figure 2. Survey respondents by companies' ownership [%]**




Source: authors

Table 1. presents survey respondents by industry. Majority of them provides *Computer/Electronic services* (17.65%) and *Consulting services* (14.71%).

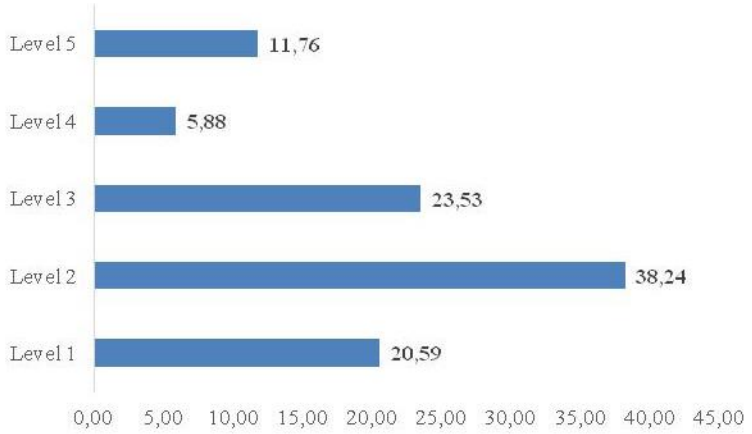
**Table 1. Survey respondents by industry**

| **Industry** | **%** |
|---|---|
| Light industry | 2.94 |
| Bank/insurance | 8.82 |
| Energy | 11.76 |
| Computer/Electronics | 17.65 |
| Education | 8.82 |
| Goverment/Defence | 2.94 |
| Helath/Farmacy | 2.94 |
| Tourism/Entertaionment | 2.94 |
| Consulting | 14.71 |
| Retail | 8.82 |
| Telecommunications | 5,88 |

Source: authors

The respondents were asked to position their company at one of the levels offered by CCMI maturity model. The results are shown in Figure 3.

**Figure 3. Levels of CMMI process maturity of service companies in Serbia**




Source: authors

Processes of majority of the companies are on the second level maturity (38.24%), while significant percent is also for level 1 and 2, while 11.76% of the respondents stated that their companies are at the highest level of process maturity.

**Table 2. Questions concerning process maturity in service companies**

| Questions concering process maturity | Never (0%) | Occasionally (1-30%) | Frequently (31-60%) | Most times (61-99%) | Always (100%) |
|---|---|---|---|---|---|
| Business processes are documented and kept up to date | 0.00 | 26.47 | 41.18 | 26.47 | 5.88 |
| The main processes in the company are measured and monitored | 0.00 | 5.88 | 29.41 | 47.06 | 17.65 |
| The support provided by automated applications is consistent with the processes defined by the company | 8.82 | 35.29 | 29.41 | 20.59 | 5.88 |
| Skills needed for performing tasks are defined and documented | 2.94 | 11.76 | 44.12 | 26.47 | 14.71 |
| Managers are trained for analyzing, designing and managing business processes | 2.94 | 35.29 | 38.24 | 20.59 | 2.94 |
| Process Managers use Process Performance data to Manage processes | 2.94 | 32.35 | 32.35 | 29.41 | 2.94 |
| Main process models also include activities performed by external suppliers / partners | 2.94 | 29.41 | 35.29 | 26.47 | 5.88 |
| Business processes are directly connected to the organization's strategy and Key Performance Indicators | 0.00 | 26.47 | 20.59 | 44.12 | 8.82 |
| Teams for Business Process Management use a standard approach for analyzing and designing the processes | 2.94 | 23.53 | 32.35 | 35.29 | 5.88 |
| Efforts for improving business processes are focused on creating value for the customer | 2.94 | 8.82 | 35.29 | 47.06 | 5.88 |
| When changing the business processes, problems related to employees and culture are effectively analyzed | 2.94 | 26.47 | 32.35 | 29.41 | 8.82 |
| Process improvement programs succeed to identify and eliminate problems and disagreements (inconsistencies) | 0.00 | 20.59 | 26.47 | 47.06 | 5.88 |

Source: authors

Table 2 show that majority of the companies stated that they are undertaking activities concerning process maturity "frequently", and these results supports the assessed position of process maturity. 17.65% of the respondents stated that the main processes in the company are always measured and monitored. 14.71% of the respondents stated that skills needed for performing tasks are always defined and documented. While 8.82% stated that support provided by automated applications is never consistent with the processes defined by the company.

Main drivers behind business process change initiatives identified among service companies are given in table 3 (multiple answers were allowed).

**Table 3. Main drivers behind business process change initiatives in services companies**

| Main drivers behind business process change initiatives | % |
|---|---|
| Need for productivity/efficiency improvement | 76.47 |
| Need for coordination and control improvement | 61.76 |
| Need for customer satisfaction improvement | 44.12 |
| Need for savings - cost/defect reduction | 41.18 |
| Business transformation | 41.18 |
| Need for product/service improvement in order to remain competitive | 26.47 |
| Risk management | 26.47 |
| QMS certification | 23.53 |
| Need for managing IT resources (ERP/CRM) | 20.59 |
| Adapting to regulations | 20.59 |
| Revenue or market share growth | 17.65 |
| Business partner's requirements | 17.65 |
| Onetime events (reorganization/mergers/acquisitions) | 5.88 |

Source: authors

Main driver for business process change were *Need for productivity/efficiency improvement* (76.47%), *Need for coordination and control improvement* (61.76%) and *Need for customer satisfaction improvement* (44.12%).

Respondents were asked to mark business process initiatives undertaken so far in their companies, which is shown in Table 4 (multiple answers were allowed).

Majority of the service companies worked on *Modeling/documenting processes* (70.59%), *Business process management* (64.71%), *Business process measurement system* (50.00%) and *Business process architecture development* (41.18%).

With regard to challenges and resistances encountered while trying to expand business process initiatives in service companies, the main challenges were *Obstacles during the new technology implementation* (38.24%), *Lack of interest within top management* (35.29%), *Management doesn't want to invest in process change projects at this time* (29.41%), and *No needed skills* (20.41%).

**Table 4. Business process initiatives that companies have undertaken so far**

| Business process initiatives undertaken so far | No. of companies | % |
|---|---|---|
| Modeling/documenting processes | 24 | 70.59 |
| Business Process management | 22 | 64.71 |
| Business process measurement system development | 17 | 50.00 |
| Business process architecture development | 14 | 41.18 |
| Process automation projects/ERP | 13 | 38.24 |
| Business process outsourcing | 12 | 35.29 |
| Coordination of business process change on the company level | 10 | 29.41 |
| Core processes redesign | 8 | 23.53 |
| Lean improvement projects | 6 | 17.65 |
| Continuous process improvement projects/KAIZEN | 6 | 17.65 |
| Six Sigma improvement projects | 4 | 11.76 |
| Lean Six sigma improvement projects | 4 | 11.76 |
| Redesign of processes with reference models (SCOR, ITIL…) | 3 | 8.82 |
| Process excellence concepts (Baldrige, EFQM, APQC) | 3 | 8.82 |
| Process managers training for process analysis/redesign (non Six sigma) | 2 | 5.88 |

Source: authors

None of the companies stated that they haven't encountered any type of resistance. Results are given in Table 5 (multiple answers were allowed).

**Table 5. Challenges and resistances encountered while trying to broaden business process initiatives in services**

| Challenges encountered | No. of companies | % |
|---|---|---|
| Obstacles in new technology implementation | 13 | 38.24 |
| Lack of interest within top management | 12 | 35.29 |
| No needed skills | 10 | 29.41 |
| Management doesn't want to invest in process change projects at this time | 10 | 29.41 |
| Inconsistencies of process improvement with business strategy | 7 | 20.59 |
| Multiple process change projects require same resources | 7 | 20.59 |
| Previous process improvement projects were unsuccessful | 7 | 20.59 |
| Management requires ROI that is not achievable | 3 | 8.82 |
| No resistance | 0 | 0.00 |
| Something else | 0 | 0.00 |

Source: authors

Respondents were asked what process initiatives they plan to undertake in the following period, and results are in Table 6.

**Table 6. Process initiatives that companies plan to undertake in the following period**

| Business process initiatives | No. of companies | % |
|---|---|---|
| Process managers training for process analysis/redesign (non Six sigma) | 15 | 44.12 |
| Core processes redesign | 12 | 35.29 |
| Business process measurement system development | 11 | 32.35 |
| Business Process management | 11 | 32.35 |
| Coordination of business process change on the company level | 11 | 32.35 |
| Business process architecture development | 9 | 26.47 |
| Business process outsourcing | 9 | 26.47 |
| Modeling/documenting processes | 8 | 23.53 |
| Lean improvement projects | 8 | 23.53 |
| Process automation projects/ERP | 8 | 23.53 |
| Redesign of processes with reference models (SCOR, ITIL…) | 6 | 17.65 |
| Six Sigma improvement projects | 5 | 14.71 |
| Lean Six sigma improvement projects | 5 | 14.71 |
| Continuous process improvement projects/KAIZEN | 5 | 14.71 |
| Process excellence concepts (Baldrige, EFQM, APQC) | 3 | 8.82 |

Source: authors

When it comes to business process improvement (BPI) in service oriented companies, a majority of companies reported that process improvement is part of normal work environment (61.76%), 26.47% of companies stated that interest in process improvement was expanding, and only few companies (8.82%) reported that they do not have interest for business process improvements.

Companies that reported expanding interest in process improvement cited engagement in following business process initiatives: *Modeling or documenting processes* (7 companies), *Business process management* (5 companies), *Core process redesign* (4 companies) and *Process automation projects* or *ERP projects* (4 companies). These companies are planning to implement *Business process measurement system development*, *Process managers training for process analysis/redesign*, and *Business process outsourcing*. Companies that have reported process improvements as part of a normal work environment have so far implemented the following initiatives: *Modeling or documenting processes* (14 companies), *Business process management* (14 companies), *Business process measurement system development* (12 companies), and *Business process architecture development* (11 companies).

Almost half of the companies that participated in the survey (41.18%) stated that they were engaged in BPI between 3 to 5 years. On the other hand, only 11.76% of service companies reported more than ten years of experience in improving the process.

Business process improvement initiatives in service environment are mainly focused on operations (12 companies), customer service or IT business unit (9 companies), finance (8 companies), and HR or sales (7 companies). Furthermore, almost one third of companies (12) reported that they apply business process improvement methodologies in the whole company.

Regarding the expansion of BPI application in service companies, majority of them had implemented BPI projects in one or more business unit (38.24%), while 12 companies (35.29%) reported enterprise-wide improvement projects. In addition, only 8.82% of companies cited small scale pilot projects and 17.65% had trained process improvement resources but without

formal program. In 38.24% of service companies, the length of the project improvement process is more than one year, 32.35% of companies stated that the length of the project is 6-12 months, in 20.59% of service companies is 3-6 months, while the average project length of less than three months was reported by 8.82% of service companies.

More than half of the service companies that participated in the survey predict that the number of employees dedicated to process improvement will increase (55.88%), 32.35% of companies stated that the number of employees will remain the same, and only 11.76% expect a reduction in the number of employees working at BPI. Furthermore, majority of respondents (64.71%) expect that budget for process improvement will increase, while 17.65% expect that budget will remain the same or decrease.

In order to test whether interdependence between the basic parameters of the company (drivers and challenges with process management and improvement practice in service companies in Serbia) exists, chi-square was used. More successful BPM projects were realized within companies with the main driver *Coordination and control improvement* ($X^2$=8.152, df=3, p=0.043). When it comes to success in BPM projects, more successful were companies that have so far developed business process architecture ($X^2$=14.592, df=6, p=0.024), modeled or documented processes ($X^2$=17.354, df=6,p=0.008), or outsourced business processes ($X^2$=16.748, df=9, p=0.043). Companies in which process managers use process performance data for process management ($X^2$=11.06, df=4, p=0.026), do not face a lack of interest within top management.

Companies which do not have *Adaptation to regulations* as a main driver expect that number of employees involved in process improvement will increase ($X^2$=7.66, df=2, p=0.02). Service companies that work on business process measuring did not face with the challenge of lack of interest within top management ($X^2$=6.356, df=2, p=0.04). Also, companies that measure and monitor the main processes did not face with the challenge *Management doesn't want to invest in process change projects at this time* ($X^2$=13.048, df=3, p=0.005). Companies with the main driver *The need to save money by reducing costs/defects* worked mostly on *Modelling/documenting processes* ($X^2$=5.788, df=2, p=0.005) and *Process automation projects/ERP* ($X^2$=7.704, df=3, p=0.005). Companies with the main driver *The need for improving productivity/efficiency* mostly worked on business process improvement project with length less than six months ($X^2$=10.197, df=4, p=0.037), while companies with the main driver *The need to customer satisfaction improvement*, in order to remain competitive mostly worked on business process improvement project lasting more than six months ($X^2$=9.183, df=4, p=0.050). Companies with the main driver *Business transformation* worked on business process improvement project with length more than one year ($X^2$=10.420, df=4, p=0.034). Furthermore, service companies with the main driver *The need for reduction of business risk* implemented so far *Process analysis/redesign training* (non-six sigma) ($X^2$=7.807, df=2, p=0.020), *Redesign project with Frameworks* (SCOR, ITIL...) ($X^2$=9.176, df=2, p=0.010), *Six sigma improvement project* ($X^2$=13.170, df=3, p=0.004) or *Lean Six Sigma improvement project* ($X^2$=8.911, df=3, p=0.031).

## 5. Discussion

The results show that the interest in BPM initiatives in Serbia, although undoubtedly present, is still in its infancy and that there is still big gap that needs to be covered in order to achieve full maturity. There are several indicators that support this claim. Total time spent doing BPM initiatives is still fairly low, and even when left to the companies to asses the maturity of their processes, the opt for levels one or two, which is lower than the World's average (Wolf & Harmon, 2012), but also lower than process maturity in companies in Serbia in general

(Stojanović et al., 2017). However, it is also evident the interest in BPM is on the rise. Companies show interest in performance improvement through BPM. This rise in interest can be contributed to two things. First, penetration of foreign companies to Serbian market introduced new knowledge and practice that companies bring with themselves from their domicile of origin. The other reason might be that foreign companies increase competition, which forces companies to consider opportunities for improving their performance. Seriousness companies can also be recognized through systematicity that is being introduced through new formal roles, e.g. business process analysts, with the intention to increase the number of employees dedicated to business process improvement. This is encouraging, as the results show that business process managers' skills are at a fairly low level, and that more training is needed, and that this need is recognized by service companies.

The results show that many companies are involved in activities that include documenting of business processes. Documenting processes is foundational activity in process improvement, and the results of this study suggest that companies that acknowledge this are more successful in their process improvement initiatives. However, there is great importance in what gets documented and how this documentation is used. Tendency to document process might be a legacy of 'ISO certification quest' which was quite popular in transitional countries (Stojanović et al., 2017). However, documentation can soon become burdensome to maintain, and it can be seen as non-operational, bringing very little effect to process improvement (Bacoup et al., 2018). Instead, a more focused approach is required, where processes are documented with the clear intention to be managed or improved.

It is interesting to note that the obstacles such as new technologies and lack of will to invest in business change projects are among the dominant ones among companies in Serbia. On the other hand, business process improvement initiatives that rely heavily on utilizing the resources that are at hand, without significant investments, such as continuous process improvement initiatives (e.g. Lean, Six Sigma, KAIZEN) are used in less than 20% of the companies, Budget might be an issue in companies operating in transitional economies, although large number of respondents expect that future budgets for process improvement initiatives will be greater than they currently are. These expectations are in line with future plans for future initiatives, as many of them include radical interventions, such as core process redesign. However, caution is advised in situations when appetites are greater than possibilities, as radical process change initiatives inherently take longer to complete, with uncertain results, which in turn can negatively affect readiness to engage in future business process change initiatives. This is why bottom-up, incremental approach might be more suitable for service companies, as process maturity is still fairly low. In addition, the results show that process automation is often used for process improvement, although it is often suggested that processes in service industries should be streamlined first, with initiatives such as Lean, in order to assure that only value creation is being automated (Bortolotti & Romano, 2012; Hartley & Sawaya, 2019).

Finally, it can be seen that main driver among service companies are efficiency related. However, given that service oriented companies directly communicate with their customers, it is important to equally address efforts to improve efficiency through process change initiatives, as they jointly create value to the customer.

Majority of respondents are process analysts and consultants, but also significant percent of respondents are business/function department managers and business analyst. Respondents job title preliminary show that companies are aware of business process importance. Respondents' understanding of BPM shows that they know that BPM is systematic approach that enables managing whole organization through business process management, but it is also recognized as initiative for cost reduction. Majority of the companies are at Level 3 of CMMI process maturity, which is in accordance with companies in the world (Wolf and Harmon, 2012). Still,

the significant number of companies was at Level 1 or 2, and there are nine companies at Level 5.

Higher number of respondents reported that process improvement initiatives are always being able to identify are remove problems than respondents who marked answer "never", while significant percent of respondents stated that they can solve problems frequently with process improvement initiatives. Process maturity level of service companies implies that processes are well documented, monitored and measured, and in that situation, it is easier to find errors and to react in appropriate way, thus making problem solving more efficient.

Service companies mostly do not have formal group for process excellence, and this can be a future task for our companies. Stojanović et al (2014) stated that companies which do not have formal BPI group are less successful in their process improvement program.

With regard to the main drivers for business process change, service companies are more oriented to the productivity/efficiency improvement, cost reduction and customer satisfaction improvement. Chi-square test shows that companies which do not have QMS certification as main driver did not have challenge of unsuccessful process change project, and also companies which did not worked on processes because of adaptation to regulations expect that number of employees involved in process improvement will increase. Service companies were more oriented to the modeling/documenting processes, implementation of Business process management in the whole, with business process architecture and measurement system development. The number of companies engaged in incremental improvement was less than service companies that work on core process redesign.

Growing lack of interest within top management for process improvements is not so good result, especially in large companies. Service companies in Serbia are also facing with the problem that management doesn't want to invest in process change projects at this time.

Service companies plan to work mostly on Core process redesign, and to continue to undertake Business process management implementation with specially development of process measurement and process architecture. This can contribute to higher process maturity within service companies and this situation is corresponding with companies' readiness to undertake Core process redesign. Also, a significant percent of service companies reported that process improvements are part of their normal work environment or that they have expanding interest for such initiatives, and these companies mostly undertake implementation of Business process management in the whole, and plan to work on Core process redesign.

Majority of the companies stated that they work on processes longer than 2 or 5 years, and that their focus was mainly on production or core operations, IT or customer services, which is expected result and confirm the development of combination of improvement practice with IT within services.

It is interesting result that service companies which work on development of process measurement system did not face with the lack of interest within top management, and this can be consequence of creating a better system for managing business system as whole.

## 6. Conclusion

The aim of this study was to assess business process maturity in service companies in Serbia (according to CMMI model), to identify main drivers and challenges for business process management (BPM) practice in these companies. The results show that process maturity is lower than expected, compared to general process maturity among companies in Serbia. Companies often opt for efficiency improvement, although effectiveness is as important (if not more than effectiveness) with service companies. Besides that, there are evidence that service companies tend to improve general coordination and control through business change

initiatives. While automation is important for service companies, the results show that they often struggle with new technologies. In addition, there's a lack of skills among business process managers, and lack of interest to invest resources in process change initiatives.

There are several practical implications stemming from this research. First, companies need to invest in knowledge acquisition and sharing, as it will increase the chance of success of process change initiatives. Second, bottom-up approach is advised, as many companies plan significant structural changes, which might not be a god way to start with BPM practice. Third, continuous process improvement initiatives should be considered more, as they can provide buy-in for further process improvement initiatives. And finally, streamlining processes should be considered before automation, as automating service oriented processes could actually decrease value as perceived by customer.

Considering the results obtained from this study, it can be concluded that services companies in Serbia have process awareness which is in accordance with the companies in the world. Situation which contributes to this fact is that process specialists are able to solve the problems in companies. Characteristics of process improvement project for services are enterprise-wide projects with duration mainly less than one year. Service companies are oriented to establishing complete Business process management system, as well as redesign of core processes. There is an obvious need to develop the formal process groups, with assignment to promote BPM.

The most significant challenge is lack of interest within top management. The main success factor in any kind of change project is commitment of top management, and their support is needed also for these kinds of projects. Further step for solving this problem can be education of managers about BPM benefits through different trainings and better business and academia connections.

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