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CRITICAL SUCCESS FACTORS OF SMALL AND MEDIUM ENTERPRISES IN FORESTRY AND WOOD INDUSTRY IN THE JUŽNOKUČAJSKO FOREST REGION

SUMMARY

Contractors for forest services play an important role in the forestry sector and, nowadays, are a common model of performing activities in forests. In addition, they represent a link between forest owners and enterprises within the wood industry. This research aims to study the characteristics of small and medium enterprises (SMEs) in the forestry and wood industry and the organization of their business processes in the Južnokučajsko forest region (JKFR), as internal critical success factors. JKFR was chosen because it has a high forest cover, a large share of privately owned forests, and the largest primary wood processing company in East Serbia is located within the region and developed furniture industry. Data were collected by conducting surveys with 43 representatives of SMEs from the forestry, primary and final wood processing sectors, which operate on the territory of JKFR. The following internal critical success factors are analysed: characteristics of the enterprises and organization of business processes. The results show that most of the forestry and wood industry enterprises were established after 2000. All enterprises from the forestry and primary wood processing sector belong to the category of micro-enterprises, while 14% of final wood processing enterprises belong to the category of small, and the rest to micro-enterprises. The largest number of SMEs in forestry (77.8%) perform activities in state forests, and 66.7% in private forests. Around ½ SMEs in forestry perform work without long-term contracts with other enterprises. However, most (88.9%) of these enterprises perform forest work independently (using their own machinery). Primary wood processing enterprises most often procure raw materials from private forest owners (77.8%), and final

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wood processing enterprises from sawmills (78.6%). Most wood industry enterprises have their own processing facilities, while others perform processing in cooperation with other enterprises. The most frequent buyers of products from primary processing enterprises are individuals, while most (78.6%) of final wood processing enterprises sell products through retail.

Keywords: small and medium enterprises, forestry, wood industry, business processes, critical success factors, Južnokučajsko forest region

INTRODUCTION

The entire business of an organizational system (e.g. enterprise) is done through business processes (Janićijević et al., 2019). They represent "…*a set of related activities and decisions, which are carried out to achieve a measurable goal of the organization, last a certain time and consume some input resources, turning them into specific products or services relevant to the customer or user*" (Brumec, 2011). Basic operational business processes (procurement, processing / production, selling) occur in manufacturing enterprises. Procurement is an operational business process procuring raw materials for further processing and/or selling. Production/processing is an operational business process within which the raw material is processed into a final or semi-finished product or simply packaged and sold on domestic and international markets. Selling is a business process which includes the sale and delivery of products to customers. This includes all business activities that organizations carry out to sell goods or services (Nonić, 2015, Nedeljković, 2021). Service companies, "…*which include specialized service companies in forestry, have a specifically organized business, in which such business processes cannot be clearly distinguished*" (Nedeljković, 2021).

SMEs in the forest sector have their own specifics. Some specifics are partly opposed to the theory of creating new forms of enterprise. While other specifics are recognized as imitations of natural ecosystems, which Moore (1988) called "business ecosystem". The theoretical aspects of creating new forms of enterprise assume that managers calibrate the mindset to "more and more", not caring about the resource (Moore, 1998). It is in contrast to forestry where moderation and sustainability of resources is the leading concept. Another aspect is the mimicry of new forms of enterprise in a form of imitation of natural ecosystems. These business ecosystems are also called economic communes aims to unite "… *customers, suppliers, lead producers, and other stakeholders - interacting with one another to produce goods and services*" (Moore, 1998). These theoretical aproaches led to stattement that small and medium enterprises (SMEs) must create their own bussines ecosystem to attract suppliers, partners and financial capital to cooperative networks (Moore, 1993). All of abovemention approaches lead SMEs to successful business.

Successful businesses are considered those that evolve rapidly and effectively. They must be able to attract resources of all sorts, drawing in capital, partners, suppliers, and customers to create cooperative networks. For a better

understanding of the work of a successful company, it has to be viewed not as a member of a single industry but as part of a business ecosystem that crosses a variety of industries (Moore, 1993). Business ecosystems are composed of different subjects (e.g. customers, suppliers, lead producers and other stakeholders) interacting with each another to produce goods and services (Moore, 1998). Business ecosystem "…*gradually moves from a random collection of elements to a more structured community*" (Moore, 1993) where SMEs have an important role working as an external associate of the large companies (Simić et al., 2020).

In forestry, large companies usually hire external associates (small and medium service enterprises) to perform silvicultural and harvesting works, transport raw material, construction and maintenance of forest roads, etc. In this way, production costs are reduced, and it is possible to perform better work due to the specialization of SMEs (Eriksson et al., 2015). Nowadays, contractors for forestry services are a common model of performing works in forestry (Nedeljković, 2021). In some countries (e.g. Finland), these companies have a long tradition. On the other hand, in the countries of Eastern and Southeastern Europe, contractors for forestry services are a relatively new entity in the forestry sector, whose development is "…*closely related to mechanization of logging and transport of raw material in era of transition to a market economy*" (Šporčić & Martinić, 2004). Previous research indicates that in countries across Europe, such as Sweden, Finland, Germany and Slovakia, contractors for forestry services are most often small businesses, or, in most cases, micro-enterprises that rarely have more than one employee (Štěrbova & Kovalčik, 2020).

In Serbia, public enterprise (PE) "Srbijašume" performed forest harvesting activities, until 1995, mostly by own workforce, In the period 1996-2002, production of wood assortments by own workforce participated with 21.7% to 30.0% in the total amount of produced wood assortments. After that, the share of production of wood assortments by own workforce decreased, and in 2020 it amounted to only 3.9% of the total amount of produced wood assortments. On the other hand, in 2020, service companies participated with 72.8%, and standing timber sale (self-processing) with 23.2% of the total amount of produced assortments (Aleksić, 2021).

The process of restructuring the PE "Srbijašume", which began in 2001, aimed, among other things, at reducing labour costs (due to the excessive number of employees) and costs associated with the purchase and maintenance of its own machinery. In that period, workers were offered to "…*take over part of the mechanization, and, eventually, become business partners of the PE in the harvesting and similar activities*", which "…*led to the formation of a number of service oriented SMEs*" (Nonić, 2015). According to the available data, the PE "Srbijašume", through a tender, contracts about 500 service enterprises, which perform cutting, production, extraction and transportation of wood assortments, as well as more than 40 companies, which perform silvicultural works (PE "Srbijašume", 2021).

Contractors for forestry services have an impact on ensuring a better living standard for Serbian citizens, especially those from rural areas (Ranković et al., 2012). In addition, there are more than 3,700 wood processing enterprises in Serbia, with more than 52,000 employees. Of the total number of these enterprises, 49% are sawmills, which participate with almost 20% in the total exports of the wood industry sector. It should be noted that "…*more than 90% of enterprises in the wood processing and furniture industry are privately owned, and they are located mainly in the central parts of Serbia*". The wood industry sector participates with 1.4% in the gross domestic product of Serbia, while the share of the wood industry in total exports is about 7.5%, "…*with a positive growth trend in recent years*" and amounts to €1.2 billion (DAS, 2021).

FACTORS AFFECTING SMEs BUSINESS

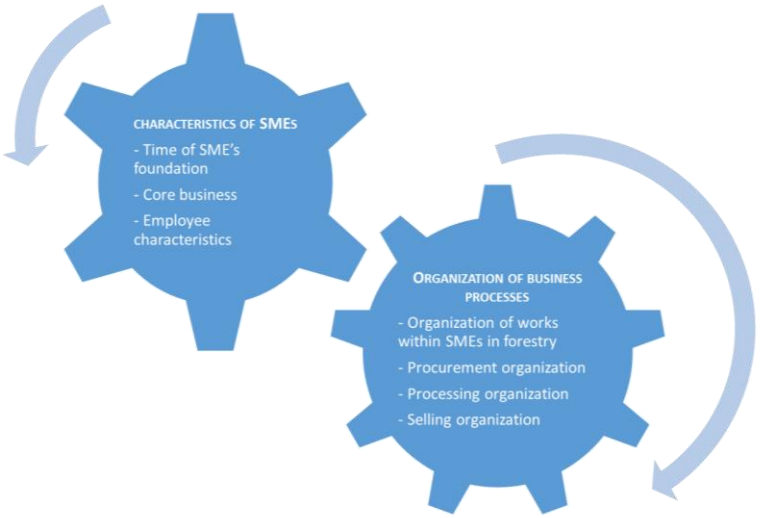
Critical success factors are defined as "…*those characteristics, conditions, or variables that when properly sustained, maintained, or managed can have a significant impact on the success of a firm competing in a particular industry*" (Leidecker, Bruno, 1984), i.e. "… *those key areas that ensure successful competitive performance for the organization*" (Duarte Alonso & Kok, 2021).

Previous research has point out that "…*only some specific factors are critical to the success of SMEs and should be the "focal point" of the SMEs efforts as long as they are consistent with their nature as small economic entities competing with big companies in small markets*" (Alfoqahaa, 2018). Also, critical success factors are defined by the type of industry, the business environment in which the small and medium enterprise (SME) operates and customer requirements (Simpson et al., 2012). In the literature, critical success factors are most often grouped into two parts: external (environmental factors) and internal (company factors) (Simpson et al., 2012, Alfoqahaa, 2018, Prasad et al., 2020, Duarte Alonso & Kok, 2021). External factors include: institutional framework (Government), market and society requirements, customer requirements, access to financial and technological resources and information, business environment, etc. Internal factors include: company characteristics, technological equipment and investments in technologies and resources, organizational structure, organizational culture, commitment and support of top management, number of employees and their training (education), business processes, business plan, products and services, cooperation, etc. (Chittithaworn et al., 2011; Alfoqahaa, 2018; Prasad et al., 2020).

In the forestry sector, critical success factors for SMEs were defined by Sanchez Badini et al. (2018). According to these authors, the business of SMEs in forestry is influenced by two groups of factors, external and internal. External factors are: macroeconomic environment, regulatory frameworks, forest law enforcement, tenure security and clarity, devolved management and land use planning rights, markets, natural capital. Internal factors are: financial capital,

forest management capacities, business management capacities, organizational capacities, clustering (Sanchez Badini et al., 2018).

For the purposes of this paper, an analytical framework (Scheme 1) is defined. This framework identifies the elements needed for the analysis of internal critical success factors, which include the characteristics of SMEs and the organization of business processes in SMEs in forestry and wood industry.



Scheme 1. Analytical framework

The analytical framework combines the characteristics of SMEs and the organization of business processes in SMEs in forestry and wood industry. Within the characteristics of SMEs, the following factors were observed:

-time of SME's foundation;
-core business;
-employee characteristics

Special attention is paid to the time of SME's foundation as an indicator of the decentralization process of PE "Srbijašume", as well as the core business of the enterprise, because it is assumed that most SMEs belong to service companies.

The following factors were considered within the organization of business processes:

-organization of the works within SMEs in forestry;
-procurement organization;
-processing organization;
-selling organization.

With the analytical framework created in this way, the paper aims to study the characteristics of SMEs in the forestry and wood industry and the

organization of their business processes in the Južnokučajsko forest region (JKFR), as internal critical success factors. The purpose of the research is to define the basis for further study of the possibilities of improving the internal critical success factors of SMEs in the forestry and wood industry in the selected forest region (FR). The subject of the research is the attitudes of SME representatives in the forestry and wood industry, registered in the municipalities located in the territory of JKFR, towards the characteristics of SMEs and organization of their business processes.

MATERIAL AND METHODS

A study was conducted at the JKFR (Map 1). This FR was chosen to conduct research for several reasons. The forest cover of JKFR is 39.9%, which is above the national average[2]. The total forest area of this FR is 114,257 ha, with the share of privately owned forests being 64.3% (PE "Srbijašume", 2012). In addition, within the borders of JKFR, there is one of the largest enterprises for primary wood processing in Serbia[3], as well as one of the largest factories in the furniture industry[4]. Due to all mentioned reasons, studying SMEs in this FR could provide the best overview of the current situation in this part of the forestry sector.

Data collection was conducted using face to face survey in the period December 2019 - February 2020, while the entry and processing of data was performed in the period March-April 2020.

Respondents were representatives of SMEs registered in the municipalities[5] within the JKFR. They were selected using census, which was then complemented by snowball sampling (Malhotra, 2020).

The preliminary list of enterprises[6] was determined on the basis of information available in online databases[7]. All representatives of these companies were contacted and with some of them, it was agreed to conduct a survey. Upon completion of the survey, respondents were asked to provide recommendations and contacts of representatives of other enterprises with which they cooperate and engaged in the same or similar activities.

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[2] According to official data, forest cover in Serbia is 29.1% (Banković et al., 2009).

[3] "Kronospan SRB d.o.o.", located in munincipality Lapovo (Central Serbia) produces and distributes wood-based panels in more than 40 production facilities around the world (Kronospan, 2021).

[4] "Jela Jagodina d.o.o." is a furniture factory based in Jagodina, founded in 1991. The factory employs over 300 workers (Jela, 2021).

[5] JKFR includes the territory of the City of Jagodina and the municipalities of Despotovac, Paraćin, Ćuprija, Rekovac and Varvarin. Representatives of enterprises from the municipalities of Rekovac and Varvarin did not express interest in participating in the research.

[6] Enterprises which belong to following codes according to business activity: 02.10, 02.20, 02.40, 02.30, 16.10, 16,21, 16.22, 16.23, 31.01, 31.02, 31.09.

[7] A database was used for each activity code by selected city and municipalities from the website https://www.companywall.rs/. After searching and collecting contacts, a single database was formed within the cross-calculation program, which united enterprises with same code of the business activity..

All surveys were conducted in person, using the face-to-face survey method. An overview of enterprise representatives who participated in the research is given in Table 1.

Map 1. Overview of the borders of JKFR (adapted according to the internal documentation of PE "Srbijašume")

Out of the total number of respondents (43), 19 are representatives of SMEs in forestry, 10 SMEs in primary wood processing and 14 SMEs in final wood processing. Two out of 10 primary wood processing enterprises also perform works in forests. Also, three enterprises in final wood processing, perform activities related to primary processing.

The questionnaire consisted of six parts:

1. socio-demographic characteristics of the respondents (questions I-1 to I-8);
2. enterprise's characteristics (questions II-1 to II-5);
3. organization of business processes (questions III-1 to III-15);
4. cooperation and business networking (questions IV-1 to IV-6);
5. frameworks that provide business conditions and support measures (questions V-1 to V-3);
6. conditions in which business activities take place (question VI-1).

For the purposes of this paper, in accordance with the analytical framework, data related to the characteristics of the enterprise and the organization of business processes are presented and analysed (groups II and III).

Table 1. Respondents according to territory and busses activity

City/municipality	business activity code	number of respondents
Jagodina	16.23	1
	02.40	1
	31.01	1
Paraćin	16.23	1
	02.40	3
Ćuprija	16.10	1
	16.23	1
	31.01	1
Svilajnac	16.10	1
	31.01	1
Despotovac	16.10	4
	16.21	2
	16.23	2
	16.29	5
	02.10	3
	02.20	7
	02.40	5
	31.01	3
Total		**43**

Data processing and analysis were performed in Microsoft Excel and *IBM® SPSS® Statistics* (ver. 23), and as statistical methods, descriptive statistics and frequency analysis were used. Descriptive statistics were applied when processing the answers to the questions, which are continuous variables (e.g. number of seasonally employed workers, etc.). Frequency analysis was used to determine the frequency of values of discontinuous variables and their share. Data were processed and analysed for each group of SMEs, depending on the activity of the company: contractors for forestry services, SMEs in primary wood processing and SMEs in final wood processing.

RESULTS

This chapter presents the results, which relate to the characteristics of SMEs in forestry, primary and final wood processing, as well as the organization of their business processes.

CHARACTERISTICS OF SMALL AND MEDIUM ENTERPRISES IN THE JUŽNOKUČAJSKO FOREST REGION

Out of the total number of analysed SME, 44.2% stated that their core business is performing works in forestry. Most of the analysed SMEs in forestry (contractors for forestry services) (98%) were established after 2000 (Table 2).

The cause of this situation, as in other forest areas, is the restructuring of PE "Srbijašume", which began in 2001. The result of this process was the leasing of the part of the machinery. This enabled private enterprises to start doing certain jobs within the forestry sector. Regarding the number of employees, it is important to note that these are micro-companies that employ less than 10 workers. Of the total number of contractors for forestry services, ¾ employs only one or two workers, while the enterprise with the largest number of employees hires six people. These are mostly family businesses, in which mostly employees are members of the owner's family. Regarding the professional workforce, i.e. forestry engineers and forestry technicians, but also seasonal workers, the research showed that only one enterprise employs a forestry engineer. Based on this, it can be stated that contractors for forestry services lack a professional workforce.

Table 2. Time of SME's foundation

	Contractors for forestry services	**SMEs in primary wood processing**	**SMEs in final wood processing**
	share (%)		
enterprises founded before 2000	11	20	35,7
enterprises founded after 2000	89	80	64,3
Total	100	100	100

Primary wood processing is the core business for 23.3% of the total number of analysed SMEs. The majority (80%) of **SMEs in primary wood processing** were also established after 2000. This indicates that the process of restructuring PE "Srbijašume" had an impact on the establishment of several enterprises for primary wood processing in this area. Regarding the number of employees, all of them are micro-enterprises, since they do not employ more than 10 workers. In addition, it should be highlighted that 70% have only one employee, while only one company employs 10 workers. As far as the professional workforce is concerned, primary processing enterprises do not employ forestry engineers. This indicates, contractors for forestry services, an obvious lack of skilled labour.

Final wood processing is the core business for 32.6% of the total number of analysed SMEs. The majority (64.3%) of **SMEs in final wood processing** were established after 2000 (Table 2), i.e. after the restructuring of PE "Srbijašume". In addition, 35.7% of companies were established before 2000, which indicates that SMEs in final wood processing at JKFR have favourable conditions for successful business for a long period. The largest number of enterprises (86%) employ up to 10 workers and belong to the category of micro-enterprises, while the remaining ones, which employ more than 10 workers, can be included in the category of small ones. Related to skilled labour, 21.4% of SMEs in final wood processing employ forestry engineers, while only 7% also employ forestry technicians.

ORGANIZATION OF BUSINESS PROCESSES

The results related to the organization of business processes in SMEs in forestry, primary and final wood processing at JKFR are presented and analysed in this sub-chapter.

Contractors for forestry services at JKFR are performing work in forests both with and without long-term contracts with other enterprises (Figure 1).

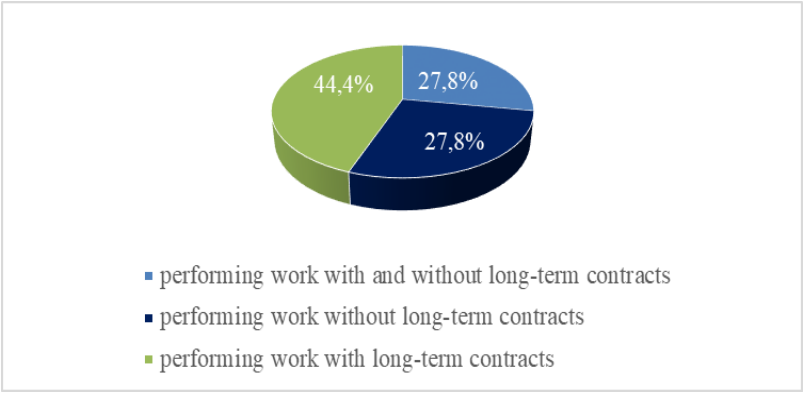

Figure 1. Ways of performing work (SMEs in forestry)

Less than ½ (44.4%) contractors for forestry services perform activities without long-term contracts with other enterprises. In addition, 27.8% of contractors for forestry services perform work based on long-term contracts with other enterprises, which indicates that these SMEs have secured work for a longer period, and thus a stable income. Also, 27.8% of contractors for forestry services perform activities both with and without contracts with other enterprises.

The machinery that contractors for forestry services have, depending on the type of equipment, is shown in Figure 2.

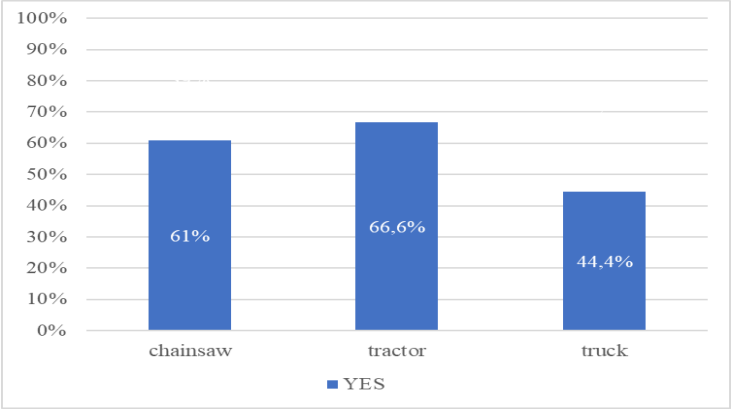

Figure 2. Level of equipment of SMEs with mechanization

More than ½ enterprises own a tractor and a chainsaw, while slightly less than ½ own a forest truck.

The largest number of SMEs (77.8%) perform their activities in state-owned and ⅔ in privately-owned forests. On the other hand, the smallest number of enterprises (Figure 3) performs activities in their own (22.2%), and in church forests (5.6%)[8].

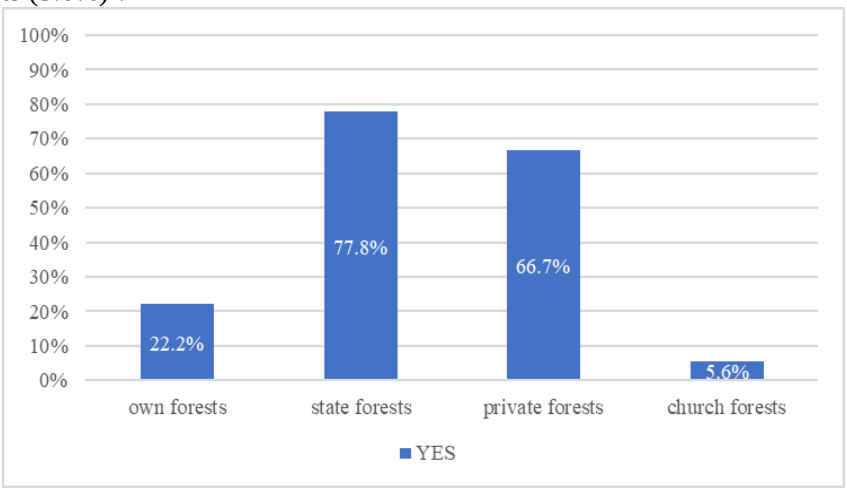

Figure 3. Areas where SMEs operate

Contractors for forestry services perform activities in several previously mentioned categories of ownership. Thus, for example, only five respondents stated that they perform all their activities exclusively in state forests, while only one enterprise performs activities exclusively in privately-owned forests. Based on the previously presented data, it can be said that most companies are directly dependent on jobs in state and private forests.

When it comes to the organization of forest harvesting, 88.9% of respondents said that they perform these works independently (using their own machinery), while only 11.1% of respondents stated that they include other SMEs to help in the realization of work in forest.

The majority (82.4%) of respondents stated that they have no problems at work. Those who face problems during work, point out the obsolescence of mechanization, lack of workers, as well as low labour costs.

Only 11.1% of contractors for forestry services have the facilities for primary wood processing.

The organization of raw material procurement within the **SMEs in primary wood processing** is shown in Figure 4.

[8] Respondents had the opportunity to choose multiple answers, which is why the total is more than 100%.

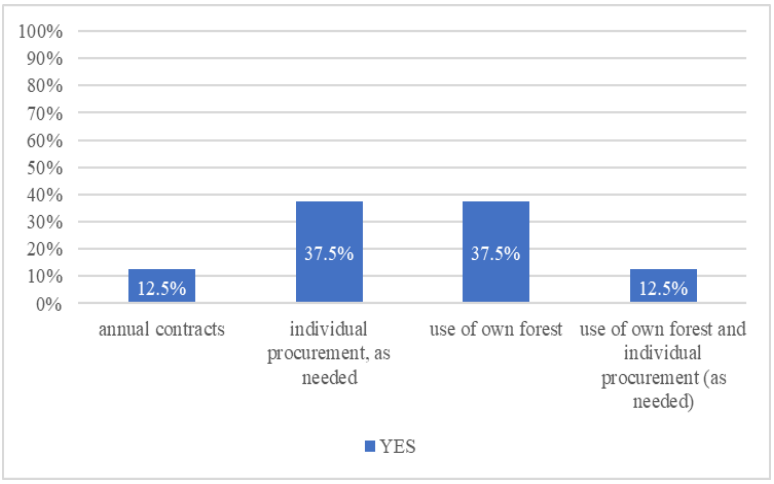

Figure 4. Organization of raw material procurement

Enterprises procure raw materials in several ways:

-based on annual contracts with other enterprises (12.5%);

-through individual procurements, i.e. "as needed" (without long-term contracts with other enterprises) (37.5%);

-using own forest (37.5%).

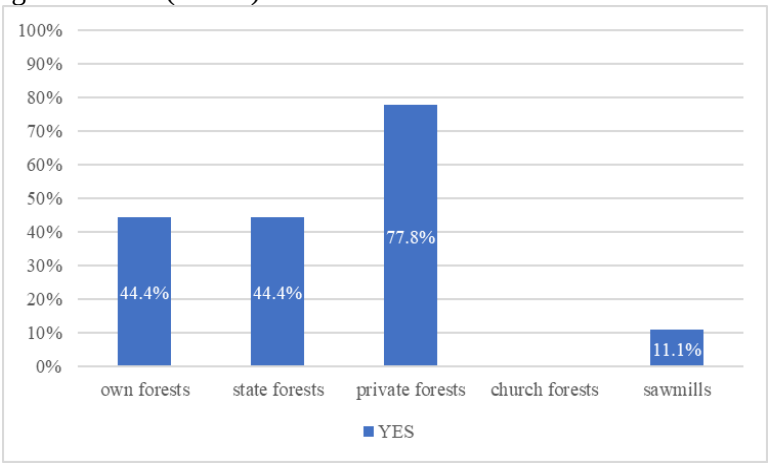

Figure 5. Source of raw materials for SMEs in primary wood processing

In addition, one part of the analysed SMEs (12.5%) procures raw materials in a combination of two ways: by using their own forest, but also, if necessary, from other enterprises.

As problems they encounter when procuring raw materials, the respondents stated the following:

-competition (50%);

-insufficient legal support they need when performing business (50%).

Figure 5 shows the sources of raw materials used by SMEs during the production process.

The largest number of enterprises procure raw materials from private forest owners (77.8%), while the smallest number procure raw materials from sawmills (11.1%). Respondents did not list church forests as one of the sources of raw materials. In addition, it should be emphasized that 33% of respondents procure raw materials exclusively from their own forest property.

The most commonly used tree species is beech (87.5%), followed by other hardwoods (maple, ash, wild cherry), whose share is 55.6%, and oaks (44.4%). The smallest number of enterprises (11.1%) use coniferous tree species as raw material (Figure 6). The large share of enterprises that use beech as a raw material is understandable, considering that this type of tree species is the most widespread at JKFR.

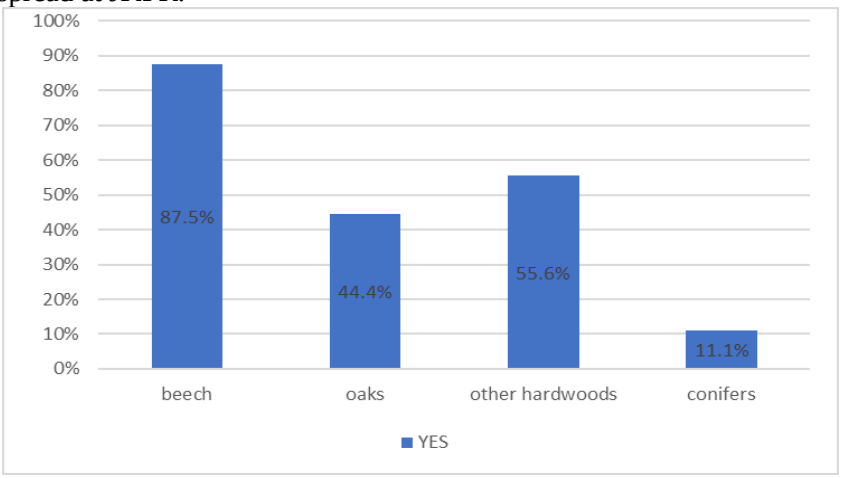

Figure 6. The most commonly used tree species

Most SMEs (77.8%) hire other enterprises to transport raw materials, while the rest use their own means of transport. This indicates that many SMEs are not equipped with appropriate means of transport, which would allow them to deliver raw materials more easily.

Most (88.9%) SMEs have their own capacities when it comes to raw material processing, while others process in cooperation with other enterprises. Only 11.1% of the analysed SMEs in primary wood processing have the facilities for final wood processing.

As the main problems in the processing of raw materials, respondents point out:

-lack of manpower (33.3%);
-lack of mechanization (33.3%);
-inadequate legislative framework, which burdens business (33.3%).

All SMEs in primary wood processing sell their products through retail, after an individual order from customers.

All SMEs in primary wood processing sell their products on the domestic market, while only ⅓ sell them on the foreign market.

The most frequent buyers[9] of products (Figure 7) are individuals, with whom 66.7% of companies cooperate. On the other hand, products are least bought by foreign companies (33.3%). Domestic companies are buyers of products of 44.4% of SMEs for primary wood processing.

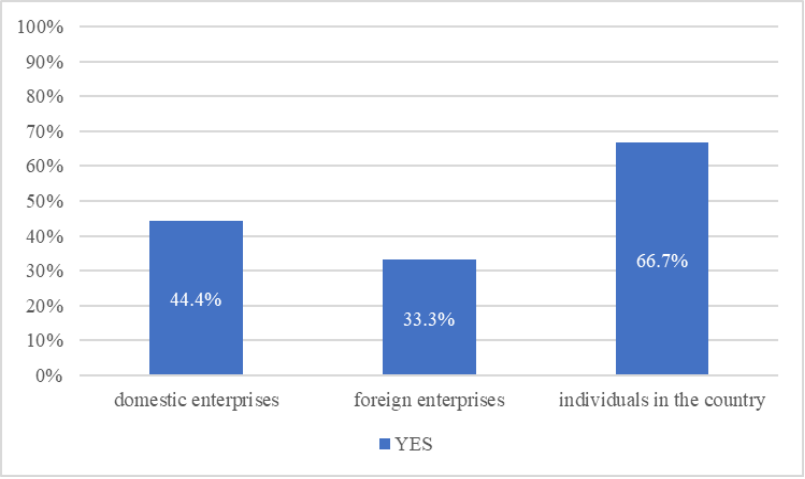

Figure 7. Structure of customers of SME in primary wood processing

The main problems in selling are payment realization (50%) and lack of customers (50%).

SMEs **in final wood processing** procure raw materials in two ways:

1.individual procurement, as needed;

2.annual contracts.

All analysed SMEs in final wood processing procure raw materials through individual procurement. as well, 28.6% have annual contracts with suppliers in addition to individual procurement.

Regarding the sources[10] of raw materials (Figure 8), the majority (78.6%) of SMEs procure raw materials from sawmills, 50% from private forest owners, while the smallest share (21.4%) procure from the state the forest. The large share of raw materials that SMEs in final wood processing procure from sawmills indicates the importance of their connection in the wood supply chain.

These SMEs most often use other hardwoods (78.6%), oak (64.3%) and beech (57.1%) as raw materials[11]. About ⅓ of SMEs in final wood processing (35.7%) use coniferous species as raw material.

[9] Respondents had the opportunity to choose multiple answers, which is why the total is more than 100%.

[10] Respondents had the opportunity to choose multiple answers, which is why the total is more than 100%.

[11] Respondents had the opportunity to choose multiple answers, which is why the total is more than 100%.

Transport of raw materials is organized in two ways: as own transport (42.9%) and through intermediaries (42.9%). One part of the enterprises (14.2%) uses both methods of transporting raw materials to processing facilities.

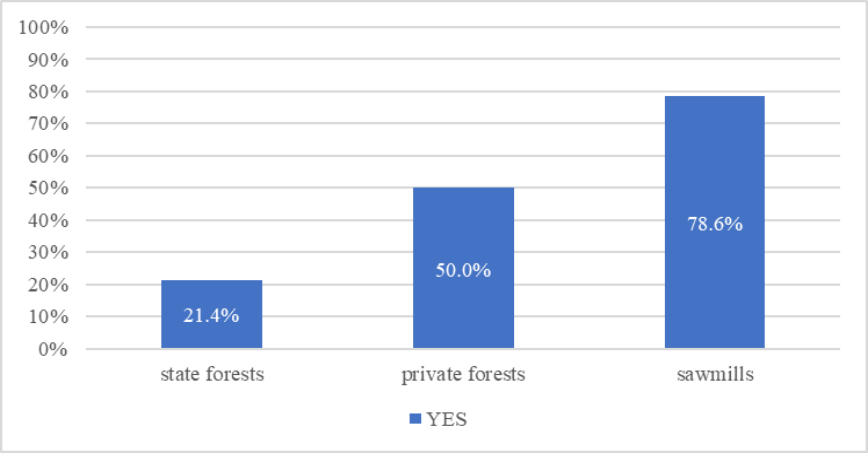

Figure 8. Source of raw materials for SMEs in final wood processing

Most enterprises (78.6%) have their own facilities for processing raw materials, while others process in cooperation with other enterprises. Most enterprises (85.7%) own machines that perform primary wood processing, 64.3% own hand tools, and 92.9% own machines for final wood processing (Figure 9). All respondents stated that lack of manpower is the main problem when processing raw materials.

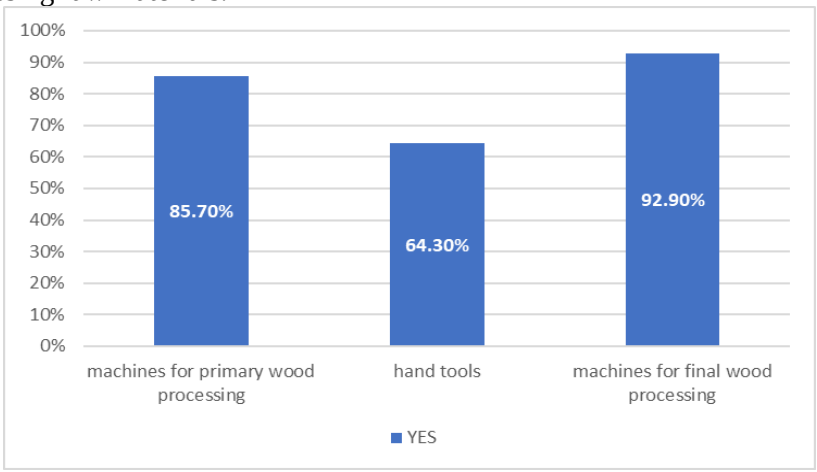

Figure 9. Machines and tools of SMEs in final wood processing

Regarding the way of organizing product selling, the research showed that 78.6% of enterprises sell products through retail, while 21.4% sell products based on annual contracts signed with other companies, in addition to retail.

The majority of respondents (66.7%) believe that the biggest problem with selling is payment realization, while the lack of customers is the problem for 33.3%.

All enterprises place their products on the domestic market, and in addition, 57.1% sell their products abroad.

The structure of customers is shown in Figure 10.

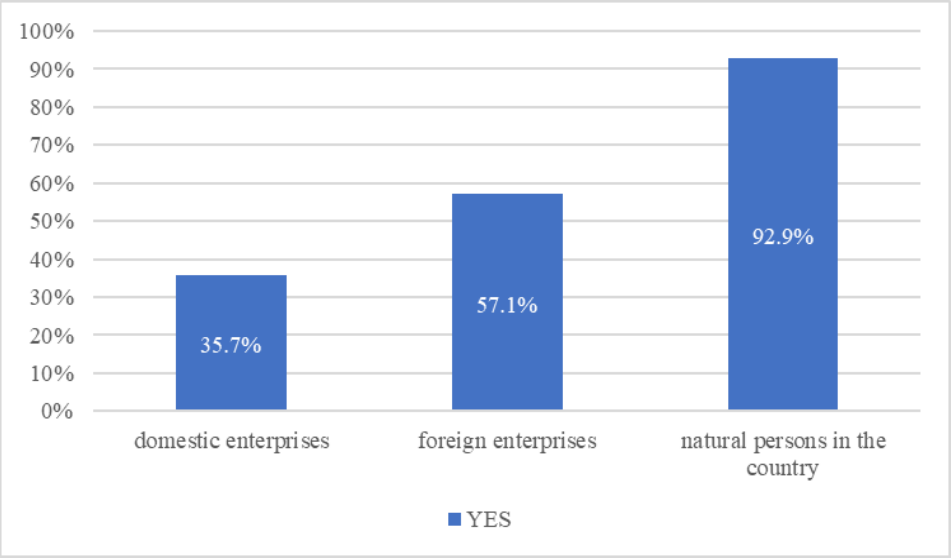

Figure 10. Structure of customers of SME in final wood processing

The majority (92.9%) of enterprises sell products to individuals, while 35.7% sell to domestic enterprises. In addition, 57.1% of SMEs in final wood processing sell to foreign enterprises[12].

DISCUSSION

Regarding the characteristics of the analysed SMEs, the research found that most SMEs in forestry, but also in the wood industry, was established after 2000. These results are in line with previous research in other FRs in Serbia. Namely, a previous survey in the Timočko FR found that 92% of SMEs in the forestry and wood industry were established after 2000 (Ranković et al., 2012). Also, the results of the research conducted in the Južnomoravsko FR show that almost ⅔ SMEs have been established in the last 10 years (Nonić et al., 2018). In the Republic of Srpska, in Banja Luka forestry region, the majority (58%) of enterprises were established after the privatization of part of the state capital in 2001 (Ostić, 2011).

It was found that all enterprises in the forestry sector employ less than 10 workers, which puts them in the category of micro-enterprises, and that most

[12] Respondents had the opportunity to choose multiple answers, which is why the total is more than 100%.

enterprises in the wood industry also fall into this category. The situation is similar in other European countries. For example, ½ out of about 8,000 contractors for forestry service in Poland employ only one worker, about 3,000 employ two to five workers, and only two enterprises have more than 50 employees each. In Germany, it is estimated that there are about 7,300 service enterprises, of which almost ½ have up to five employees including the owner. In Finland, forestry enterprises employ an average of 3.3 workers (Šporčić et al., 2009). In Scotland, it was found that contractors belonging to the category of micro-enterprises in 57% of cases do not have employees, i.e., the only worker is the person who founded the enterprise. When it comes to enterprises from the wood industry, the situation is slightly different, i.e. 35% of enterprises in primary wood processing were without workers (Lawrence, 2018). A survey conducted in Croatia showed that 52.4% of contractors for forestry services do not have permanent employees at the state level. Among enterprises that had permanent employees, only 0.93% employed more than 10 workers (Šporčić & Martinić, 2004). In the Republic of Srpska, in the Vlasenica, Milići, Hanpijesak and Romanija FRs, small enterprises (concerning the number of employed workers) in forestry and wood industry also predominate, with up to 20 employees (Stanišić, 2021). In Serbia, previous research has similar results. Namely, the majority of enterprises (78.6%) in the territory of the Južnomoravsko FR belong to the category of micro and small enterprises (Nonić et al., 2018).

All enterprises, on average, employ less than one forestry engineer and forestry technician. Similar results were found in the research. In Croatia, it has been found that only 2-3% of companies employ forestry engineers (Šporčić & Martinić, 2004). Also, in Južnomoravsko and Timočko FRs, it was found that less than 5% (Nonić et al., 2018) and 9% (Ranković et al., 2012) of the total number of employees have higher education. However, in the Republic of Srpska, in the Vlasenica, Milići, Hanpijesak and Romanija FRs, all contractors for forestry services employ forestry engineers (due to legal regulations, which oblige them to do so), but only ¼ of SMEs in the wood industry have forestry engineers (Stanišić, 2021).

Regarding the organization of business processes, as one of the internal critical success factors of the analysed enterprises, it was noticed that the most common problems encountered by contractors for forestry services at JKFR are: obsolescence of machinery, lack of workers and low labour costs. The situation is similar in Timočko FR, where one of the major problems is the obsolescence of mechanization used when performing various tasks in the forest, regardless of its purpose (Ranković et al., 2012). In the Republic of Srpska, SMEs most often encounter problems related to unused capacity, outdated mechanization and low skill labour force, when performing works on felling, processing, and extraction of wood assortments (Stanišić, 2021).

By transitioning to the form of stable network according to Miles et al (1992), some of these common problems can be diminished. The stable network

is designed to serve a mostly predictable market by linking together independently owned specialized assets along with a given product or service value chain. In this network, a large company is managing the assets of its partners, but also taking the responsibility for their output (Miles *et al*., 1992). This "…*stable financial network insulates the firm from market pressures for short-term performance*" (McGuire, Dow, 2009).

When it comes to logging, in Serbia in 2016, about 3.1 million m^3 of wood was felled for commercial purposes, of which the largest share (87.7%) was hardwood, while the rest (12.3%) were conifers (DAS, 2019). Previous research in the Južnomoravsko FR found that 57.1% of enterprises use beech exclusively as raw material, and 21.5%, in addition to beech, most often use oaks, poplars, etc conifers (Nonić et al., 2018). Research presented here shows that 68% of SMEs use beech as raw material, 53.8% oak, 69.2% other hardwoods, such as ash, wild cherry and maple, and 26.9% conifers. It should be taken into account that beech is the most represented tree species in JKFR (present in total volume with 46.5%) (PE "Srbijašume", 2012). That the use of certain types of species for industrial purposes depends on the characteristics of the FR is indicated by the fact that at the level of the Republic of Srpska, 35% of raw materials processed in companies are coniferous trees, most often fir and spruce (Bačić, 2009).

The wood industry enterprises in JKFR most often procure raw materials from private forest owners (65.4%), while in the case of Južnomoravsko FR, about 50% of raw materials come exclusively from the private forests (Nonić et al., 2018). It is important to note that about ⅔ (64%) of the forests on JKFR are privately owned, followed by state-owned forests (32%), while church forests have the smallest share (4%) (PE "Srbijašume", 2012). In addition, it should be added that several enterprises (7.1%) procure raw materials from both private and state forests. It is important to point out that enterprises often do not have only one source of raw materials, but they are procured from a larger number of suppliers.

Only 14.3% of companies in the Južnomoravsko FR have annual contracts with other enterprises for the supply of wood raw materials (Nonić et al., 2018), while at JKFR the number is slightly higher and amounts to 16%.

The largest number of enterprises (92.9%) in the Južnomoravsko FR transport raw materials through intermediaries (Nonić et al., 2018), while in JKFR a much smaller number (50%) use other enterprises for this service. This indicates that the companies at JKFR are better equipped with transport machinery compared to the enterprises from the south of Serbia.

In JKFR, more than ¾ enterprises have facilities for primary wood processing, and more than ½ also have machinery for final wood processing. In the Južnomoravsko FR, 14.3% of enterprises are engaged exclusively in primary processing, while 35.7% perform a lower degree of product finalization (Nonić et al., 2018).

In the period January-June 2019, Serbian companies exported wood, cork, straw and paper worth $728.7 million, which represented 4.4% of total exports at the national level. Products are mostly exported to the EU (51%), followed by countries in the region (26%), but also Russia and Belarus (26%) (DAS, 2019). Data from JKFR partially correspond to the national average, where it was found that about 50% of products are exported exclusively to the EU. None of the respondents stated that they export their products to Russia or countries in the region.

The most common problem faced by enterprises in the Timočko FR when selling is payment realization (72.5%) (Ranković et al., 2012), which is quite similar to the situation with the wood industry in JKFR, where 60% of respondents said that payment realization is the biggest problem. On the other hand, only 28% of contractors for forestry services answered that this is the problem in their business. In the Banja Luka forestry region, 75% of enterprises have a problem with payment realization (Ostić, 2011). In the Vlasenica, Milići, Hanpijesak and Romanija FRs, the payment realization, i.e. illiquidity of customers also stands out as a problem in SME's business (Stanišić, 2021).

To improve the organization of business processes in SMEs in forestry, it is necessary to increase investments in equipment and training of professional staff, perform greater health control and increase health protection of workers, better define legal obligations of entrepreneurs in forestry (Šporčić et al., 2018).

Exernal factors have a significant impact on business success of SMEs (Duarte Alonso & Kok, 2021). For example, JKFR is characterised by bountiful forest resources (JP "Srbijašume", 2012), which makes favourable conditions for entrepreneurship development. According to previous research (Nonić et al., 2012), availability of forest resources, as external factor, is the basic precondition for sustainability of forest-based enterprises. Another important external factor is regulatory framework. This is because SMEs in forestry "…*operate within the context of regulatory frameworks that normalize business and forest management activities*". Very often, these regulations are prohibitive and unstable (Sanchez Badini et al., 2018). However, in previous research in Serbia, which focused on cooperation of forest-based SMEs, it was found that "… *policy framework does not specifically support nor hinder*" it (Nonić et al., 2012). Yet, it must be highlighted that "…*despite the national culture in Serbia does not support entrepreneurship orientation in any single dimension, in SMEs in Serbia entrepreneurial culture is dominant*" (Rodić et al., 2017). However, it was also identified that support measures are an important factor (Dudic et al., 2020), but their implementation in practice is not at high level (Nonić et al., 2012). To accelerate small businesses in forestry, "…*regulatory frameworks should be adequate, simplified, and proportional to the type and size of the enterprises*" (Sanchez Badini et al., 2018). Comparing the European models it was found that the European Union adopts the approach of active participation in the public sector in the development of business activity, particularly the sector of SMEs (Wasilewski, 2015).

CONCLUSIONS

The paper analyses the characteristics of SMEs in forestry and wood industry and the organization of business processes in these enterprises, which have been identified as internal critical success factors.

In relation to the year of establishment, similarities were noticed in all three groups of enterprises, i.e., most SMEs were established after 2000. Based on this, it can be said that the process of reform of PE "Srbijašume", which took place around 2000, significantly influenced the establishment of SMEs in forestry, as well as those dealing with primary and final wood processing.

Based on the number of employees, it can be stated that all enterprises from the forestry and primary wood processing sector belong to the category of micro- enterprises and employ up to 10 workers. The situation with enterprises for final wood processing is a little different, i.e. 14% of them fall into the category of small enterprises, as they employ more than 10 workers.

The analysed SMEs lack a skilled workforce, considering that only one SME from the forestry sector employs an engineer and that primary wood processing enterprises do not employ forestry engineers, while only 20% of final wood processing enterprises in JKFR employed academically educated people.

Almost ½ forestry enterprises work on a contract basis with other enterprises, and this is the case with 20% of final wood processing enterprises, while none of primary wood processing SMEs works on a contract with other enterprises.

In addition, it is important to emphasize that contractors for forestry services perform the largest number of activities in state-owned forests, but also there is a large number of those who directly cooperate with the private forests owners. For example, primary wood processing enterprises usually procure raw materials from private forest owners, while SMEs in final wood processing in most cases procure raw materials from sawmills.

SMEs in primary wood processing most often use beech as a raw material, while in the case of final wood processing enterprises, hardwoods (maple, ash, wild cherry) are most often used. There is a difference between primary and final wood processing enterprises when it comes to selling. Most final processing enterprises (⅔ of them) sell products on foreign markets, while only ⅓ primary processing companies sell their products abroad.

SMEs have problems in their business due to the obsolescence of mechanization, and there is insufficient skilled labour. Also, representatives of SMEs in wood industry see as a problem lack of information regarding export support measures, provided by the public services.

Based on the identified problems, it is **recommended** that, in order to improve internal critical success factors, SMEs should be better informed on the activities and programs of relevant institutions and organizations. According to previous research, such activities and programs belong to the group of external critical success factors. Also, it is necessary to encourage business networking of SMEs in JKFR to jointly sell on foreign markets, which, according to previous

research, is also a critical success factor. Providing better information to SMEs and companies networking would have a positive impact on the business of these legal entities.

It is important to point out that the results presented here refer only to the attitudes of SME representatives in the forestry and wood industry in JKFR, because the situation in other regions is not as developed as here and the factors could be different. In that sense, the conclusions and recommendations refer exclusively to contractors for forestry services and SMEs in primary and final wood processing on the territory of JKFR and cannot be directly applied to SMEs in other FRs in Serbia.

For that reason, the recommendations for further research are to conduct such analyses in other FRs, which would determine similarities and differences and give adequate proposals for improving the organization of business processes of SMEs in the forestry and wood industry in Serbia. Also, the recommendation for further research is to define the analytical framework for external critical success factors and their analysis.

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