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Internal and external export barriers: analysis from Serbian SME's point of view

Abstract: *Influence of enterprise characteristics, i.e. size, length of export experience, capital ownership and type of industry, on export barriers perception in case of Serbian manufacturing SMEs exporters was researched in this paper. Aims of the study were to identify factors that may pose export barriers for Serbian SMEs, rank perceived barriers, spotting differences by different groups of SMEs, and examine correlations between SMEs characteristics and export barriers perception. Main hypothesis was that SMEs from Serbia perceive factors that may pose export barriers similar to exporters in other countries, but degree and magnitude of influence depend on enterprise's characteristics. The empirical research has been conducted through a survey and 137 exporters taking part in it, which gave response rate of 35.49%. For collected data processing and analyzing descriptive statistics, differences among groups and correlation tests were employed. Results showed that influences of the enterprise size and foreign capital ownership on export barriers perception are positive, which means that small and domestic enterprises face larger barriers to export compared to medium and foreign ones.*

Key words: *Export barriers, SME, perception, enterprise characteristics, factors of internal and external environment, Serbia*

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Unutrašnje i spoljne izvozne prepreke: analiza sa stanovišta MSP iz Srbije

Apstrakt: *U ovom radu se istražuje uticaj karakteristika preduzeća, odnosno veličine, dužine izvoznog iskustva, vlasništva nad kapitalom i vrste industrije, na opažanje izvoznih prepreka u slučaju proizvodnih MSP izvoznika iz Srbije. Njeni ciljevi bili su da utvrdi činioce koji mogu da predstavljaju izvozne prepreke za domaća MSP, rangiranje opaženih prepreka, uočavanje razlika između različitih grupa MSP i ispitivanje korelacije između odlika MSP i opažanja izvoznih prepreka. Osnovna hipoteza rada bila je da MSP iz Srbije opažaju činioce koji mogu da predstavljaju izvozne prepreke slično izvoznicima u drugim zemljama, a da stepen i obim uticaja zavise od odlika preduzeća. Empirijsko istraživanje je sprovedeno putem ankete uz učešće 137 izvoznika što je dalo stopu odziva od 35.49%. Za obradu prikupljenih podataka korišćena je deskriptivna statistika, testovi za utvrđivanje razlika između grupa i korelacija. Rezultati su pokazali da su uticaji veličine preduzeća i stranog vlasništva nad kapitalom na opažanje izvoznih prepreka pozitivni, što znači da se mala i preduzeća sa domaćim kapitalom suočavaju sa većim izvoznim preprekama u odnosu na srednja i ona sa inostranim kapitalom.*

Ključne reči: *izvozne prepreke, MSP, opažanje, odlike preduzeća, činioci unutrašnje sredine i spoljnog okruženja, Srbija*

1. Introduction

Expansion of export is vital for development and health of every national economy Export improves trade and payment balances, helps dealing with unemployment, boosts profitability, increases capacity utilization, and leads to better competitiveness (Koksal, 2008). With 11,353 million dollars Serbia accounts for less than 0.07% of global export and about 1.2% of export of all East Europe (UNCTAD Handbook of Statistics, 2013, p. 6, 14). The low levels of domestic exports have caused a lot of concern in academic and professional circles, and debate about export as a very important part of new economic development policy (Savić & Bosković, 2011; Mićić & Zeremski, 2011; Čajka & Mašić, 2013).

Although some essential sources of data in area of external trade in Serbia exist (for example: Republički zavod za statistiku, 2013), the debates about exports in transition economies, to which Serbia belongs, have generally suffered from lack of more empirical enterprise level data, especially for small and medium enterprises [hereafter, SMEs] (Neupert, Baughn, & Dao, 2006;

Che Senik, Scott-Ladd, Entrekin, & Khairul, 2011). For that reason researches in the field of SMEs export have multiple needs. First, the researches of export are primarily focused on large enterprises and multinationals (Rundh, 2007). Second, even if SMEs export is taken in consideration, it generally covers SMEs from developed economies (Singh, 2009). Third, as more SMEs engage in export today, there is a growing interest in this process uniqueness (Lages, Silva and Styles, 2009). Fourth, although globalization has removed many barriers and enabled wider access for SMEs to export, SMEs still face them in terms of resources constraints (Dhanaraj & Beamish, 2003). All those undermines the generalization, especially on SMEs from one small, transition economy like Serbian, in which SMEs contributed with 98.8% of all business and 69% of employment, but only 19% of manufacturing, 33% of GDP, 46,5% of export and 61,7% of foreign trade deficit (OECD, 2012, p. 230; Ministarstvo finansija i privrede, 2012, p. 8) Taking into account that enterprise's decision about export is influenced by export barriers perception, main motivation of this paper stems from desire to conduct research of Serbian SME's point of view and contribute to understanding of export barriers in one specific context.

A substantial body of empirical work has identified many factors that influence export, but, the lack of agreement among researchers on the degree and magnitude of the influence of certain enterprise's characteristics on export barriers perception makes this issue actual.

Aims of this paper are to identify factors that may pose export barriers for Serbian SMEs, rank perceived barriers, spot differences by different groups of SMEs, and examine correlations between certain SME's characteristics and export barriers perception. Purpose of the listed is to obtain information on the direction to which the export policy in Serbia should be oriented and in which way SME's management has to reorganize the exporting in order to mitigate or eliminate some export barriers.

For achieving the set purpose and aims, this paper is structured as follows. First, a literature review about the various factors that may pose barriers to export and certain SME's characteristics relations was made. Second, export barriers were classified. Those gave possibility for conceptual framework for empiric research building and hypotheses set up. That is followed by the methodology and research results sections. The paper ends with a discussion and conclusion with research findings implications on economy policy makers, SME's management and future researches.

2. Literature review

Export activity from SME's point of view has been the focus of a significant body of theoretical and empirical research, employing resource-based view of

enterprise and stage theory of internationalization as principally theoretical frameworks (McAuley, 2010; Dhanraj and Beamish, 2003). Theory quotes that large and multinational enterprises more likely perceive export barriers as smaller because they possess greater resource capacity, enabling them to better serve export markets. SMEs are resource constrained and they have been largely hindered by export barriers (Brouthers et al., 2009; Hall and Cook, 2009).

Researchers in the field of international business and marketing have identified several factors that can influence export from the enterprise level. According to some authors there are factors related to enterprise knowledge, internal resources, procedures and export markets (Kneller & Pisu, 2011). Knowledge- related factors limit information from export markets collecting, while internal resources refer to financial, organizational and marketing constraints. Procedural factors apply to procedures, non-custom limitations and tariffs. Export markets related factors include cooperation with export partners, business circumstances in export markets, offer and demand trends, fluctuations of currency exchange rates, activities of competition, governments regulative and culture aspects.

Other authors claim that there are external, operational, internal and informational factors that may pose export barriers (Tesfom and Lutz, 2006; Neupert et al., 2006). External factors comprise price of capital for export financing, fluctuations in currency exchange rates, foreign completion, and national policies toward exporters. Operational factors include procedural, transactional, logistic, and transport aspects. Internal factors refer to organizational resources and capacities of enterprise. Informational factors apply to availability of information for export conducting process.

Third group of authors underline that export is influenced by internal forces, stemming from enterprise's characteristics, and external forces formed by domestic business environment and export markets characteristics (Sousa, Martinez-Lopez & Coelho, 2008).

Mentioned export barriers have been heterogeneously perceived by different types of enterprises depending on their characteristic. For researchers the export barriers perception have usually been explored taking into consideration enterprise size, length of export experience capital ownership, and type of industry that enterprise belongs to.

Evidence from empirical studies suggests that enterprise size matters for export, but degree and magnitude of that influence vary. Some authors found positive influence of size on export barriers perception, because size affects scale of production, management and marketing capabilities, problem solving, R&D investments, attitudes, needs and practices on export markets (Majocchi, Bacchiocchi, & Mayrhofer, 2005; Larimo, 2007). Large and multinational

enterprises given their superior resources can deal with export barriers more effectively than SMEs and perceive them as less influenced. But not all studies have confirmed this result. Some found smaller enterprises dealing with export barriers more successfully than larger ones, or found no influence of size on export barriers (Pla-Barber & Alegre 2007; Saixing et al., 2009).

The accumulation of export experience leads to better knowledge, understanding and possibility for overcoming export barriers and therefore that kind of enterprises perceive export barriers as smaller (Majocchi et al., 2005; Alvarez, 2007). On the other hand, some opposite and neutral results can be found also (Andersson, Gabrielsson & Wictor, 2004; Larimo, 2006).

Studies dealing with capital ownership impact on export barriers perception are mostly conducted in the transition and developing economies with mixed results too. Ones claim that foreign ownership positively impact export barriers perception and overcoming (Cole, Elliott & Virakul, 2010; Filatotchev, Stephan & Jindra, 2008). On the other hand, the others found no or negative impact of capital ownership on export barriers (Wignaraja, 2008; Jenkins, 1979).

Type of industry is very frequently researched characteristic of enterprise related to export barriers, and it has been usually seen in the light of technology level of some industries. However, these studies have opposite results too. Ones emphasize positive impact of belonging to high-tech industries on export barriers perception (Rodriguez & Rodriguez, 2005; Richardson, 2011). The others state that there is no, or there is negative impact of belonging to high-tech industries on export barriers perception (Gao, Murray, Kotabe & Lu, 2010; Chetty & Hamilton, 1993).

3. Conceptual Framework and Hypotheses

A list of factors that may pose barriers to export from previous studies has been mainly followed up in this paper, with addition of two new factors. This refers to national export branding policy, since there is no internationally recognized Serbian export brand, and exporters associations issues, since process of clustering has just started.

All factors that may pose export barriers have been divided into two groups - factors of internal and external environment, as presented in Fig. 1. This classification was chosen because it allows clear dividing of recommendations for SME's management and economic policy makers in the closing section of paper.

Figure 1. Research conceptual framework
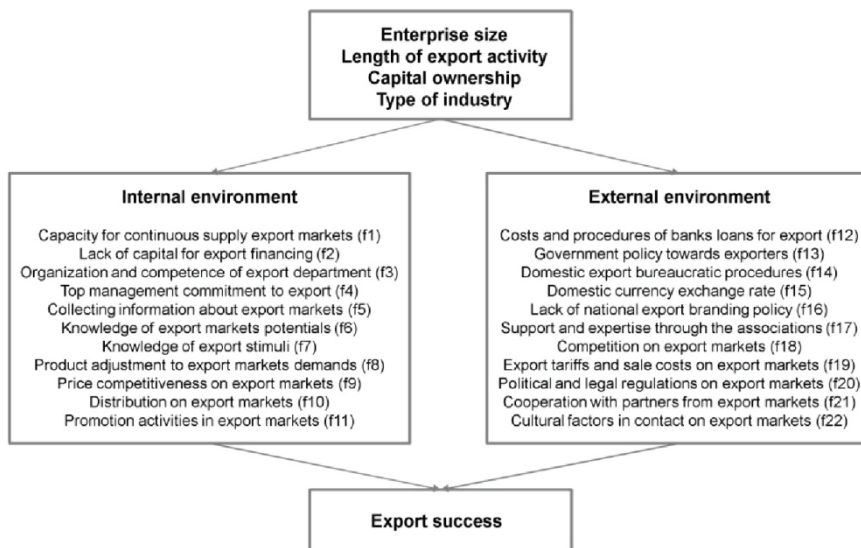
Source: Authors

Assuming that main hypothesis is that SMEs from Serbia perceive factors that may pose export barriers similar to exporters in other countries, particular hypotheses and their alternatives for empirical research were made on influence of certain SME's characteristics based on previous literature review findings:

H1: Size positively affects export barriers perception.
H2: Length of export business positively affects export barriers perception.
H3: Foreign capital ownership positively affects export barriers perception.
H4: Belonging to high-tech industries positively affects export barriers perception.

4. Methodology

The empirical research on influence of SMEs' characteristics on export barriers perception was conducted through a survey. Questionnaire had two parts. The first one was composed of data on size, length of export business, ownership of capital and type of industry enterprises belong to. Independent variables were formed on the basis of these data. The second part included 22 factors from enterprises' internal and external environment that may pose export barriers. Dependent variables were formed on the basis of these data.

Respondents provided assessments on the scale ranging from 1 to 5 depending on the level of their influence, but only factors with average rates higher than 2.5 have been considered as barriers to export.

The basic sample for research consisted of all of the 386 Serbian manufacturing small and medium enterprises with export income of at least one million dollars in 2012 according to the Serbia Investment and Export Promotion Agency data. Questionnaires were sent to respondents by e-mail.

Respondents first received an e-mail with the questionnaire attached, followed by four further follows-ups. In total 148 enterprises took a part in the research, but 137 questionnaires were completely filled-in. Hence respond rate in this research was 35.49%. This is considered satisfactory since average respond rate in surveys involving business respondents is approximately 30% (Dillman, 2007, p. 323). Main data on enterprises that took part in the survey are presented in the Table 1.

Table 1. Caracteristics of enterprises took part in the survey

Size of enterprise			
Small enterprises		Medium enterprises	
Frequency (%)		Frequency (%)	
40 (29.2)		97 (70.8)	
Length of export business			
Up to 5 years	6 to 20 years	21 to 50 years	Over 50 years
Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
10 (7.3)	82 (59.9)	24 (17.5)	21 (15.3)
Ownership of capital			
Domestic and dominant domestic		Foreign and dominant foreign	
Frequency (%)		Frequency (%)	
87 (63.5)		50 (36.5)	
Type of industry			
Low technology	Mid-low technology	Mid-high technology	High technology
Frequency (%)	Frequency (%)	Frequency (%)	Frequency (%)
68 (49.6)	40 (29.2)	17 (12.4)	12 (8.8)

Source: Authors' survey

Internal consistency and reliability in this survey measured by Cronbach's alpha coefficient was 0.824, which is indicated as good (DeVellis, 2003, p. 90).

Several tests have been conducted in order to establish whether it is likely that perceptions of enterprises taking part in the survey may differ significantly from those that failed to reply in accordance with relevant practice (Armstrong & Overton, 1977; Weisberg, 2005, p. 159). However, those tests haven't discovered statistically significant differences.

For data processing and analyzing, the descriptive statistics techniques and tests for statistically significant differences existence were used, checking different groups of enterprises that were sorted by their characteristics. The one way analysis of variance of different groups (ANOVA) and the Kruskal-Wallis test (K-W test), when there were three and more groups, and independent sample t-test and Mann-Whitney U test (M-V U test), when there were two groups within independent variable, were employed. Both types of tests have been used to ensure that the results were not influenced by mathematical bias inherent to parametric and nonparametric statistical analysis tests. Correlation analysis was employed to check relations among independent and dependent variables. Values obtained by analysis of differences between groups and correlation were assessed by Cohen's criteria (Ellis, 2010, pp. 40-42).

5. Research Findings

Research findings are presented in three separate parts - first, internal and external environment factors ranking, second differences in evaluating internal and external environment factors depending on enterprises' characteristics and third correlation analysis between enterprises' characteristics and internal and external environment factors.

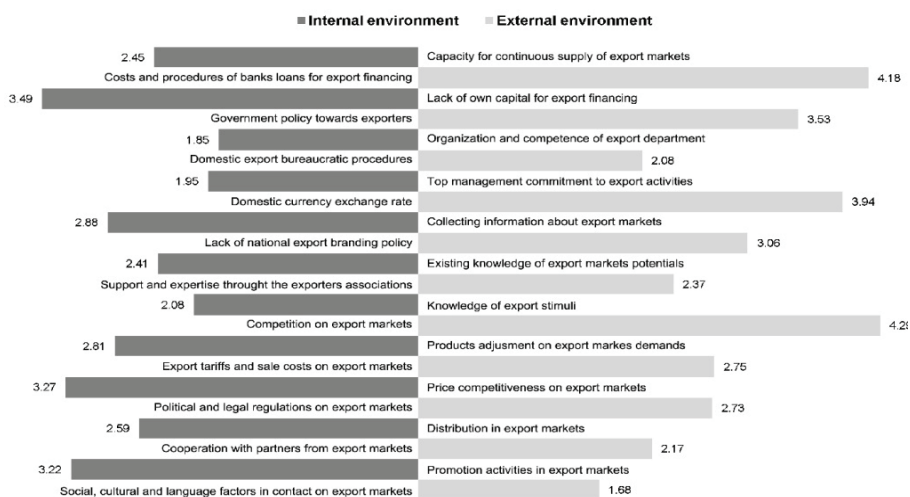## 5.1. Factors of enterprises internal and external environment ranking

Means of explored factors that may pose barriers to export are shown on Fig. 2.

Within factors of internal environment the largest barriers are lack of capital for export financing ($M = 3.49$), price competitiveness achieving ($M = 3.27$) and organization of promotion activities ($M = 3.22$). Other barriers include collection of information about export markets ($M = 2.88$), adjustment of products to export markets demands ($M = 2.82$) and distribution ($M = 2.59$). Rests of the factors are not perceived as export barriers.

Amongst factors of external environment the largest barriers are competition on export markets ($M = 4.29$) and cost and procedures of bank loans for export financing ($M = 4.18$). Also, significant barriers are domestic currency exchange rate ($M = 3.94$) and government policy toward exporters ($M = 3.53$). Others include lack of national export branding policy ($M = 3.06$), export tariffs and sale cost on export markets ($M = 2.75$), and political and legal regulations on export markets ($M = 2.73$).

Figure 2. Internal and external environment factors rancing*

■ **Internal environment** ■ **External environment**

2.45	Capacity for continuous supply of export markets	4.18
Costs and procedures of banks loans for export financing	Lack of own capital for export financing	
3.49		3.53
Government policy towards exporters	Organization and competence of export department	
1.85		2.08
Domestic export bureaucratic procedures	Top management commitment to export activities	
1.95		3.94
Domestic currency exchange rate	Collecting information about export markets	
2.88		3.06
Lack of national export branding policy	Existing knowledge of export markets potentials	
2.41		2.37
Support and expertise throught the exporters associations	Knowledge of export stimuli	
2.08		4.2?
Competition on export markets	Products adjusment on export markes demands	
2.81		2.75
Export tariffs and sale costs on export markets	Price competitiveness on export markets	
3.27		2.73
Political and legal regulations on export markets	Distribution in export markets	
2.59		2.17
Cooperation with partners from export markets	Promotion activities in export markets	
3.22		1.68
Social, cultural and language factors in contact on export markets		

* Factor is a barrier to export for $M > 2.5$
Source: Authors' survey

5.2. Differences in evaluation of internal and external environment factors depending on enterprises' characteristics

The independent samples t-tests results, followed by M-W U tests, as shown in Table 2, find existence of three statistically significant differences in evaluation of explored factors of internal environment depending on the enterprise's size:

1) Capacity for continuous export markets supply, t (135) = 2.524, p = 0.013, U = 1502.500, z = - 2.142, p = 0.032. The scope of this difference totals η^2 = 0.045, and is considered as small. It means that small enterprises (M = 2.8250, SD = 1.31826) have been influenced by this factor a bit more than medium ones (M = 2.2990, SD = 1.01206).

2) Lack of capital for export financing, t (135) = 4.198, p = 0.000, U = 1100.000, z = - 4.119, p = 0.000. The scope of this difference totals η^2 = 0.115, and is considered as large. It means that small enterprises (M = 4.1000, SD = 0.98189) have been influenced by this factor much more than medium ones (M = 3.2474, SD = 1.11832).

3) Promotion activities, t (135) = 3.172, p = 0.002, U = 1298.500, z = - 3.184, p = 0.001. The scope of this difference totals η^2 = 0.069, and is considered as medium. It means that small enterprises (M = 3.6750, SD = 0.85896) have

been influenced by this factor more than medium ones (M = 3.0412, SD = 1.13576).

Table 2. Differences in evaluation of internal environment factors depending on the enterprises size

Internal Environment Factors	t-test		M-W U test		
	t	*p*	*U*	*z*	*p*
f1	2.524	0.013*	1502.500	- 2.142	0.032*
f2	4.198	0.000*	1100.000	- 4.119	0.000*
f3	- 0.459	0.647	1923.000	- 0.086	0.931
f4	0.808	0.421	1786.500	- 0.777	0.437
f5	1.142	0.255	1716.000	- 1.100	0.271
f6	0.913	0.363	1740.000	- 0.980	0.327
f7	0.690	0.491	1743.000	- 0.978	0.328
f8	0.056	0.955	1915.500	- 0.122	0.903
f9	0.388	0.699	1848.500	- 0.453	0.650
f10	1.901	0.059	1563.000	- 1.837	0.066
f11	3.172	0.002*	1298.500	- 3.184	0.001*

*Difference is statistically significant at p < 0.05
Source: Authors' survey

The independent samples t-tests results, followed by M-W U tests, as shown in Table 3 find one statistically significant difference in evaluation of explored factors of external environment depending on the enterprises size:

Table 3. Differences in evaluation of external environment factors depending on the enterprises size

External Environment Factors	t-test		M-W U test		
	t	*p*	*U*	*z*	p
f12	2.028	0.045*	1509.000	- 2.197	0.028*
f13	1.916	0.057	1536.500	- 1.985	0.057
f14	- 0.408	0.684	1777.000	- 0.811	0.417
f15	1.711	0.089	1545.500	- 1.999	0.076
f16	1.301	0.195	1702.000	- 1.161	0.246
f17	1.009	0.315	1752.000	- 0.928	0.353
f18	1.685	0.094	1655.000	- 1.475	0.140
f19	- 0.012	0.990	1937.000	- 0.015	0.988
f20	- 0.748	0.456	1819.000	- 0.598	0.550
f21	0.583	0.561	1809.500	- 0.647	0.518
f22	0.711	0.478	1935.500	0.981	- 0.124

* Difference is statistically significant at p < 0.05
Source: Authors' survey

1) Costs and procedures of bank loans to finance exports, t (135) = 2.028, p = 0.045, U = 1509.000, z = - 2.197, p = 0.028. The scope of this difference totals η^2 = 0.029, and is considered as small. It means that small enterprises (M = 4.4000, SD = 0.77790) have been influenced by this factor a bit more than medium ones (M = 4.0928, SD = 0.81755).

The ANOVA results, followed with K-W tests, as shown in Table 4, find the two statistically significant differences in evaluation of researched factors of internal environment depending on the length of export business of the enterprises:

1) Commitment of the top management to export activities, among enterprises which have been exporting up to 5 years (M = 2.8000, SD = 1.31656) on one side, and enterprises that have been exporting from 21 to 50 years (M = 1.7368, SD = 0.94966) and enterprises which have been exporting for over 50 years (M = 1.8667, SD = 1.05744), on the other side [F (3, 134) = 2.744, p = 0.046]. It was confirmed by K-W test, χ^2 (3, N = 134) = 8.191, p = 0.048. The scope of this difference totals η^2 = 0.058, and is considered as medium. It means that enterprises which have been exporting up to 5 years have been influenced by this factor more than enterprises that have been exporting from 21 to 50 years and enterprises which have been exporting for over 50 years.

Table 4. Differences in evaluation of internal environment factors depending on length of export business

Internal Environment Factors	ANOVA		K-W test	
	F	p	χ^2	p
f1	1.132	0.339	2.234	0.525
f2	1.142	0.335	3.947	0.267
f3	0.882	0.452	1.680	0.641
f4	2.744	0.046*	6.484	0.048*
f5	1.016	0.388	2.589	0.459
f6	1.817	0.147	4.258	0.235
f7	0.754	0.522	2.304	0.512
f8	2.689	0.049*	7.027	0.041*
f9	0.551	0.648	1.456	0.693
f10	0.554	0.647	1.804	0.614
f11	0.743	0.528	2.942	0.401

*Difference is statistically significant at p < 0.05
Source: Authors' survey

2) Adjustment of products to the demands of export markets between enterprises exporting from 21 to 50 years (M = 2.6053, SD = 0.88652) on one side, and enterprises exporting for over 50 years (M = 3.1556, SD = 0.92823) on the other side [F (3, 134) = 2.689, p = 0.049]. It was confirmed by the K-W test, χ^2 (3, N = 134) = 8,191, p = 0.041. The scope of this difference totals η^2 = 0.056, and is considered as medium. It means that enterprises which have

been exporting over 50 years have been influenced by this factor more than enterprises that have been exporting from 21 to 50 years.

Regarding external environment, no statistically significant differences were found in evaluating researched factors depending by the length of export experience of enterprises by ANOVA and K-W tests, as shown in Table 5.

Table 5. Differences in evaluation of external environment factors depending on length of export business

External Environment Factors	ANOVA		K-W test	
	F	p	χ^2	p
f12	1.970	0.122	5.898	0.117
f13	0.552	0.648	1.884	0.597
f14	1.943	0.126	6.276	0.099
f15	0.298	0.827	1.652	0.648
f16	1.357	0.259	4.171	0.244
f17	2.252	0.085	7.335	0.062
f18	0.550	0.649	1.600	0.659
f19	0.272	0.845	1.100	0.777
f20	0.518	0.671	1.935	0.586
f21	1.727	0.165	3.682	0.298
f22	1.108	0.348	1.948	0.583

Source: Authors' survey

Independent samples t-test and the M-W U test, as shown in Table 6 confirms five statistically significant differences in evaluation of the internal environment factors among enterprises with domestic and dominant domestic and firms with the foreign and dominant foreign capital:

1) Capacity to continuously supply export markets, t (135) = 2.667, p = 0.019, U = 1587.000, z = - 2.719, p = 0.007. The scope of this difference totals η^2 = 0.050, and is considered as small. It means that enterprises with domestic and dominant domestic capital (M = 2.6437, SD = 1.13072) have been influenced by this factor more than enterprises with foreign and dominant foreign capital (M = 2.1200, SD = 1.06215).

2) Lack of capital to finance export, t (135) = 3.346, p = 0.001, U = 1466.000, z = - 3.284, p = 0.001. The scope of this difference totals η^2 = 0.076, and is considered as medium. It means that enterprises with domestic and dominant domestic capital (M = 3.7356, SD = 1.07249) have been influenced by this factor more than enterprises with foreign and dominant foreign capital (M = 3.0800, SD = 1.15776).

3) Collecting information about export markets, t (135) = 3.936, p = 0.000, U = 1351.000, z = - 3.822, p = 0.000. The scope of this difference totals η^2 = 0.114, and is considered as large. It means that enterprises with domestic and

dominant domestic capital (*M* = 3.1494, *SD* = 1.06234) have been influenced by this factor much more than enterprises with foreign and dominant foreign capital (*M* = 2.4200, *SD* = 1.01197).

4) Price competitiveness achievement, *t* (135) = 3.199, *p* = 0.002, *U* = 1490.000, *z* = - 3.206, *p* = 0.001. The scope of this difference totals η^2 = 0.070, and is considered as medium. It means that enterprises with domestic and dominant domestic capital (*M* = 3.4828, *SD* = 0.99839) have been influenced by this factor more than enterprises with foreign and dominant foreign capital (*M* = 2.9000, *SD* = 1.07381).

5) Promotion activities, *t* (135) = 8.292, *p* = 0.000, *U* = 682.000, *z* = - 6.999, *p* = 0.000. The scope of this difference totals η^2 = 0.337, and is considered as large. It means that enterprises with domestic and dominant domestic capital (*M* = 3.7241, *SD* = 0.81682) have been influenced by this factor much more than enterprises with foreign and dominant foreign capital (*M* = 2.3600, *SD* = 0.98478).

Table 6. Differences in evaluation of internal environment factors depending on capital ownership

Internal Environment Factors	t-test		M-W U test		
	t	*p*	*U*	*z*	*p*
f1	2.667	0.009*	1587.000	- 2.719	0.007*
f2	3.346	0.001*	1466.000	- 3.284	0.001*
f3	0.719	0.473	2041.000	- 0.644	0.520
f4	1.872	0.064	1871.000	- 1.453	0.146
f5	3.936	0.000*	1351.000	- 3.822	0.000*
f6	1.839	0.068	1818.500	- 1.650	0.099
f7	0.518	0.605	2086.000	- 0.417	0.677
f8	1.400	0.164	1894.000	- 1.324	0.185
f9	3.199	0.002*	1490.000	- 3.206	0.001*
f10	1.470	0.144	1864.000	- 1.431	0.152
f11	8.292	0.000*	682.000	- 6.999	0.000*

*Difference is statistically significant at p < 0.05
Source: Authors' survey

When external environmental factors are concerned, independent samples t-tests followed by M-W u tests find statistically significant differences in evaluation of nine factors among enterprises with domestic and dominant domestic and those with foreign or dominant foreign capital, as shown in Table 7:

1) Costs and procedures of bank loans to finance export, t (135) = 5.667, p = 0.000, U = 1073.500, z = - 5.303, p = 0.000. The scope of this difference totals η^2 = 0.192, and is considered as large. It means that enterprises with domestic and dominant domestic capital (M = 4.4828, SD = 0.54692) have been influenced by this factor much more than enterprises with foreign and dominant foreign capital (M = 3.6600, SD = 0.93917).

2) Government's policy towards exporters, t (135) = 4.282, p = 0.000, U = 1309.000, z = - 4.023, p = 0.000. The scope of this difference totals η^2 = 0.119, and is considered as large. It means that enterprises with domestic and dominant domestic capital (M = 3.8276, SD = 1.13308) have been influenced by this factor much more than enterprises with foreign and dominant foreign capital (M = 3.0200, SD = 1.02000).

3) Domestic bureaucratic export procedures, t (135) = 2.497, p = 0.014, U = 1632.000, z = - 2.553, p = 0.011. The scope of this difference totals η^2 = 0.044, and is considered as small. It means that enterprises with domestic and dominant domestic capital (M = 2.2414, SD = 1.02260) have been influenced by this factor a bit more than enterprises with foreign and dominant foreign capital (M = 1.8000, SD = 0.94761).

4) Domestic currency exchange rate, t (135) = 4.560, p = 0.000, U = 1203.000, z = - 4.652, p = 0.000. The scope of this difference totals η^2 = 0.133, and is considered as large. It means that enterprises with domestic and dominant domestic capital (M = 4.2069, SD = 0.79443) have been influenced by this factor much more than enterprises with foreign and dominant foreign capital (M = 3.4800, SD = 0.95276).

5) Lack of a national exports branding policy, t (135) = 7.056, p = 0.000, U = 898.500, z = - 5.881, p = 0.000. The scope of this difference totals η^2 = 0.269, and is considered as large. It means that enterprises with domestic and dominant domestic capital (M = 3.5977, SD = 1.09396) have been influenced by this factor much more than enterprises with foreign and dominant foreign capital (M = 2.1400, SD = 1.27791).

6) Support and expertise through associations, t (135) = 4.051, p = 0.000, U = 1315.000, z = - 4.009, p = 0.000. The scope of this difference totals η^2 = 0.118, and is considered as large. It means that enterprises with domestic and dominant domestic capital (M = 2.6552, SD = 1.06561) have been influenced by this factor much more than enterprises with foreign and dominant foreign capital (M = 1.8800, SD = 1.09991).

7) Competition on export markets, t (135) = 3.248, p = 0.001, U = 1524.000, z = - 3.182, p = 0.001. The scope of this difference totals η^2 = 0.072, and is considered as medium. It means that enterprises with domestic and dominant domestic capital (M = 4.4598, SD = 0.71210) have been influenced by this

factor more than enterprises with foreign and dominant foreign capital (M = 4.0200, SD = 0.84491).

8) Cooperation with partners from export markets, t (135) = 4.261, p = 0.000, U = 1291.500, z = - 4.136, p = 0.000. The scope of this difference totals η^2 = 0.119, and is considered as large. It means that enterprises with domestic and dominant domestic capital (M = 2.4253, SD = 0.92299) have been influenced by this factor much more than enterprises with foreign and dominant foreign capital (M = 1.7400, SD = 0.87622).

9) Cultural factors in contacts on export markets, t (135) = 2.309, p = 0.023, U = 1748.000, z = - 2.130, p = 0.033. The scope of this difference totals η^2 = 0.037, and is considered as medium. It means that enterprises with domestic and dominant domestic capital (M = 1.8161, SD = 0.99451) have been influenced by this factor a bit more than enterprises with foreign and dominant foreign capital (M = 1.4600, SD = 0.78792).

Table 7. Differences in evaluation of external environment factors depending on capital ownership

External Environment Factors	t-test		M-W U test		
	t	*p*	*U*	*z*	*p*
f12	5.667	0.000*	1073.500	- 5.303	0.000*
f13	4.282	0.000*	1309.000	- 4.023	0.000*
f14	2.497	0.014*	1632.000	- 2.553	0.011*
f15	4.560	0.000*	1203.000	- 4.652	0.000*
f16	7.056	0.000*	898.500	- 5.881	0.000*
f17	4.051	0.000*	1315.000	- 4.009	0.000*
f18	3.248	0.001*	1524.000	- 3.182	0.001*
f19	1.541	0.126	1878.000	- 1.374	0.169
f20	1.401	0.163	1883.000	- 1.363	0.173
f21	4.261	0.000*	1291.500	- 4.136	0.000*
f22	2.309	0.023*	1748.000	- 2.130	0.033*

*Difference is statistically significant at p < 0.05
Source: Authors' survey

The ANOVA results, followed by K-W tests, as shown in Table 8 and Table 9, find no statistically significant differences in evaluation of researched factors of internal and external environment depending on the type of industry.

Table 8. Differences in evaluation of internal environment factors depending on industry type

Internal Environment Factor	ANOVA		K-W test	
	F	p	χ^2	p
f1	0.867	0.460	1.995	0.573
f2	1.928	0.128	5.196	0.158
f3	0.278	0.841	0.691	0.875
f4	0.436	0.727	1.721	0.632
f5	0.043	0.988	0.165	0.983
f6	0.648	0.586	2.331	0.507
f7	0.772	0.512	2.139	0.544
f8	1.042	0.376	3.488	0.322
f9	0.196	0.899	0.402	0.940
f10	0.385	0.764	1.113	0.774
f11	0.830	0.480	1.314	0.726

Source: Authors' survey

Table 9. Differences in evaluation of external environment factors depending on industry type

External Environment Factors	ANOVA		K-W test	
	F	p	χ^2	p
f12	1.943	0.126	3.732	0.292
f13	1.100	0.351	3.347	0.341
f14	0.874	0.456	1.949	0.583
f15	1.017	0.387	1.782	0.619
f16	0.954	0.416	3.234	0.357
f17	0.523	0.667	1.247	0.742
f18	2.195	0.092	5.833	0.120
f19	0.720	0.542	2.050	0.562
f20	0.696	0.556	1.941	0.585
f21	2.502	0.062	5.951	0.060
f22	0.099	0.960	0.200	0.978

Source: Authors' survey

5.3. Correlation analysis between enterprises' characteristics and internal and external environment factors

To examine ties between independent and dependant variables, i.e. enterprise characteristics and researched factors of internal and external environment, correlation analysis was employed. Due category nature of independent variables the correlation analysis was conducted by calculating the Spearman's rank correlation (*rho*). The results of this analysis are shown in Table 10 and Table 11.

Three correlations have been found between enterprise size and factors of internal environment:

1) Weak, *rho* = - 0.184 for capacity to continually supply export markets
2) Medium, *rho* = - 0.353 for lack of capital for export financing
3) Weak, *rho* = - 0.273 for promotion activities on export markets organization.

No correlations have been found between length of export business of enterprises and factors of internal environment.

Five correlations have been found between capital ownership of enterprises and factors of internal environment:

1) Weak, *rho* = - 0.233 for capacity to continually supply export markets
2) Weak, *rho* = - 0.282 for lack of capital for export financing
3) Medium, *rho* = - 0.328 for collecting information about foreign markets
4) Weak, *rho* = - 0.275 for price competitiveness on export markets achieving
5) Strong, *rho* = - 0.600 for organization of promotion activities on export markets.

No correlations have been found between type of industry of enterprises and factors of internal environment.

Table 10. Correlation of the enterprises' characteristics and the factors of internal environment

Factors of internal environment	Enterprise size	Length of export business	Capital ownership	Type of industry
f1	- 0.184[*]	0.012	- 0.233[**]	- 0.106
f2	- 0.353[**]	- 0.081	- 0.282[**]	- 0.049
f3	0.007	- 0.005	- 0.055	- 0.012
f4	- 0.067	- 0.144	- 0.125	- 0.094
f5	- 0.094	- 0.029	- 0.328[**]	0.010
f6	- 0.084	- 0.082	- 0.141	0.031
f7	- 0.084	- 0.078	- 0.036	0.014
f8	- 0.010	0.159	- 0.114	- 0.112
f9	- 0.039	0.086	- 0.275[**]	- 0.054
f10	- 0.158	0.091	- 0.123	0.062
f11	- 0.273[**]	- 0.065	- 0.600[**]	- 0.003

[*] Statistically significant at $p < 0.05$
[**] Statistically significant at $p < 0.01$
Source: Authors' survey

Three correlations have been found between enterprise size and factors of external environment:

1) Weak, *rho* = - 0.188 for costs and procedures of bank loans for export financing

2) Weak, *rho* = - 0.170 for government's policy towards exporters
3) Weak, *rho* = - 0.171 for domestic currency exchange rate.

No correlations have been found between length of export business of enterprises and factors of external environment.

Nine correlations have been found between capital ownership of enterprises and factors of external environment:

1) Medium, *rho* = - 0.455 for costs and procedures of bank loans for export financing
2) Medium, *rho* = - 0.345 for government's policy towards exporters
3) Medium, *rho* = - 0.219 for domestic export bureaucratic procedures
4) Medium, *rho* = - 0.399 for domestic currency exchange rate
5) Strong, *rho* = - 0.504 for lack of national export branding policy
6) Medium, *rho* = - 0.344 for support and expertise through associations
7) Medium, *rho* = - 0.273 for competition on export markets
8) Medium, *rho* = - 0.355 for cooperation with partners from export markets
9) Weak, *rho* = - 0.183 for cultural differences in contacts on export markets.

Table 11. Correlation of the enterprises' characteristics and the factors of external environment

Factors	Enterprise size	Export length	Capital ownership	Type of industry
f12	- 0.188[*]	- 0.165	- 0.455[**]	- 0.043
f13	- 0.170[*]	- 0.035	- 0.345[**]	- 0.105
f14	0.070	- 0.025	- 0.219[*]	0.041
f15	- 0.171[*]	- 0.061	- 0.399[**]	- 0.050
f16	- 0.100	- 0.103	- 0.504[**]	- 0.055
f17	- 0.080	- 0.026	- 0.344[**]	- 0.004
f18	- 0.126	- 0.059	- 0.273[**]	- 0.090
f19	0.001	0.067	- 0.118	- 0.103
f20	0.051	0.105	- 0.117	- 0.046
f21	- 0.055	- 0.014	- 0.355[**]	- 0.156
f22	0.002	- 0.010	- 0.183[*]	- 0.027

[*] Statistically significant at *p* < 0.05
[**] Statistically significant at *p* < 0.01
Source: Authors' survey

No correlations have been found between type of industry of enterprises and factors of external environment.

6. Discussion

The results of the empiric research show that Serbian manufacturing SMEs face export barriers in 11 out of 22 explored factors of the internal and exter-

nal environment. Ranked according to their means, perceived export barriers are presented in Table 12.

Table 12. Ranks of export barriers perception by small and medium enterprises

Explored factors that pose barriers to export	Environment	Mean
Competition on export markets	External	4.2993
Costs and procedures for obtaining loans for export	External	4.1825
Policy of exchange rate of the domestic currency	External	3.9416
Government's policy toward exporters	External	3.5328
Lack of capital for export financing	Internal	3.4964
Achieving price competitiveness	Internal	3.2701
Promotion on export markets	Internal	3.2263
Absence of export branding national policy	External	3.0657
Collecting information about export markets	Internal	2.8832
Adjusting products for export market demands	Internal	2.8175
Export tariffs and sale cost on export markets	External	2.7518

Source: Authors' survey

The strong competition on export markets is the biggest barrier to them. This is consistent with the results of some other research conducted in developing and transition economies (Neupet et al., 2006; Che Senik et al., 2011; Singh, 2009). However, marketing barriers take an important place among the listed barriers. Even six of them are identified: price competitiveness achieving, adjusting products on export markets demands, promotion activities organization, collecting information about export markets, and distribution originate from internal environment, while absence of national export branding policy derives from external environment. These findings suggest the low level of marketing activities in domestic SMEs exporters and absence of sense in policy makers' minds that national export branding policy is of essential need.

Perceived export barriers affect more small enterprises and enterprises with domestic and dominant domestic capital ownership, especially for the lack of capital for financing export, costs and procedures of bank loans for export financing, organization of promotional activities on export markets, collecting information about export markets, government's policy toward exporters, and lack of national export branding policy.

Statistical differences between group tests and correlation between enterprise size and six out of total 22 explored factors of internal and external environment lead to *H1* partial confirmation. Similar result was confirmed in some previous researches (Majocchi et al., 2005; Larimo, 2006).

Small differences between group tests and absence of correlations between enterprise lengths of export business and explored factors of internal and

external environment lead to *H2* rejection. In this finding the results of this research are consistent with the results of a few previous studies (Andersson et al., 2004; Larimo, 2006).

Significant statistical differences between group tests and capital ownership correlation with 14 out of total 22 investigated factors of internal and external environment lead to *H3* confirmation. Consequently, the results of this paper confirmed the same as in some previous studies (Cole et al., 2010; Fila-totchev, et al., 2008).

Almost negligible differences in the assessment of all investigated factors between enterprises classified by the type of industry, none of which is statistically significant, and the lack of correlation between the type of industry and the investigated factors give grounds for rejection of the *H4*. Accordingly, the results of the research are in compliance with several previous surveys (Gao et al., 2010; Chetty & Hamilton, 1993).

7. Conclusion

The main objective of this paper was to explore the export barriers perception by Serbian manufacturing SMEs. Results show that influence of the enterprise's size on export barriers perception is partial, which means that small enterprises in general face larger barriers to export compared to medium ones. Also, presence of foreign capital positively influences the export barriers perception, which means that enterprises with domestic and dominant domestic capital perceive researched factors as larger barriers in export compared to foreign and dominant foreign capital ones.

From these findings implications can be drawn for the exporters' management, economic policy makers and future researches. Typical resource barriers that SMEs face when trying to export were identified in this paper. As the main problem in export of Serbian SMEs is the lack of competitiveness, and the exporters' managements have to find the way to increase it. Special attention should be paid to improving the product quality and building competitive marketing strategies. Associating in clusters may also help because international practice shows that it could be a successful way to overcome some export barriers. However, these efforts may be unsuccessful if economic policy makers do not take necessary measures. As commercial banks loans for SMEs export financing are expensive, government has to find the way to support them better. Regarding the financing, given the example of some other countries, the export bank with credit lines designed especially for SMEs should be established, and more supporting export guarantee fund has to be made. Providing of special consultancy management and marketing services

to the exporters by government bodies and exporters associations would be welcomed too.

The findings in this paper should be interpreted in the light of several remarks and limitations. First, findings were based on subjective evaluation. This in particular refers to internal environment factors and ability of SMEs to give an objective evaluation of them. Second, as it is typical with most surveys, data were collected from a single respondent in each SME. Thus, results may be influenced by single-respondent bias. Third, conclusions were made on the basis of the successful Serbian SME's opinions. Hence, statistically significant differences and correlation might have been much more relevant if the survey had been taken on a random sample with all exporters from sector of SMEs. Fourth, survey was conducted in one national economy. For other transition countries, the factors may be similar or different and it will be interesting to find out if perceived barriers are the same in other developing countries or not.

In addition, future researches may be involving data collection on a longitudinal basis in order to validate these findings and find causality. Also, it may be supported by qualitative approach for the detection of new factors that may affect exports, which were not explored in this study, and for a deeper understanding of the problems in export and possible ways of surpassing them based on successful exporters' practices.

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