INTANGIBLE CAPITAL Session

IMPROVING COMPETITIVENESS OF SERBIAN FIRMS: THE ROLE OF INTANGIBLE CAPITAL

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ABSTRACT

The paper presents some initial analyses after a survey conducted in a set of Serbian firms. Although initial, the results show some interesting tendencies within the Serbian firms and represent a broad picture on understanding the importance of intangibles in improving firms' competitiveness. The three aspects of intangible capital are analysed: internal relationships and human capital, external relations and marketing and finally, innovation and R&D including the developments in IT sector. It appears that internal relations are relatively underdeveloped jeopardising an efficient fulfilment of the firms' objectives. Thus, decision making processes in many cases are not properly designed and leave an excessive role to the owner as an exclusive decision maker. Also, the position of workers is poor particularly regarding their rights to be informed, make proposals or participate in decision making and even some traditional workers rights are frequently neglected (unions, collective bargaining etc.). On the other hand the higher level of workers satisfaction and loyalty to the firm emerge under better internal relations. Regarding external relationships and marketing practices the results show that this element of intangibles is steadily improving but still is at a lower level then necessary. An essential progress has been remarked within the exporting firms and/or other firms that develop international businesses. We understand this fact as a consequence of a special form of spillovers of international business practices. Regarding innovations many firms claim innovative practices but still at a rudimentary level. Better practices are found among the firms that are exporters and those in manufacturing industries and yet among the foreign firms. However, foreign firms in some cases neglect R&D if they act as a part of larger international companies. This finding points at a lower technological level of production that has been established in the country by means of FDI while major R&D activities are organised in home countries of foreign investors. The finding is in accordance with other research results that found a lower level of spillover effects of FDI in transition economies than it was expected at the beginning of transition process. In concluding remarks we propose some policy measures that could incite local firms' investments in intangible capital.

JEL Clasification: O32, O34, M21

1. Introduction

It is well known that Serbia is a transition laggard. Since October 2000 when important political changes took place in the country, some speeding up of the reforms was expected. Indeed, the country was directed towards relatively fast institutional adjustments during the 2001 and 2002 in the field of market liberalisation and privatisation. However, apart from slowing down the reforming processes during the subsequent years, Serbian economy suffered also from some well identified deficiency of transition projects like sluggish enterprise restructuring, poor competition policies and above all lack of proper industrial policies and corresponding definition of growth models in use (see in detail Cerovic *et al.* 2012). This has resulted in a slower recovery from the devastating legacy of the 1990s, fast decrease in manufacturing output share in GDP and long lasting decline of the employment rate, which altogether was followed by a remarkable public discontent. Moreover, in the year 2012 Serbia has deteriorated its anyway low competitiveness and has become the least competitive country among the countries emerged from former Yugoslavia (World Economic Forum, 2013).

Under these circumstances we found challenging to analyse what was the prevailing attitude of those firms that have been established in that period and/or have managed to survive and do businesses until and during the period of global crisis (since 2008). Our basic position was that firms' restructuring should be a major change after market oriented reforms and privatisation. Also, we expected that these changes should lead to more efficient and more productive performance of the firms in question and their more sound business policies and/or strategies particularly in developing their competitive abilities. In a country that was for years practically cut off the major flows in investments, technology progress and business appearance in the world markets and was additionally lacking capital endowments it could be reasonable to make an effort in developing more available resources such as social capital, internal relations, knowledge, management and marketing skills as well as some other fields that were usually seen as intangible capital of a firm. However, it is also well known that such a kind of competitive capabilities of a firm can be lost unless properly understood among corporate governance actors and firms' management as an internal and accessible source of higher efficiency and competitiveness.

Although the resulting competitiveness in development of social, informational and relationship capital and in information technology, innovation, research, marketing activities and branding, proper organisation and human resource management is undoubtedly confirmed at both macro and micro level,[113] we found challenging to analyse the matter in a country like Serbia that is coming out from a tremendous decline in economic results (although never particularly advanced) and yet is burdened by various kind of pressures to accomplish transition reforms with no specific features that could ease the entire process. Namely, our aim is to analyse in what way the development of intangible assets was recognised within the firms and – according to the results obtained – to suggest some policy measures the government should adopt in foster development of this component of competitive capabilities.

The paper is a part of a joint project taken by the Faculties of Economics in Ljubljana and in Belgrade and represents the first findings obtained after a survey conducted in a sample of

[113] For broader literature survey see section 2.

Serbian firms. We shall concentrate on several important features that can give a preliminary picture of how and to what extent the importance of intangible capital has been recognised in Serbian enterprises. We shall particularly discuss the issues connected with internal relation within the firms and upgrading human capital – both seen as a part of social capital accumulation, further on we shall examine the external relations of the firms with other economic agents they are linked with and finally shall make some observations regarding innovation processes.

The paper is organised in seven sections. After the introduction (section 1), in section 2 we present a brief literature survey aimed to point out the most important findings regarding the impact of intangible capital on competitiveness while section 3 informs on basics of methodology used in the project. Section 4 presents some major findings regarding internal relations and human capital accumulation and section 5 is devoted to analysing brand capital and external relations of the firms. In section 6 some data on innovation practices will be analysed and in the last section (7) we shall make basic conclusions and give some recommendations regarding policy measures.

2. Literature review

Terms like knowledge, networks, innovation, brand, reputation, intellectual and social capital are the key words of modern business. They describe various forms of corporate intangible assets that are becoming the major drivers of competitive advantage and growth. Developments of communication technology, business networks and alliances, continuous innovations, as well as rapid internationalisation bring on important changes in global businesses. Organisations are aware that technology-based competitive advantage is just temporary whereas sustainable competitive advantage is being determined by intangible resources they possess (Johanson *et al*, 2001). Instead of conventional factors like land, labour and capital the main sources of contemporary competitive advantage are knowledge, innovations, brands, reputation, customer loyalty, high-quality production processes, business networks. We are witnesses of a new phase in economic development, characterised by soft, intangible, non-financial factors Lev and Zambon, 2003).

Intangible assets can be defined as identifiable non-monetary assets without physical substance that is, as a non financial asset that is source of future economic benefit, without physical embodiment (Lev, 2001, p. 5). Numerous different terms are used as synonyms for this kind of intangibles such as capabilities, strategic assets, organisational competences, basic competences, knowledge asset, intellectual capital, social capital. Regardless of the used term, all intangibles have some similar characteristics:

- they lack physical existence, although some intangibles can be stored on CD (software) or in some legal documents (intellectual property rights),
- all intangible objects are renewable after they have been used,
- while being used they have an ability to increase in quantity and especially in quality.

Lev (2005) emphasises an additional characteristic of intangibles: they are non-tradable resources, since there are no organised and/or transparent markets for trading these assets. In comparison with tangible assets, like financial or physical resources, intangibles are less

flexible, hard to accumulate and not easily transferred, so they are barely imitable by competitors (Perrini and Vurro, 2010). Due to mentioned characteristics and based on resource based view it is evident that intangibles have a potential to provide long-term differentiation and to become an important source of sustained competitive advantage of firms and their superior performance.

The literature provides different methods of classifying intangible assets. The most commonly accepted categories of intangibles seem to be: (a) human capital, (b) organisational capital and (c) relational capital. Human capital includes skills, talent, experience and knowledge of employees, their creativity, leadership skills and other competencies. Organisational capital refers to all organisational capabilities needed to meet market requirements. It includes brands, intellectual property, organisation strategy, culture, processes, structure, reputation and image of a firm. It can be defined as the institutionalised knowledge and codified experience stored in databases, hardware and software, culture, routines, patents, brands, intellectual property rights, and structures. Relational capital mainly covers relationships of an enterprise with its external and internal stakeholders, such as buyers, consumers, investors, suppliers, government institutions, research and education institutions, marketing agencies, business partners, media, managers and employees. In this paper we shall endeavour to follow this taxonomy of intangibles in analysing practices of Serbian enterprises in regard to intangible capital and shall make just minor variations according to the data and phenomena we were able to observe.

In academic literature, since 1990s one can recognise a remarkable interest in intangibles. One of the main problems in understanding and assessing the importance of intangibles appears to be lack of financial information and empirical data, due to difficulties in measurement of intangible assets, as well as absence of generally accepted theoretical framework. Intangible asset literature is predominantly conceptual, aiming at establishing adequate theoretical background. Empirical studies are rare, with great differences in methodology and even in definitions of intangible assets. On the other hand, some of the available analyses study intangible capital at the micro (firm) level and some at the macro (national) level.

Regarding those studies that analyse firm level, one can divide them in two main groups: (i) studies that address value of firms' intangibles together with the accounting practices and methodologies of intangible assets measurement and reporting; (ii) studies that emphasise the relationship between intangible assets and firms' performance.

In most of studies from the second group one can find strong empirical evidence in regard to positive impact of intangibles on competitive advantage and company's performance, in both – developed and emerging countries. Thus, for example, empirical evidence in emerging countries can be tracked through cases of Indonesia (Hidayati *et al*.,2012)., Taiwan (Tseng and Goo 2005), Albania (Prasnikar, *et al.* 2012), Slovenia (Prašnikar, ed., 2010), and Brazil (Dutz, 2012). Using Tobin's q as a measure for intangible assets, authors of the study on Indonesia, found that intangibles had a significant impact on firm's competitive advantage and market value that was more intensive in manufacturing than in non-manufacturing companies (Hidayati *et al*., 2012).

In the study of Taiwan enterprises, Tseng and Goo (2005) used also Tobin's q, and Value Added Intellectual Coefficient, as a measure for intangibles, and found a positive relationship between intellectual capital component and corporate value. Taiwan is an important example representing an emerging knowledge economy: a favourable international competitive position of Taiwan's firms is based on R&D, technology and human resources, while Taiwan's economy is characterised by a high share of companies in technology intensive sectors.

The main conclusions of the study on Albania that was conducted in 2011 and focused on six specific aspects of intangible capital (Prasnikar, *et al.* 2012) could be summarised as follows: (a) relational, informational and information technology capital of Albanian firms affects productivity; (b) innovation and R&D are not the key success factors for Albanian firms, due to a very low level of innovation expenditure (0,2% of GDP); (c) organisational flexibility has no relationship with productivity, while average productive companies have more loyal employees and they invest more in systematic knowledge transfer.

As to the developed countries the most of firm level studies have been performed in the USA. The main findings are that intangible resources are drivers of value creation, especially in an R&D organisation (Pike *et al*. 2005). Also, a positive relationship between investments in intangible capital and marker value of firms was found (Brynjolfsson et al., 2002). Some analyses address specific types of intangible resources, providing firm empirical support to hypotheses that human, social and organisational capital, as components of intellectual capital, are related to organisational performance and play a significant role in determining firm performance (Youndt and Snell, 2004).

According to Global Intangible Tracker around 65% of firms' value in the world refers to intangible assets, with great differences among different industries (Global Intangible Tracker 2007). The highest share of intangibles is found in advertising, internet and software sectors, biotechnology, cosmetics and health services.

Macro level studies analysing intangible capital are mainly focused on investments in intangibles and their impact on economic growth and/or productivity. Estimations of World Bank show that 78% of world wealth is due to intangible capital, 59% in developing and 80% in OECD countries (Roth and Thum, 2010). According to some analyses investments in intangibles, as a percentage of GDP, are at the highest level in the USA and Canada, reaching around 12%, while in Europe the largest investments are in the UK, 11% of GDP (Roth and Thum, 2010 and Kuznar, 2012). In EU countries evidence show that investments in intangibles are not so high as in USA, while the lowest rate is in Mediterranean countries (Kuznar, 2012). According to the OECD data, total intangible investments (as a percentage of the GDP) range between 6% and 11%: Austria, Japan and Italy score lower rates, while the Scandinavian countries, France and the US score high ones (Croes, 2000). Regarding East and Southeast Europe estimations for Czech Republic (6.45%) and Slovakia (4,53%) are considerably lower than for Germany and France, but higher than for Italy and Spain; Greece is a big outlier, with the lowest level of intangible investments, 1.6% of GDP only.

Overall, capital investments in intangible assets grow faster in comparison with investments in tangible ones. All OECD countries show a higher growth rate of intangible compared with tangible investments, especially the Scandinavian countries (Croes, 2000). Two countries, the USA and the UK, show a higher ratio of intangible investment as percentage of GDP

relative to tangible capital, while in Czech Republic, Spain, Italy, Slovakia and Greece intangible investments are still relatively low (Van Ark, *et al*. 2009).

In literature one can find a variety of data regarding intangible investments, due to different methodologies used and various indicators for intangible assets. Although some international standardisation of indicators seems necessary for comparative analysis, there is a lack of general consensus on what should be counted as to be an intellectual asset. Empirical studies of intangibles for a long time have been oriented to R&D and intellectual property and later on other intangibles have been introduced, such as brands and reputation, information technology and human capital. The OECD study analyses data on five aspects of intangibles: R&D and innovation, payments for foreign technology, software, education and marketing (Croes, 2000). Corrado *et al*. (2009) established a methodology that is widely adopted in newer economic analyses. Intangible assets have been classified under three broad categories: (i) computerised information, (ii) innovative property and (iii) economic competencies. Though a series of economic or business models have been constructed that include different sorts of intangibles, some quandaries still remain about which items should be included in analyses of intangibles, and how to measure them, either on macro or micro level.

In macro level studies exploring links between intangibles and economic growth and/or productivity we may highlight several important contributions. Positive relationship between intangible capital investments and labour productivity growth is confirmed in a variety of countries (the EU 15 countries, Roth and Thorm, 2010, in eleven developed countries, Van Ark, *et al*. 2009, Corrado *et al*. 2013, Corrado *et al*. 2012). The contribution of intangibles to labour productivity growth ranges from about 10 to 40 percent (Van Ark, *et al*. 2009).

Most of authors highlighted the importance of incorporating intangible capital into national accounting framework so that a real assessment on investments in tangible and intangible assets could be obtained. It is widely recognised that the national accounts framework based on investments in physical assets only, gives a partial insight into growth, investment and productivity, while if intangible investments are considered, they are often focused exclusively on scientific R&D, that accounts for less than 10 per cent of all intangible investments by businesses (Roth and Thorm, 2010). The strongest argument for national accounting framework adjustment came from developed countries, like UK and USA. These countries currently have more intangible than tangible investments, while other EU countries are following those practices (Corrado et al, 2013). There are other approaches to the issue such as in an interesting contribution (Nelson, 2006) that shows how intangible investments from the past can explain some anomalies in a conventional financial model regarding returns in certain industry groups and index returns in stock exchange.

Macro level studies can be summarised by a general conclusion that intangible capital, as a driver of national productivity and economic growth became a major challenge for national governments to develop proper policies that will foster investments in intangibles and in doing so to ease the allocation of resources to their most productive use. Also they should develop and adopt new national accounting systems based on the recognition of the role of intangibles that would provide quality information and so enhance investments effectiveness.

3. Research methodology

The survey was conducted within a sample of 41 Serbian firms in 2013. The paper draws on a methodology advanced by Prašnikar *et al.* (2012) that was applied to similar analysis on Albanian firms as well as firms in Slovenia and partially in Bosnia and Herzegovina (more precisely in the Republic of Srpska).

Due to limited resources, the sample was chosen using the snowball method so as to represent the most typical structure of Serbian firms by industry (but non-randomly chosen). Some structural elements of the sample are presented in the table below.

Table 3.1 Sample structure:

	Number of firms
Total	41
Manufacturing (and similar)	26 (63%)
Services	15 (37%)
Foreign owned	10 (24%)
Domestic owned	31 (76%)
Small (< 50 employees)	15 (37%)
Medium (50<employees<200)	15 (37%)
Large (>200 employees)	11 (26%)
Exporters (at least 5% of production)	26 (63%)
Non-exporters	15 (37%)

As can be seen from the table the sample consisted of 26 manufacturing firms (63%), while 37% of the sample (15 companies) is from service activities. There are 24% (10 units) of the sample companies owned by foreign capital, while the major part of the sample (76%) is represented by domestically owned companies.

The sample also intended to well cover all kinds of firms' size structure; small (less than 50 employed) and medium (from 50 to 200 employed) companies are 37 percent of the sample each, while share of large companies is 26 percent of the sample. Indeed, the actual structure of Serbian economy is different with more smaller and medium firms as well as with less manufacturing firms. However, our sample was intentionally biased covering higher percentage of big and/or manufacturing firms since our interests were predominantly oriented to these types of companies. The similar could be applied to the firms that are engaged in export and in contrast to those that sell exclusively in domestic market.

In order to become familiar with the questionnaire, a company first received it by mail. The questionnaire was then answered by a company's CEO, financial or HR manager. In some cases, researchers from the Faculty of Economics in Belgrade complemented the received questionnaires with the data from the Serbian Business Registers Agency. The analysis conducted relies mostly on descriptive statistics. Whenever possible we have identified certain statistical correlations and/or at least tested statistical significance of our findings. Our analysis relies mostly on descriptive statistics, accompanied with correlations and simple statistical testing, when it is possible.

4. Internal relations and human capital

The issue of internal relations within a firm particularly those related to labour and the communication between managers and owners is of a special interest in Serbia. Firstly, discussing labour relations the issue could be specific having in mind self-management legacy. Secondly, both labour and managers-owners relations could be specific due to the relatively fast property rights change in a dozen of past years. The answer to these quandaries might shed some light on what are institutional changes that really have happened during Serbian privatisation process and what kind of internal relations has been build over the period.

4.1. Wages and employment

In discussing these matters we shall start from some purely economic data concerning wages. Within this group of questions we have remarked that a big majority of firms did not know to properly answer whether the wages are above the level indicated by collective contracts. This is due to the fact that they actually do not follow guidelines from these contracts, which is also connected with the later responses on trade unions that exist only in few firms (we shall comeback to this problem below). However, this information is to explain why in the table 4.1 concerning wages we disregard this question.

In analysing workers pay we grouped the firms according to several criteria and in particular: whether a firm is in manufacturing or in services, whether the firms are foreign or domestic owned (FOF-s and DOF-s respectively), whether they belong to a group that earn higher (21 firms) or lower (20) profit per worker, whether they are exporters (ExF who earn from exports at least 5% of their revenues) or not (NExF) and finally, according their size in regard to a number of employees. The main results are presented in the Table 4.1 below

Table 4.1 Wages, year 2012

Firms	**Wages higher than in less successful firms targeting the same labour market**	**Among better paid in the entire economy**
Full sample	23 (56%)	14 (34%)
Manufacturing (and similar)	18 (72%)	11 (44%)
Services	5 (33%)	3 (20%)
Foreign owned (FOF)	7 (70%)	5 (50%)
Domestic owned (DOF)	16 (52%)	9 (29%)
Profit per worker – high	11 (52%)	8 (40%)
Profit per worker – low	11 (58%)*	5 (26%)*
Exporters (ExF)	17 (65%)	10 (38%)
Non-exporters (NExF)	6 (40%)	4 (27%)
Small (< 50 employees)	5 (33%)	4 (27%)
Medium (50<employees<200)	8 (53%)	4 (27%)
Large (>200 employees)	10 (91%)	6 (55%)

* One firm omitted due to bankruptcy (high loss, one employed, formerly large manufacturing firm)

It is evident from the table that the majority of firms in our sample declare their workers are better paid in regard to their competitors in the labour market (56%) and yet more than a third of all firms claim their employees receive higher wages comparing the entire country. This characteristic of a sample comes from the fact that we deal with active firms that is, survivors after the crisis and transition and privatisation related events.

Secondly, we may remark that in manufacturing wages seem to be higher than in services which is a surprise but could be an effect of changing policy orientation that was implicitly favouring services during first years of transition. The idea of a new growth model could impact the labour market making the demand for manufacturing workers higher than before while services are pretty saturated in terms of labour force.

It is also evident that higher percent of FOF pay higher wages than DOF while an important difference among firms was found in regard to export activities: almost two thirds of ExF claim their workers are better than in competing firms and almost two fifths (38%) they receive wages considerably higher than others in the economy whereas only 40% and 27% of NExF claim similar situation (respectively). Some difference appears when the group of large firms is compared with smaller ones: a vast majority (91%, small just 33%) of big firms claim better wages than competitors can pay (statistically significant difference regarding the size of firms: $F = 5.055$; $p = 0.011$) and yet 55% assess their wages to be among the highest in the economy (though statistically insignificant).

However, from the analytical point of view the most intriguing finding is that higher percent of low-profit-per-worker firms claim to pay better wages than their 'less successful' competitors in the labour market do (58%), when compared with firms with higher profits (52%). They also relatively frequently (5 of them or 26%) pay workers higher than others in the economy (two of these firms have even negative profit). Although statistically insignificant it is still somewhat peculiar since they cannot be taken as the most productive firms: low profits per worker plus high wages cannot guarantee high value added per worker. On the other hand 5 of 8 firms with the highest profit per worker declare their wages are among the highest in the economy, which is expected. However, we cannot find any significant link between the two sets of data and cannot link wages with some specific features in terms of any other measure regarding intangible capital within our questionnaire. We may only conclude that the issue of wage levels is still pretty unclear within the Serbian economy when compared with firms' economic performance.[114]

The second issue regarding some basic economic indicators in this section deals with short term adjustments in employment. Our hypothesis is that short term adjustments should lead to definition of a proper core number of employed and yet should demonstrate flexibility in firm's organisation that could help in overcoming sudden shocks and/or acquiring sudden opportunities.

We wanted to particularly analyse what were reactions of the firms observed in turbulent period 2008-12. In our sample of 41 firms there are 23 (56%) that declare they had some short term adjustments in labour force during the period. In that number there were 9 large, 8 medium and 7 small firms in terms of number of employees. Moreover, this difference

[114] It is possible that some of the firms do pay their workers higher than expected in order to keep and stimulate them. However, even this assumption will appear dubious when paired with some other data as we shall show further on.

based on the size of firms is statistically significant (F = 2.389; p = 0.10). Among the firms that do not report short term adjustments dominate (expectedly) small firms (9), followed by medium ones (6) and surprisingly, two larger firms (both FOF-s). On the other hand, FOF-s appear to be more flexible in general, since 7 of them (70%) affirm short term adjustments while only 52% DOF-s report similar alterations. The difference is not statistically significant but this can be due to a small FOF set).

However, as to the mode of short term adjustments in labour dominate pretty conventional methods – basically the most used way of change is additional working hours of the existing employees and/or hiring part time workers. Rarely one can find relationships with employment agencies, employment of students and similar. In case of economically undesired events shortened working hours are dominant practices.

The following two questions we have asked the firms deserve more attention as they are related to deeper insight in planning the real needs of labour and longer term adjustments. However, the firms' responses were pretty optimistic. Firstly, in majority cases they claim that have approached the targeted number of workers (or even have attained it already). This answer was given by 34 enterprises (83%) but interestingly, even 25 DOF-s (81%) are confident they are at or close to targeted number while 7 FOF-s (70%) are ready to assert this statement. In our view this higher percent within DOF-s should be understood as a higher degree of concern and caution among the FOF-s as well as an overestimated state of art among DOF-s. Such a conclusion is based on a number of other examples where FOF-s demonstrate usually better results in governance and management.

Secondly, the firms were asked to answer whether they do recognise a core group of employees that makes a nucleus of the firm and makes a firm's comparative advantage. The answers were again optimistic though with somewhat changed distribution of answers. In total 31 firms confirmed the statement (76%) but FOF-s appeared to be more familiar with the issue giving affirmative answer in 9 (90%) cases compared with DOF-s presenting 22 (71%) positive responses. Looking from the standpoint of economic results affirmative answer was given by 17 firms (81%) from the group with higher profit per worker and by 14 (70%) from the lower group.

Finally, when we tried to face the three answers on employment adjustment with those for wages calculating a compound factor for the former (0-3) and related it with the answers that claim considerably higher pay for labour than in the country we found an interesting result. In the group of firms with the value of the compound factor 0-1 (7 firms) there were no firms that claim wages that high. In the following and the biggest group with factor 2 (23 firms) there were 8 (32%) with exceeding wages reported. Finally, in the group with factor value 3 (11 firms) six of them (55%) have claimed top wages. One may conclude that firms with healthier planning and better strategies in their employment policies can afford better wages for their employees.

4.2 Decision making: owners, managers and workers

The most challenging part in the analysis – regarding internal relations – discusses the issue of decision making. The issue can be analysed in several perspectives such as: to what extent strategic decisions and management are recognised and separated in regard to operative decisions, what level of cohesion in decision making has been achieved in terms of

harmonious work between owners and managers and in particular with workers and other employees, what kind of loyalty exhibit workers towards their firms and are they ready to undertake some risks that a firm could meet etc. Finally, we shall try to find out how all these elements do affect satisfaction of employees and/or how much can add to rising of firms' social capital as factors of improving business performances.

The firms were firstly asked whether they systematically separate strategic from current operative decisions at various levels of decision making with an idea to investigate do they recognise specific features of strategic choices. In total, 24 firms (58.5%) confirmed such practices. However, it should be remarked that the majority of negative answers come form smaller firms (13 below 50 and 3 below 100 employees) which could be understandable to a certain extent. It should be noted that different responses to this question in regard to the firm's size is highly significant ($F = 18.496$; $p = 0.000$). There is a slightly higher percentage of firms that earn higher profit per worker and confirm separation between the two sorts of decisions (13 or 62%) when compared with the firms from the lower profit group (11 or 55%). A non-negligible difference appeared between FOF (8 or 80%) and DOF (16 or 52%) that indicates better management practices in foreign companies (though statistically insignificant probably again because of too small number of foreign firms in the sample).

Basically the similar results have been obtained within the set of firms' responses regarding harmony and coordination between owners and managers in strategic decision making over the past five years. In total, 25 firms (61%) declare that their managers and owners act harmoniously among which, somewhat surprisingly, 14 (70%) are in the lower while 11 (52%) in the higher group according to profit to employment ratio. Again it should be remarked that among the latter group there are 10 smaller companies and again we encounter a significant difference in managerial practices in regard to the size of the firms observed ($F = 8.445$; $p = 0.007$). Also, there was a difference when harmonious relations were reported by FOF-s 8 (80%) and by DOF-s with only 17 (55%) examples of the kind.

Finally, when asked whether strategic decisions are coordinated between owners, managers and workers there were 20 units confirming such a state but again with a sharp distinction between FOF and DOF. In FOF 8 firms (80%) positively responded to the question while in DOF only 12 (39%) did so, which despite the imbalance in size of the two sets appeared to be significant ($t = 2.147$; $p = 0.044$). Some difference in responses (though insignificant) was found between manufacturing (46%) and service firms (53%) and between exporters (46%) and non exporters (53%).

In general, we may conclude that foreign firms have established a better system of strategic decision making with fewer possibilities to turn into any kind of conflict among the key groups of agents and/or internal stakeholders.

As stated at the beginning the relations between managers and workers and general position as well as attitude of workers in a new surrounding of private firms was of specific interest. In essence we investigated three groups of questions: is there any form of workers' participation in decision making, are there trade unions units in firms and are workers ready and devoted to participate in risk bearing within their firms.

Table 4.2. Workers, participation and risk aversion, 2012 (number of firms, percentage)

	All firms (total: 41)	FOF (10)	DOF (31)	High P/L (21)	Low P/L (20)	ExF (26)	NExF (15)
Participation in decision making							
Right to be informed	26, 63%	9 , 90%	17, 55%	11, 52%	15, 75%	17, 65%	9, 60%
Possibility to make proposals	19, 46%	6 , 60%	13, 42%	8, 38%	11, 55%	16, 62%	3, 20%
Members of the board	7, 17%	2, 20%	5, 16%	2, 10%	5, 25%	3, 12%	4, 27%
Trade unions (TU)							
There are TU units	10, 24%	4, 40%	6, 19%	4, 19%	6, 30%	7, 27%	3, 20%
Risk participation							
Readiness to 'do something more'	29, 71%	8, 80%	21, 68%	16, 76%	13, 65%	18, 69%	11, 73%
Stay with the firm if offered better job	14, 34%	6, 60%	8, 26%	8, 38%	6, 30%	7, 27%	7, 47%
Willing to invest in the firm (financially)	7, 17%	4, 40%	3, 10%	4, 19%	3, 15%	3, 12%	4, 27%

As can be realised from the table presented 26 firms confirm they do inform workers properly. If we omit one firm under bankruptcy, it should be remarked that among the 14 firms which do not inform workers 13 are small and/or medium companies (1). On the other hand this should indicate that in all other firms whether small or big – workers are well informed. However, in explaining what means and kind of information are present we encounter very different answers, from 'publicly presented decisions' (with no previous consultations with workers) to regular meetings and discussions with them (4 examples) regarding new products, offered projects etc. as an usual way of workers' involvement in decision making. In contrast, an equal number of respondents (4) insist on pointlessness of these forms of information convincingly underlying that owners are the only ones in charge (not even managers).

As to some more developed practices that involve workers in decision making it is noticeable that less than a half of the firms in the sample (19) develop opportunities for their employees to give suggestions and/or make proposals. Also one may see that these practices are more developed among the firms from the lower profit per worker group. Actually, this could be explained by the fact that in the lower profit per worker group dominate larger firms, already recognised as more friendly with workers participation. It is interesting that both practices – better information and better opportunities to propose – are more developed in foreign firms than in domestically owned ones. FOFs appear only to be more reserved when workers membership in boards is considered though this is anyway just a sporadic practice.

The data on trade unions (TU) give a very specific picture. As in the case of collective bargaining and agreements it seems that existence of trade unions in Serbian firms appears more incidentally than regularly. There are 10 firms only with TU units while in just 3 of them act more than one TU organisation. Also, only four firms report that TU is concerned with the firms' economic success and performance.

Analysing what sort of firms report TU existence, at a first glance it seems that joint stock companies (5 that is, 100%) usually favour existence of trade unions while only 5 limited companies (5/36=14%) claim trade union presence. Seemingly, this can also be linked with the size of the firms since all of them are larger companies. However, when analysed more carefully one may remark that the difference observed has not much to do with legal status of the firms in question or their size. In fact, there is a more remarkable common feature within the companies with TU activities: they are all either 'old' companies that were in operation already in the former Yugoslavia or they were acquired by the firms with similar history and legacy. Thus, we may remark that 100% of these 'old' companies and/or their employees stick to some, say, traditional values inherited from the former institutional arrangement (whatever was the real role and position of the 'socialist' trade unions under communist led self-management system).

When asked to assess whether their workers are ready to participate in risks their firms could meet or whether they are risk aversive 29 firms (71%) claim their workers are ready to do something 'more' for the firm. Among them 8 are the firms with TU-s (out of 10 with TU-s); 14 are those that report good workers' informing practices; 14 are those with open dialogues with workers, while 5 have workers in boards (of 7 having that arrangement). On the other hand, 10 are the firms stating that their workers are among the best paid in Serbia, while 18 are those that claim their workers are better paid than their competitors from the same industry.

However, coming to the explanations – what does that 'more' means it comes out that 10 firms point at additional working hours labourers are ready to work and 2 at their readiness to accept postponed wages or even their diminishing. Such answers, in the contest of unemployment could rather describe workers fears that might be laid off than their loyalty to the firm (we may quote another interesting answer – workers are ready to do *everything* they are ordered since they know that are well paid). Only two firms point at some more sophisticated practices stating that workers are interested in additional training and/or interested in new technology and processes or propose new products etc., while two more firms quote some other relevant examples. Additionally, it is interesting that in a control question on the same issue within another context, 3 positive answers changed into three negative but two negative were substituted for two positive keeping approximately similar percentages of positive answers in total.

One should also remark a systematically higher percentage of workers' readiness to participate in firm's risks among FOF in all categories when compared with DOF and in particular when their readiness to financially invest in the firm (statistically significant: $t = 1.770$; $p = 0.086$). This could be an indication of a higher level of labourers' trust in firm's success within FOF or at least in managerial abilities of their managers. It is also interesting that risk aversion among employees appear to be more evident in manufacturing companies than in services: summing up all three categories of possible risks the average value for manufacturing is 1 (out of 3) while in services it reaches 1.7 which represents a statistically

significant difference (t = 2.00; p = 0.057). Some difference is also evident in comparisons of ExF and NExF: the above table shows that employees in exporting firms are less loyal or more risk aversive.

To conclude with we have tried to find out what firms claim their employees are more satisfied and loyal. Summing up positive answers for three questions – whether workers are ready to 'do something more', whether they will stay with firm if offered a better job somewhere else and do they are at least as satisfied as workers of other similar firms – we tried to establish a measure for employees satisfaction and loyalty. We obtained the following results. In the firms that do not experience workers participation in decision making and have no TU and accordingly, TU has no concern on firms' performance (14 firms; positive answers 0 of 5) average values for satisfaction/loyalty is 1.5 (max = 3). In the firms where positive answers for participation and TU count 1 or 2 (14 firms) the satisfaction/loyalty measure reaches 1.9 while in the firms with participation/TU factor from 3 to 5 (12 firms) the average value for satisfaction/loyalty was 2.2.

A similar result was obtained in comparing managerial practices regarding coordination between managers and owners. If sum of three decision making indicators is 0 the satisfaction/loyalty measure is on average 1.6 (14 firms), but if the decision making indicators reach maximum value 3 (18 firms) the average satisfaction/loyalty reaches 2.1. Thus, we may conclude that an important factor of workers satisfaction and loyalty are sound owner-management-workers relations. In other words, open and trustful relations between owners, managers and workers and an active position of workers regarding their rights and participation appear to be a guarantee for employees' loyalty and even for risk taking with obvious positive effects on upgrading social capital of a firm.

Finally, it is important to note that the level of employees' satisfaction/loyalty is higher within foreign firms reaching 2.4 points when compared with domestic firms (1.6). Surprisingly in the context of inherited habits, the level of participation and TU activity is also higher within FOF where corresponding indicator is 2.1 while it is 1.5 among DOF which is in line with other results that connect this kind of relations with workers' satisfaction/loyalty. Last but not least satisfaction/loyalty appears to be bigger in larger firms: it is at the level of 1.5 in small firms, 1.9 in the medium ones and 2.1 in larger companies (when readiness to financially invest was added to the sum for satisfaction/loyalty the same difference remain but is even greater 1.8; 1.9; 2.4, respectively).

4.3 Human capital

It was mentioned in the previous section that regarding some answers obtained from the survey workers do sometimes (and on their own) organise certain courses (predominantly in languages but also those for upgrading skills that are necessary in their work). In this section we shall consider how much do firms invest in human capital by organising various training practices. Basically, we shall explore what kind of training do firms organise, what is their scope and how the effects are measured and transferred. In table 4.3 some basic results are presented.

Table 4.3. Investments in human capital accumulation, 2012 (number of firms)

	All firms (41)	FOFs (10)	DOFs (31)	High P/L (21)	Low P/L (20)
Are there organised trainings	33	10	23	16	17
Involve more than 50% of workers	18	6	12	6	12
Measuring effects	16	4	12	5	11
On job training organised	30	8	22	17	16
Transfer of knowledge	33	8	26	11	7
Successors prepared	28	7	21	11	5

From the table presented one may conclude that the majority of firms from the sample (81%; while FOF even 100%) recognise the importance of investments in raising of human capital. Although some responses may be taken cautiously since seem to be too optimistic it is remarkable that 44% of firms have involved more than 50% of their employees in training activities while 39% claim to seriously measure effects attained. In regard to the latter issue the firms were asked whether they measure effects in some other way apart from surveys and they have reported various practices – mainly testing (5 firms), internal control of work and results (3), ISO procedures (1), quality control of products (1), though some firms did not precise what measurement they apply. It is also evident that firms with lower profits per worker are keen to more invest in training activities which could be assessed as a positive move in their efforts to increase profits.

Also, various forms of on job training are relatively widespread (73%; FOF 80%) and in particular internal transfer of knowledge between employees seem to be a familiar practice within the firms observed (81%). Around 68% of firms report proper preparations of workers who should succeed their colleagues when necessary. Although some self over-estimation is possible this could be taken as a positive sign of introducing new practices in human resource management. Moreover, in this field there are no substantial differences between domestic and foreign firms.

Comparing the satisfaction/loyalty factor (as explained above) with the scope of training practices it appears that fewer training forms has been applied in the firms with less satisfied/loyal employees (1-3 out of 6 training activities observed in the firms with an average satisfaction/loyalty factor 1.5) while more trainings have been found in firms with higher satisfaction (3-6 training forms with an average satisfaction factor 2). In order to finally conclude whether satisfaction and loyalty are induced by better training possibilities or other way round, we have compared participation and TU activities already seen as a factor that positively affects satisfaction and loyalty among workers. Expectedly, it appeared that in the firms with low score for participation and TU activity (0-1) 3.4 organised training forms have been conducted on average while in more participative firms (score 2-5) the number of training forms is one point higher (4.4). Hence, we conclude that more trustful relations with workers could ease training practices and raise their motivation for upgrading their skills.

5. Brand capital and external relationships

In this section we shall analyse preliminary results on brand capital and external relationships as parts of intangible capital in the companies from the sample. Relational capital includes firm's relations with its stakeholders, consumers, buyers, competitors, suppliers, government institutions, employees, etc. As we have already analysed internal relationships, in this part we will address relationships with external stakeholders.

5.1. Elements of brand capital

In current competitive environment, branding is recognised as one of the most important drivers of added value and an important issue for all stakeholders of a company. Branding has become a top management priority when it was recognised that brands are one of the most valuable intangible assets that firms could have (Keller and Lehmann, 2006). Brands are frequently are seen as vital elements of intangible assets of all companies, regardless of industry, size, business strategy, country of origin. For companies brands represent means of legally protected unique features of a company, means of endowing products with unique associations, signal of quality level to customers, as well as source of competitive advantage and financial returns (Keller, 2003, p. 9).

Brand capital will be examined by analysing brand-related marketing activities, in four sections: (a) brand development activities, (b) brand value, (c) marketing innovations, (d) brand prospects.

In order to understand brand development, we tracked several aspects of brand management activities in our questionnaire:

- whether company develops its own brands of products/services,
- development of corporate brand,
- development of brand architecture.

Brand value section explains how companies build brand value, and it contains three questions:

- whether companies have legally protected their brands,
- how much they invest in brand development activities (investment as a share of sales), aiming to increase brand value,
- whether companies measure brand value.

The third section of brand capital analysis is dedicated to marketing innovation. In the questionnaire we include four variables for marketing innovation:

- the introduction of new media and/or techniques for promotion,
- important changes in design and/or packaging of products/services,
- new methods of product placement or marketing channels and
- new forms of pricing.

In the last section we consider the firm activities regarding future development of brands, based on three questions:

- strategy for future development of company brands,
- possibilities for future development of brands in new markets,
- possibilities for future leading market positions for company brands.

5.2. Brand capital: results

Our hypothesis is that there is correlation between brand development and brand value activities, as well as between brand development/brand value and marketing innovations. Also, we suppose that companies that report more developed brand activities and more brand value activities are better prepared for future marketing.

Results in section of brand development activities are shown in table 5.1.. In total sample, 71% of enterprises (29 firms) have their own brands of products/services, while 66% of companies developed corporate brand in addition to the separate brands of products/services. On the other hand, only 32% of companies have developed brand architecture (the way in which the brands within a company's portfolio are related to, and). The architecture should define how the company's brands are inter-related, support each other and how they are differentiated from one another. Low percentages in this section underline the great ignorance of brand development activities, as a way of market differentiation and of achieving competitive advantage.

Table 5.1. Brand development activities

	All firms	DOF	FOF	ExF	NExF
Existence of products brands	71%	65%	90%	73%	67%
Corporate brand development	66%	58%	90%	65%	67%
Brand architecture	32%	29%	40%	35%	27%

Some differences are evident among various groups of companies. The FOFs claim better results, in every segment of brand development activities, in comparison with DOFs. In our sample 90% of FOFs report development of its own products/services brands, as well as development of corporate brand, and 40% have brand architecture, while 65% of DOFs report development of its own products/services brands and 58% development corporate brand while only 29% confirm to have their brand architecture. Interestingly enough, there are differences among groups of companies that earn higher and lower profit per worker. Surprisingly, the group of companies with higher profit per worker shows lower results in terms of development of products/services brands (62% in comparison with 80% of companies in lower profit per worker group). Inferior results for higher profit per worker group could be an outcome of a higher share of service companies in this group, especially those that are distributors for international firms in Serbia. They usually operate behind the name and brand of the international company they represent and do not even use their corporate name in communication with market.

Relatively bad results for the first set of questions are in accordance with the results in the next set, regarding brand value (see table 5.2). Only 66% of firms report that they have legally protected company's brands, 58% of firms state that they have made some investments in marketing activities to increase brand value in the last five years, and only 17% of firms have applied some methodology of brand value measurement. We can also track previous indicators of the FOFs and DOFs since in these two groups main differences remain to be clearly visible. Thus, 90% of FOFs state that they have legally protected their brands compared with 58% of DOFs and 70% that have made some marketing investments to increase brand value versus 48% of DOFs. An average investment FOFs have made amounts at 3.54% of sales revenues while in DOFs it reaches only 2.22%; also 50% of FOFs report practices of brand value measurement in contrast to 6% of DOFs.

Table 5.2. Brand value activities

	All firms	DOF	FOF	ExF	NExF
Brand protection	66%	58%	90%	62%	73%
Investment in brands	54%	48%	70%	62%	40%
Investment in brands (% of sale, 2011)	2.68	2.22*	3.54	2.91	2.2
Brand value measurement	17%	6%	50%	19%	13%

*One company was excluded from the sample due to an unusual data value

In the sample 59% of firms have introduced some innovation in marketing communications, 61% in product design/packaging, 76% in marketing channels, and 83% in new forms of pricing. An interesting difference appears between manufacturing and service firms, as well as between firms with domestic and foreign ownership. Manufacturing firms report more innovation in promotion (statistically significant, t = -2.338, p = 0.028) and product design and packaging (statistically significant, t = -1.849, p = 0.077), while service firms innovate slightly more in pricing (80%:69%) and distribution (80%:73%), which is in accordance with specific characteristics of these industries. Finally, there is a systematic difference between exporting and non exporting firms and is always in favour of exporters.

Table 5.3. Marketing innovations

	All firms	DOF	FOF	Manufacturing	Service	ExF	NExF
Promotion	59%	55%	70%	73%	33%	65%	47%
Product/services design	61%	55%	80%	73%	40%	69%	47%
Distribution	76%	71%	90%	73%	80%	85%	60%
Price	83%	77%	60%	69%	80%	77%	67%

In the section concerning the future of brands, 59% of all companies reported that they have a strategy about the further brand development, 76% of companies see possibilities for expanding their brands to new markets and even 54% see a possibility for establishing the leading market position with their brands in future. In this group of questions one can again identify differences between manufacturing and service firms, FOF-s and DOF-s, as well as between exporters and non exporters: developed brand strategies can be more frequently found among FOF-s, manufactures and exporters and these firms are more confident in opportunities for their advancement in markets (table 5.4). Manufacturing firms see more possibilities of introducing brands to new markets (statistically significant t = -2.355, p =

0.031), which is an expected result since higher investments usually are necessary if services appears in new markets.

Table 5.4. Brand development

	All firms	DOF	FOF	Manufacturing	Service	ExF	NExF
Existence of brand strategy for further brand development	59%	55%	70%	62%	53%	62%	53%
Possibility of introducing brands to new markets	76%	74%	80%	88%	53%	81%	67%
Possibility for establishing brand leadership	54%	48%	70%	62%	40%	58%	47%

Lower results of DOFs in marketing and branding in comparison with FOFs can be explained by a higher share of small and medium companies among DOFs. Due to their size, small and medium enterprises do not have a potential to attract high qualified specialists and often do not find it even necessary. In fact, this is a result of high involvement of owners in decisions making and already mentioned absence of clear line between strategic and operative decisions at various levels of decision making, which is the main characteristic of small firms in the sample. On the other hand, FOFs are more attractive as employers for local specialists, and they bring up marketing practice and processes that they have already established in their domestic markets, which lead to better results in marketing and branding in Serbian market as well, especially in the case of firms that came from developed countries. Apart from this it is reasonable to suppose that the absence of positive marketing practices within domestic firms can be an outcome of insufficient level of knowledge in the field and inadequate engagement of educational institutions that should provide better educational programs for business and marketing.

Statistically significant differences appear between small, medium and large firms in many segments of brand capital, favouring large firms. They perform better in brand development activities (existence of products brands, $F = 3.821$; $p = 0.031$); corporate brand development, ($F = 8.953$; $p = 0.010$); brand architecture, ($F = 8.361$; $p = 0.010$) and brand value activities (brand protection, $F = 4.887$; $p = 0.013$); investment in brands ($F = 4.129$ $p = 0.024$); brand value measurement ($F = 23.472$ $p = 0.000$), as well as in all segments of marketing innovation, except in pricing (with statistically significant differences regarding innovation in promotion $F = 3.312$; $p = 0.048$). Regarding brands prospects, large firms perform better in all three segments (table 5.4), with statistically significant differences in identified possibilities for establishing brand leadership ($F = 2.849$; $p = 0.071$). This is in accordance to previous observations regarding small and medium firms and their lagging behind large firms in marketing knowledge and practices.

Regarding export orientation, it appears that export oriented companies report better results in all segments of brand capital that we have investigated. It seems that internationalisation has an important influence on brand capital and marketing innovations. Doing business in foreign markets, facing international competitors, cooperation with international buyers and distributors are important factors of international business strategy and have positive impact on marketing activities and marketing competences of companies. Internationalisation processes foster learning in organisations, and these effects are the

most visible in marketing and branding. Exporters innovate more, and more of them have developed brand strategies in comparison to non exporters. Consequently, they also invest more in brand development and in marketing activities and report better results regarding brands prospects. This is quite expected: it is impossible to be competitive in international markets without developed brand capital and developed marketing competences. On the other hand, this point at a necessity of continuous improvements of the discussed yet vital elements of intangible capital in order to increase number of firms that can effectively export, be competitive in foreign markets and increase the amount of export revenues in the entire economy. This can be taken also as a policy advice: incentives should be made for fostering export orientation but should simultaneously be followed by incentives in the field of quality business education, entrepreneurial training etc.

In order to examine relationships between different elements of brand capital we have conducted the following correlation analysis (results presented in table 5.5).

Table 5.5. Correlations coefficient table

			brand development	brand value	marketing innovations	future marketing
Spearman's rho	**brand development**	Corr. Coeff.	1.000	.747**	.393*	.630**
		Sig. (2-tailed)		.000	.011	.000
		N	41	41	41	41
	brand value	Corr. Coeff.	.747**	1.000	.524**	.612**
		Sig. (2-tailed)	.000		.000	.000
		N	41	41	41	41
	marketing innovations	Corr. Coeff.	.393*	.524**	1.000	.659**
		Sig. (2-tailed)	.011	.000		.000
		N	41	41	41	41
	future marketing	Corr. Coeff.	.630**	.612**	.659**	1.000
		Sig. (2-tailed)	.000	.000	.000	
		N	41	41	41	41

**. Significant at the 0.01 level (2-tailed). *. Significant at the 0.05 level (2-tailed).

Expectedly, we found positive correlation between brand development and all other categories of brand strategy (value, marketing innovations and future perspectives). These results also show that companies ranked higher on branding scale are also eager to implement more innovation within their marketing mix, while these companies are better prepared for future marketing activities.

5.3. Relational capital: external relationships

The analysis of relational capital includes three sections: (a) relationships with customers (buyers and consumers), (b) relationships with competitors, (c) relationships with suppliers.

Firm's relationships with business buyers and consumer we have analyze separately. Regarding business buyers, in total, 73% of firms state that employees from different functional areas meet regularly to exchange views and observations about customers; 81% of companies claim that they have regular meetings with business customers to determine

their needs, while 73% of firms state that business customers are engaged in process of developing new products and services. Service companies report lower involvement of business customers in development of new products/services (53%), in comparison with manufacturing firms (81%), but they paid more attention to internal meetings about their customers (80%) than manufacturing firms (65%). There is statistically significant difference among exporters and non exporting firms, regarding involvement of business customers in development of new products/services ($t = 2.080$, $p = 0.044$).[115] Exporters to a greater extent involve their buyers in process of development of new products when compared with non exporting firms. It is known that an important factor of success in international business represents relationship with distributors, as key international buyers. They can help in overcoming the physic distance, which is the major barrier of internationalisation of firms and a key factor that explains variations in expansion patterns and firm performance. Involvement of buyers in development of new products represents the highest level of partnership marketing, and is a good indicator of quality of relationship.

Regarding final consumers and marketing competences in segment of business to consumer marketing we found a dubious gap between claims that companies had a detailed market analysis of behaviour of theirs consumers (85%), and statements that only 41% of firms had defined budget for market research. Evidently, this might be only a declarative consumer orientation without serious commitment to market research, which should be the first step in development of marketing programmes and sincere relationship building with consumers. The highest recognised level of commitment in marketing is customer relationship management – CRM. However, in the sample, only 22% of firms reported implementation of some elements of CRM (with higher share of service companies, 27% in comparison with 19% of manufacturing firms), primarily due to increase of loyalty programs in retailing sector. In implementation of CRM there are the great differences between the firms with domestic and those with foreign ownership, as well as between small, medium and large firms. FOFs implement CRM to a greater extent (40%) than DOFs do (16%). Large firms in this segment outperform small and medium firms ($F = 4.518$; $p = 0.018$), since 33% of medium firms implement CRM practice, 36% of large firms and none of small firms. One may remark that FOFs that FOFs more frequently incorporate marketing principles in their strategy when compared with DOFs.

We have analyzed companies' relationship with competitors from the perspective of defensive and/or offensive competitive orientation. More than 50% firms in the sample report defensive competitive orientation. They rather choose to follow market leaders, than to take aggressive business action in response to activities of major competitors. Better results in regard to offensive marketing strategy are reported by FOFs (60%, in comparison with 45% of DOFs), which can be an outcome of better performance in marketing, in general. However, the highest difference is found between exporters (62%) and non exporters (27%). Exporters have more aggressive marketing strategy (statistically significant difference: $t = 1.739$, $p = 0.091$)[116], endeavouring to establish firm market position in foreign countries. A major number of exporters are those that have already established a position of leader in

[115] Statistically significant differences appear between exporters that earn 20% or more of their revenues in foreign markets and the group of non exporters and those with foreign sales less than 20% of revenues.

[116] Statistically significant differences appear between exporters that earn 20% or more of their revenues in foreign markets and the group of non exporters and those with foreign sales less than 20% of revenues.

domestic markets, and thus eager to rely on aggressive competitive positioning on foreign market.

Final section deals with suppliers, precisely the origin of suppliers. It appears that imported inputs have positive effects on productivity, since they allow and push firms to adapt to the advanced technology from abroad and benefit from foreign R&D. This suppliers' effect is crucially connected with the level of development of a country of their origin. Thus, in the sample 44% of companies report that more than 50% of suppliers are from foreign markets, while only 37% of companies state that majority of their suppliers comes from developed countries (which is substantially less than in Slovenian firms (73%), for example). However, origin of suppliers for higher profit per employee group is not significantly different from that of lower profit per worker group of firms. There are statistically significant differences between exporters and non exporting firms ($t = 1.789$; $p = 0.082$), since more than 45% of exporters have suppliers from developed countries, in comparison with 20% of non exporting firms.

6. Innovations and R&D

A good part of our survey deals with the issue of innovations, research and development investments and various sorts of competences in the field since traditionally this is an important element of firms' intangible capital. As it will be demonstrated below, despite of sometimes over-optimistic answers to the questionnaire we may identify some principal differences that appear among the set of firms observed and generally assess the state of art in this sector.

6.1. Innovations

At the beginning, the firms were asked to answer a question regarding their new products and to assess their quality in comparison with the similar activities in the firms they compete with. In total, 36 firms (89%) declare they have new products over the last five years and estimate to be at least as successful as their competitors. All foreign firms confirmed new products launch and are fully confident regarding their competitiveness. The confidence regarding competitiveness is confirmed also by all domestic firms that answered the question.

When asked whether they do assess to be more successful than their competitors, 26 firms in total (56.1%) confirmed the statement. It is interesting to note that among the firms that consider them more successful 11 comes from the lower and 12 from the higher profit per worker group. It is also evident that FOFs appeared to be more confident about their competitiveness (70%) than DOFs (52%). Moreover, when asked whether they consider them as leaders within the industry this gap was extremely widened: 7 FOFs (70%) consider them as leaders compared with only 10 (32%) of DOFs (statistically significant difference: $t = 1.539$; $p = 0.142$).[117] Among the entire set of 17 firms that claimed their leading position in

[117] When asked whether they consider them at least equally successful as competitors we have again a statistically significant result in favour of FOFs ($t = 2.460$; $p = 0.022$).

the industry they work in, 8 come from the lower and 9 from the higher profit group. It is particularly remarkable that only 2 firms of 17 are important exporters – one firm exports two thirds of its production (around 20% to former Yugoslav markets and 37% ti the EU) and the other one 33% (22% to former YU and 11% to the EU markets). All other firms attributing themselves a leading position in the industry sell 80-100% of their production in domestic market. Finally, the distribution of leaders is almost even between manufacturing and service firms (42% and 40%, though manufacturing firms report higher activity in innovating products that is 96% to 73%).

In the Table 6.1 below firms' assessments are presented on what importance should be given to various forms of product upgrading and/or to new products.

Table 6.1. Upgrading and new products (38 responses)

Assess the importance of the following forms of new products in the firm	**High**	**Medium**	**Low**	**Not in use**
Repositioning of existing products	10	19	5	4
Additions to existing products	17	15	4	2
Upgrading existing product lines	11	15	7	4
New product lines	14	13	4	7
New products according to intl. standards	20	6	7	4

Data show that the majority of firms assess all forms of product improvements as to be high or medium. It is important to mark that among the firms that highly assess new products according to international standards (which is a category that was assessed as the most important one, 53% of firms) there are 15 manufacturing firms (from 26 in the sample; manufacturing firms systematically attribute higher importance to all forms of products innovation than firms in services do[118]). Comparing the data from the table with other available data we found that 12 firms come from the lower and 8 from the higher profit per worker group but among these 20 firms there are 9 that have considerably increased their profit per worker indicator over the period 2010-12. Though we do not know when their new products have emerged and have been offered in the markets this still gives an indication on effects new products could make and how could affect businesses. It is also interesting that exporting firms better assess the importance of new products in all of their forms when compared with firms that exclusively sell to domestic buyers: exporters assess the importance of new products from 1.9 to 2.3 while non-exporters just from 1.1 to 1.7. This could be understood as a mirror image of a considerably lower competition that home market oriented firms are faced with.

We tried to get some information about processing innovations asking firms have they undertaken in past five years considerable and/or substantial innovation in general and particularly improvements in production, in logistics, distribution and similar and in supporting departments like accounting etc. The answers obtained were definitely over-

[118] Assessments in manufacturing range from 1.8 to 2.3 while in services from 1.5 to 1.7. However, it should be remarked that the difference mentioned could be connected with the fact that manufacturers are often exporters while services are predominantly oriented to home market with lesser competitive pressures.

optimistic: all firms reported some considerable general innovations while in other more specified questions reported improvements in at least 85% of cases up to 93% (with some difference between manufacturers and service sector regarding production and logistics improvements in favour of manufacturers).

6.2. Research and development

The structure of the sample analysed suggests that one should expect some variety in results obtained particularly when organisation of R&D is concerned. For that reason we have firstly investigated what could be the scale of investments in R&D among the firms observed since this could give an indication to what extent firms did recognise the importance of such a kind of spending. In total, 27 firms claim they have invested in 2011 at least 1% of their revenues in R&D. It is remarkable that manufacturing firms are more devoted to these endowments (80% of these firms report that scale of investments and only 40% in services) yet this difference is statistically significant: t = -2.668; p = 0.013). Among these firms there are 12 that invested more than 2% of the revenues (10 manufacturers and 2 in services) while 5 of them report even more than 3% (3 manufacturers and among them 2 big exporters that sell more than two thirds of their production in foreign markets and 2 in services).

It is important to underline that the firms which export at least 30% or more of their products abroad invest more in R&D: they invest on average 1.5% of their revenues while all others just 0.9%. However, we found another important characteristic regarding R&D investments: a big majority of firms that report some investments claim a change in these expenditures over a period 2008-10 but there is only one reporting a growing percentage in revenues. Implicitly we may conclude that during the crisis investments in R&D have been diminished.

It is also remarkable that all the manufacturers that report R&D investments come from the lower profit per workers group while service firms are all in the higher group. This could be understood as a consequence of the transition growth model that has favoured services oriented towards domestic markets and imports rather than exports (see: Cerovic and Nojkovic, 2011, 2011a). Such a position of manufacturing and no proper industrial policy might explain relatively low level of investments in general including R&D and substantial deterioration of manufacturing industries over transition.

On the other hand, it should be pointed out that among the firms that did not report any R&D investments (14) four foreign firms were found and one large domestic firm. All of them are parts of larger international systems or of a large domestic holding that usually organise R&D departments in other places. Among the remaining nine firms without investments of this sort 3 are micro enterprises with less than 5 employed. Also, within the entire group of 14 there are 10 firms that predominantly sell products of renowned producers, sometimes with minor finalisation. Hence, for all these firms it is not expected to have particular investments in R&D. However, this may be linked with a specifically poor outcome of the FDIs in transition since often they do not enhance expected spillovers particularly regarding knowledge and technology (see for example: Gunter, 2005; Gorodnichenkou *et al*. 2007).

As suggested above the nature of our sample could generate some specific differences among the firms. Thus for example, just 11 firms have special R&D departments. This is usually connected with the different size of the firms observed (it is not surprising that small firms have no departments of that kind) and their different positions regarding their principals (large foreign companies or a domestic holding). Among the 11 firms with R&D departments there are one with less than 100 employees (food producer), three between 100 and 200 and 7 companies with more than 800 workers; 10 are manufacturers and just one is in services (retailing). These firms also specify that their R&D departments systematically act in solving firms' problems and develop absorbing ability, while 8 of them see the department as an important agent in changes within the firm that establishes guidelines for technological development and in 7 cases the department is engaged in developing industrial design.

6.3. Competences

The firms were asked to assess their competences in technology and marketing in regard to their competitors but also to assess their complementary or matching competences in regard to competitors. The results obtained are presented in the tables 6.2, 6.3 and 6.4 below.

Table 6.2 Firm's technological competences *vis-a-vis* competitors (number of firms)

Assesments	substantially lower	lower	similar	better	substantially better
R&D knowledge highly developed*	4	6	10	7	7
We have high technological abilities in the firm or within strategic partnerships″	1	3	11	11	6
We correctly predict technological trends**	-	7	9	11	6

Responses: * 34; ″ 32; **33

In assessing their technological competences manufacturing firms appear to be more confident: they assess these competences to be on average somewhat better than of competitors with the assessments in range from 3.4 to 3.7. Firms in services are a bit more reserved particularly regarding their R&D knowledge (average assessment 2.6) but still are convinced that are better than their competitors in two remaining categories: 3.4 and 3.2. Foreign owned firms (FOFs) are decisively confident and assess on average to be substantially better than competitors with the assessments from 4 (predicting trends) to 4.3 (R&D knowledge). DOFs are more careful in assessing their competences ranging them from 2.9 (R&D) to 3. 4 (technological abilities) and 3.5 (predicting trends; this does not seem to be quite reliable if compared with other responses). One may also notice that exporters assess their technological abilities noticeably higher than non-exporters do (3.8: 3.2).

Table 6.3. Firm's marketing competences *vis-a-vis* competitors (39 responses)

Assesments	substantially lower	lower	similar	better	substantially better
Acquiring information on consumers preferences and needs	2	2	19	9	7
Acquiring information on competitors	1	-	22	9	7
Long-term relations with buyers	-	1	12	13	13
Long-term relations with suppliers	-	-	11	14	13

It is remarkable that all the firms observed do highly assess their marketing skills with only few examples that confess their knowledge and practices are t a lower level in comparison with their competitors. DOF-s appear to be particularly self-confident giving assessments in range 3.5 to 4.1 and systematically higher than FOF-s do (from 3.1) except for relations with buyers where their assessments are equal. It is reasonable to suppose that all firms overestimate their skills and the domestic ones in particular. However, it is remarkable that exporters assess their marketing competences particularly high: from 3.6 (information on consumers' preferences) to 4.2 (long-term relations with suppliers) suggesting one more time that foreign competition press for advancement in business practices.

Table 6.4. Firm's complementary competences *vis-a-vis* competitors (39 responses)

Assesments	substantially lower	lower	similar	better	substantially better
Clearly defined tasks of units (dpts)	2	4	12	13	8
Good transfer of technological and marketing competencies between units	1	3	13	15	7
High level of R&D knowledge transfer with strategic partners*	7	2	11	13	5
Products development is efficient (in terms of costs)*	1	4	8	15	10

* 38 responses

In identifying complementary competences in regard to the competitors the firms seem to be somewhat more reserved than in assessing their marketing skills. However, they are confident that are particularly strong in products development (25 firms or two thirds of those that responded). FOFs find them particularly competitive in knowledge transfer (average assessment 3.9) and remarkably more competitive in R&D (3.6) than DOFs (3.1). On the other hand, in estimating the efficiency of introducing new products domestic firms seem to be more confident (3.8) than foreign ones (3.6). Exporters assess to have light advantage against competitors in all the four categories examined (3.3 to 3.9) and in all categories are in front of non-exporting firms (3 to 3.4)

Finally, the firms were asked to evaluate the importance of various sources of information that help them in acquiring knowledge regarding innovations, R&D and other components of their competitive advantage. The results are reported in table 6.5, below.

Table 6.5. Sources of information – importance level (40 responses)

Assesments		high	medium	low	Not in use
Internal	Within the firm	25	12	2	1
Market	Equipment suppliers	13	22	2	3
	Other suppliers	16	17	3	3
	Buyers	17	15	1	6
	Competitors or other firms from the region	13	16	8	2
	Consultants, R&D private firms etc.	5	13	9	13
Institutional	Universities, higher education institutions	3	10	12	15
	Government or public research institutions*	-	8	13	18
Other	Conferences, fairs, exhibitions	14	15	3	8
	Journals or commercial publications	7	16	5	12
	Associations, chambers etc.	4	15	10	11

*39 responses

From the table above it is evident that a good number of firms do not use (or use in a very smll capacity) institutional sources of information (including their own associations and/or chambers of commerce or similar) and in particular government and/or public institutions. This is specifically evident when smaller firms are in question. However, this also points at an insufficient support of the institutions in question in improving business practices. This is an important finding that urges for more active policy in the field, especially regarding smaller and medium enterprises. Surprisingly, foreign firms frequently do not use – apart from public institutions – university sources or even other scientific sources, which could be an indication of a lower level of technology applied in FDI established/acquired local enterprises and lower level of investments in R&D within local companies.

On the other hand, it is interesting that all the firms which do not make use of consultants or other private R&D firms are domestic ones and predominantly small. This could be an indication of a typical local entrepreneurial habit – owners of smaller firms recognize predominantly their own ideas and do not feel they could acquire some additional knowledge from professional consultants and advisers. In contrast to this finding, it is evident that exporting firms assess these sources of information – including universities and journals – to be almost twice more important than non-exporters do (1.4; 1.2; 1.7 against 0.9; 0.6; 0.9).

6.4. IT capital

In this section we shall add a few remarks regarding IT capital that is, the development of IT sector, investments in the IT and its understanding regarding business efficiency and competitiveness. We firstly asked firms whether they posses an adopted strategic plan regarding IT development, is it implemented and does it is updated regularly. Also we explored what part of the revenues is allotted to the IT investments. The answers are presented in the table 6.6.

Table 6.6. Development of IT capital

	All firms	ExF	NExF	DOF	FOF	Service	Manufacturing	P/L low	P/L high
IT strategic plan									
Adopted	59%	54%	67%	48%	90%	53%	62%	65%	52%
Implemented	37%	31%	47%	32%	50%	33%	38%	40%	33%
Updated each 2 years (at least)	27%	27%	27%	23%	40%	20%	31%	20%	33%
Investment in IT (2011)									
> 1% of revenue	49%	62%	27%	55%	30%	33%	58%	40%	12%
> 2% of revenue	15%	15%	13%	15%	0%	13%	15%	25%	1%
> 3% of revenue	10%	12%	7%	3%	30%	13%	8%	5%	3%

As it can be easily seen a good number of firms (59%) claim they have a strategic plan on IT development. However, only 37% confirm an implementation of the plan while just 27% of enterprises do update the plan (at least) once in a two year period. As in some previous examples a remarkably higher percentage of FOF-s exhibits these activities (90%, 50% and 40% respectively) when compared with DOF-s (48%, 32%, 23%). Having in mind that among 74% of firms that report investments in IT of at least 1% of the revenues (or more) we find a higher percentage of DOF-s this means that many of them have no clear plan regarding an efficient use of these investments and further development of IT capital (poor implementation and update of strategic plans). The conclusion is particularly strengthened when firms respond to the questions aimed at exploration of their understanding of the IT importance. Although 68% of DOF-s agree that the role of IT is not just a support for usual businesses (FOF: 100%) and 61% claim that IT changes the mode of doing business (FOF: 100%), only 45% recognise that could attain certain competitive advantage by means of IT (FOF: 70%). Basically, these results confirm an already formed picture on understanding and recognition of intangible capital among domestic firms: very often they have a rudimentary idea on the importance of certain components of intangibles but are not competent enough to fully benefit from their use. On the other hand, despite better employment of IT in FOF-s the results indicate a similar state as in regard to R&D: there are not always remarkable investments in IT nor full engagement in the IT capital development, which reduces potential spillover effects across the local economy.

7. Conclusions

Presented data and the analyses conducted although just preliminary, lead us to a conclusion that the importance of investments in intangible capital is slowly becoming recognised in Serbian economy. However, despite some better results in several specific practices – deeper insight shows that many aspects of intangible capital that could be invested remain still at a rudimentary level.

This general conclusion to a certain extent may be ameliorated and be more positive in regard to some specific groups of companies observed. Frequently we found examples of advanced practices within foreign owned firms and among firms that are present in foreign markets.

As to the foreign companies that do business in Serbian market it is evident that they go further than a typical local firm in intangible capital investing. Nevertheless, in some aspects of intangible investments, predominantly in R&D, foreign owned firms have not some particular experience. We conclude that such a situation is caused by a lower level of technology and perspective progress of these firms when established in Serbian economy. A negative side of such state of art is that we cannot expect any substantial spillover effects concerning intangible investments that might influence practices of domestic firms.

In regard to the firms that export their products or at least have some other relationships with foreign markets we have remarked a deeper involvement concerning intangible investments. This can particularly be seen when marketing practices are explored. We conclude that this was influenced by higher degree of competition in foreign markets but also represents a kind of spontaneous learning and a spillover effect of practices met in foreign markets. On the other hand, exporters come usually from manufacturing sectors that are at the lower level of economic results when compared with services. Our hypothesis is that this predominantly signifies an undesired outcome of a liberal transition project that neglects any kind of industrial policy in designing development and growth models of transition countries.

A specific concluding note should be made in regard to internal relations. Firstly, our analysis has shown that even despite declared separation of strategic and operational decisions in many companies this distinctiveness is pretty blurred and that decision making process could be better structured. It seems that internal relations suffer of too literarily understood social relations change during transition characterised by attributing to owners an excessive role and power in managing companies.

Secondly, the problem is particularly evident in regard to workers' position within the firms observed. Understanding of the importance of workers involvement in various processes – from good information to their proposals and some decision making – that affect firms' performance, appears to be pretty rude. Moreover, there is an evident lack of traditional workers rights regarding trade unions, and collective bargaining that sporadically appear and predominantly where these activities have been inherited. These problems are especially tough in smaller firms.

On the other hand, our analyses have shown that the degree of satisfaction and loyalty to the firm depends on well-ordered internal relations along the entire agency chain – owners, managers, workers. Accordingly but surprisingly considering local self-management legacy, we found a systematically higher percentage of workers' readiness to participate in firm's risks among FOFs in all categories when compared with DOFs and in particular regarding their readiness to financially invest in the firm. Basic explanation should be found in an extremely poor local institutional arrangement of workers' rights and high unemployment when domestic firms are in question and in better established practices imported from home countries within the foreign firms.

Finally, we have found a specific difference in understanding of various forms of intangible capital within smaller firms that exhibit both ignorance on the matter and an exceeding self-confidence with the abilities of their owners. We find this attitude is in consequence of low level of knowledge, poor institutional (bad regulation) and economic environment (high unemployment and lack of competitiveness). Together with a very low degree of recognition

of possible support that could be acquired from public consultants, economic associations and educational sector among small entrepreneurs force us to conclude that some important reforms should be done in these institutions.

The basic conclusions listed above bring about some policy advice. We suggest a more active policies that will support export led growth, enhance manufacturing production and make the country attractive for higher tech foreign investments. According to our findings the companies that will emerge and/or develop under such policies will eventually lead to better understanding and broader undertaking of intangible investments. Also, we suggest more attention to be paid to general economic education and business in particular including a deeper study on human resource management, upgrading internal relations and in marketing strategies, as well as various forms of entrepreneurial training. Finally, we suggest industry associations, employers associations, chambers of commerce and trade unions to be better institutionally positioned and designed in a new manner that will corresponding to the ongoing changes and global economic environment.

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