

# **THE EFFECTS OF THE CORPORATE GOVERNANCE SYSTEM ON INNOVATION ACTIVITIES IN CROATIA**

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## **Abstract**

Innovation activities depend upon both market and wider institutional determinants. We thus analyse the relationship between the system of corporate governance and innovation activities, using the example of Croatia. The system of corporate governance influences the level and modes in which innovations are developed, financed and implemented. There are complementarities and inconsistencies between the system of corporate governance, financial system and national innovation system. The debate about the relative merits of corporate governance systems regarding innovation cannot be automatically applied to transition economies. Their bank-based financial systems often exhibit underdeveloped and/or inconsistent institutions, whereas their capital markets are usually relatively shallow and illiquid. In Croatia, underdeveloped institutions have engendered weakness of external and

internal corporate governance mechanisms. Corporate strategies based on innovation and higher governance and competitiveness standards may involve higher risks and costs, leading to marginalisation of innovation, their low economic effects, and to the lack of innovative SMEs.

**Key words:** *Corporate governance, institutions, national innovation system, innovation activities, Croatia*

## 1. INTRODUCTION

Competitiveness in markets where high added value is created is related to innovativeness. Innovation of products and processes provides a paramount contribution to restructuring of industrial structure of particular sectors and economy as a whole. Understanding the determinants of innovation performance requires tackling both market and wider institutional factors that influence the level and characteristics of innovation within an economy. These determinants are often analysed in terms of national innovative capacity, i.e. the ability of a country to produce and commercialise a long-term flow of innovative technology (cf. Stern, Porter and Furman, 2000), which involves R&D supply, absorption capacity, diffusion of knowledge and market demand (cf. Radošević, 2004). However, innovative activities occur within socio-economic systems<sup>1</sup>, and it can be expected that wider institutional factors may strongly affect it. The capacity to innovate depends upon the national innovation system, which entails actors, relationships and interactions among actors that influence creation,

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<sup>1</sup> Socio-economic systems can be said to consist of three basic subsystems: institutions, technological regime and economic subsystem (cf. Dosi and Orsenigo, 1988). Although they are interlinked, a demarcation line between them can be outlined. Institutions are "durable systems of established and embedded social rules that structure social interactions" (Hodgson, 2004: 3). Technology regimes can best be understood as prevailing technology systems, practices and policies. Economic subsystem comprises firms and markets for capital, labour and products/services.

diffusion, utilisation and commercialisation of knowledge within a country – with the emphasis on research institutions, business sector and government (cf. Kuhlmann, 2001, Lundvall, 1992, 2006). Furthermore, innovation evolves within particular institutional environments and systems of corporate governance, which regulate business activities and influence the creation and utilization of new knowledge, as well as financing of innovation.

The main focus of the paper is the relationship between the system of corporate governance and innovation activities in Croatia. Račić and Aralica (2006) emphasized in their recent paper the relationship between institutional environment, market efficiencies and corporate competencies and stressed the importance of interaction of national innovation system and the corporate governance system for competitiveness and innovation within the economy. In this paper we take a step forward and further analyse the implications of the system of corporate governance on the level and prevalent modes of innovation activities and ways in which innovations are developed, financed and implemented within enterprises. Hereby the system of corporate governance and the national innovation system are viewed in terms of ‘institutional complementarity’ (cf. Amable, 2000), i.e. they are functionally interrelated and their respective institutions are expected to co-evolve depending on environmental demands and internal structures and relationships.

Several authors have attempted to explain industrial specialization of particular countries comparing corporate governance systems (and/or institutional frameworks in general) and innovation performance. Visintin (2001) outlined Italian industrial specialization in terms of innovation activities and noticed some possible directions for its change in view of the changing corporate governance system. Tylecote and Ramirez (2005) have explained technological innovation activities of the UK companies using a well-developed

characterisation of the country's corporate governance and financial system. Furthermore, Casper and Matraves (2003) analysed how governance structures impact the innovation capabilities of leading German and UK firms in the pharmaceutical industry, showing how variations in national institutional frameworks influence the innovation process and relative performance.

This exploratory paper aims to contribute to the discussions on corporate governance and innovation by explaining the interrelationship between institutional conditions, corporate strategies related to innovation, and innovation activities, and by applying the framework to Croatia, as a transitional country with a specific developmental pattern. We have structured the paper in three main parts that follow the introduction. The second section is devoted to the literature overview, after which a case-study of Croatia is presented in the third section. The latter discusses corporate governance and innovation activities in Croatia, and is broken down into further parts, which deal with the system of corporate governance, innovation strategies and performance and corporate governance and external financing of innovation, respectively. The final section summarises the main findings and offers some concluding remarks.

## **2. LITERATURE OVERVIEW**

By corporate governance we mean 'a set of relationships between a company's management, its board, its shareholders and other stakeholders' (OECD, 2004). Corporate governance is influenced by the firm's external and internal conditions. External factors comprise government and stock exchange regulation, national corporate governance code (if it exists) and the structure of relevant markets for capital, labour and products/services. Relevant internal conditions include ownership structure, internal organisation (especially the systems

of decision-making and control and organisational culture), and power relationships among different stakeholders. Corporate governance in practice revolves around the definition of strategic objectives, means to fulfil them and instruments to measure fulfilment of these objectives, as well around the defining rights and relationships between main stakeholders concerning control, income flow, assets and liabilities, and information of the enterprise (cf. Mygind, 2001).

The emergence of knowledge-based economy complicates both value creation and risk management. Lazonick and O'Sullivan (1998) argue that, given organisational control over the strategic allocation of resources and returns, learning and innovation within enterprises is enabled by financial commitment (access to the financial resources until financial returns from innovation can be reaped) and organisational integration whereby stakeholders have the necessary incentives to jointly contribute their skills and efforts in the pursuit of common goals. At the societal level, corporate governance can be viewed as a learning process that operates through interaction among various stakeholders and results in particular social habits and institutions. Its effectiveness can be analysed in terms of processes (e.g. levels of transparency and accountability of managers and firms to their stakeholders) and (economic, social and environmental) outcomes. Effective governance requires a balancing process between the macro-level wider institutional frameworks, meso-level opportunities for stakeholder interaction and micro-level managerial autonomy and accountability (Račić and Podrug, 2004).

Given this embeddedness of governance arrangements into institutional frameworks and societal habits, there are various national systems of corporate governance. Despite emerging initiatives towards international standards (cf. OECD, 2004) and the harmonisation pressures

induced by globalisation of financial markets and business operations, many differences are still likely to be preserved. This includes the basic distinction between Anglo-American (USA and UK) and continental European and East Asian governance systems, i.e. between 'shareholder' and 'stakeholder' capitalism, or (in the language of the 'varieties of capitalism' literature - cf. Hall and Soskice, 2001) between 'liberal' and 'coordinated' market economies.

Corporate governance systems are largely associated with corresponding financial systems; Berglöf (1997) refers to the former as arm's length (outsider-dominated) and to the latter as control oriented (insider-dominated) financial systems. Anglo-American systems tend to have larger size and stronger role of equity markets and more dispersed ownership, which results in portfolio orientation of investors towards the control of enterprises and a stronger role of boards of directors (as opposed to control-orientation of dominant shareholders and relatively weaker boards which are more frequent in systems characterised by more concentrated ownership and stronger reliance on banks, rather than equity markets)<sup>2</sup>. Corporate governance discussions should not be focused only on the publicly traded companies or centred around market-based modes, because that would severely limit their scope in bank-based financial systems whereby the stock market plays an ancillary role in corporate finance, and takeover threats are rare due to concentrated ownership structures. The issues such as disclosure and transparency of corporate practices, and the treatment of minority shareholders and other stakeholders are particularly pertinent here. Inadequate regulation and/or ineffective judiciary, as it is witnessed in many transition countries, further reinforce these problems. Therefore, reliance on arm's length modes is inadequate in the absence of markets for corporate control and a legal system that provides efficient redress mechanisms (Račić and Podrug, 2004).

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<sup>2</sup> See Tylecote and Conesa (2002) for a more detailed discussion.

Particular aspects of the corporate governance system - including modes of financing, level and types of coordination among stakeholders, corporate organisation and industrial relations – can be used as arguments in support of institutional complementarity between the corporate governance system and the national innovation system. The development of one system does not presuppose the development of the other<sup>3</sup>, but they tend to be mutually reinforcing. The combined effects of these factors may thus significantly influence the innovative activities of companies operating under different governance regimes. The common view here is that Anglo-American systems are on average more conducive to radical innovation, due to stronger reliance on equity markets (and risk capital in particular), more flexible corporate organisation and restructuring facilitated by flexible industrial relations. The basic claim is expressed by Allen and Gale (2000: 406): 'Markets will be especially effective at financing industries that are new or where relatively little relevant data are generated, that is, industries in which information is sparse and diversity of opinion persists.'<sup>4</sup>. Furthermore, Casper and Whitley (2002: 1) claim that, according to the 'varieties of capitalism' framework, liberal market economies 'excel in developing the necessary competencies to innovate in industries dominated by rapidly emerging technologies'. On the other hand, institutional frameworks in coordinated market economies tend to favour 'long-term and incremental innovation strategies, but inhibit more radical innovation paths' (cf. Whitley, 2000, Hall and Soskice, 2001). Casper and Whitley's (2002) findings related to software and biotechnology firms in Germany, Sweden and the UK largely corroborate these claims<sup>5</sup>.

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<sup>3</sup> For example, Zimmermann (2004) argued that Germany (despite a developed corporate governance system) has not sufficiently developed its national innovation system - especially in the area of science-industry relationship and utilisation of intellectual property rights.

<sup>4</sup> That does not necessarily have to mean that the *national* capital market will necessarily be the accessed. Companies can also go public abroad – as in the case of Israeli companies financed by venture capital, which often do initial public offerings in the USA.

<sup>5</sup> However, the current debate about the relative merits of corporate governance systems regarding innovation cannot be automatically applied to transition economies. Although these countries usually have bank-based financial systems, their institutions are often both underdeveloped and inconsistent, and capital markets may remain relatively shallow and illiquid (see the case of Croatia below).

At corporate level, corporate governance relationships and processes tend to influence innovation and technology-related activities, such as R&D (cf. Lhuillery 2006). The empirical literature tends to focus on the influence of ownership on R&D and the influence of governance practices on R&D. The evidence on the relationship between ownership concentration and R&D activity is inconclusive. As for the relationship between type of owners and R&D activity, Munari, Oriani and Sobrero (2005) found negative relations between the bank institutional investors and R&D activity, whereas Berrone, Surroca and Triba (2005) established a positive relationship between non-bank institutional investors and R&D activity. The influence of the composition of the board of directors on R&D is researched mainly through examination of the role of the non-executive directors, whose stronger presence on the board, according to Lhuillery (2006), is relatively more likely to promote innovation. As for the relationship between the governance practices and R&D expenditures, the results are also ambiguous. The CEO compensation scheme can stimulate corporate practice (Hall & Liebman, 1998), but no significant relation between the firm's compensation scheme for their managers and R&D expenditure could be found in the literature (Eng & Shackell, 2001). The previous results suggest that corporate governance may influence R&D intensity, but it seems that the relation between corporate governance and R&D is context-dependent (on the relevance of R&D expenditure within the corporation). When innovation is strongly embedded in corporate strategy, organisational features and resource allocations, and supported by adequate governance arrangements, positive effects on R&D expenditures and innovation activities in general are quite likely<sup>6</sup>.

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<sup>6</sup> The relation between the corporate governance arrangements and the innovation activities is not unidirectional: there is also feedback from innovation to corporate governance. Successful innovation requires collective learning processes that lead firms to undertake coordination of investments and further to achieve productive interactions (cf. Antonelli, 2003). Depending on the novelty of innovations, sometimes a reorganization of a company is required (cf. Tylecote and Ramirez 2005).



Furthermore, innovative capabilities of a company can often be facilitated by cooperative stakeholder relationships, which correspond to strategic concerns and are supported by adequate incentives and governance arrangements. This includes innovation cooperation with research institutions, suppliers, customers or other enterprises, as well as employee motivation through pecuniary (e.g. stock options, profit sharing, royalties etc.) and non-pecuniary means (e.g. organisational culture, learning opportunities etc.). Proactive relationships with seemingly more distant stakeholders may also increase innovative capabilities of a company – e.g. multisectoral partnerships between companies, public sector and nongovernmental organizations (cf. Bagić, Škrabalo and Narančić, 2004)<sup>7</sup>. In the end, even entrepreneurs with potentially radical innovations could be unwilling to let venture capitalists acquire a share in equity, which is a case of demand-side financial constraint (cf. Cressy and Olofsson, 1997).

To sum up, corporate governance system, complemented by national innovation system, influences innovation activities in a country. That is also likely to occur at the level of particular companies. However, both relationships are still quite under-researched. Consequently, it is useful to provide case studies of particular countries which may assist in elaboration of more sophisticated findings on the issues. This is the aim of the following section, in which we examine the case of Croatia.

### **3. CORPORATE GOVERNANCE AND INNOVATION ACTIVITIES IN CROATIA**

#### **3.1. The system of corporate governance**

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<sup>7</sup> It seems to us that much too often R&D is understood as synonymous with innovation activities, such as in the mentioned references. However, a typical Community Innovation Survey measures not just (intramural and extramural) R&D, but also other innovation activities, like acquisition of equipment and machinery as well as of external knowledge for innovation activities. Training, marketing and design could also be counted as innovation activities.

The corporate governance regime in Croatia has emerged primarily through privatisation and institution building: economic assets have been defined and distributed through privatisation, which was complemented by defining and enforcing legal and social frameworks that govern business transactions and firms engaged in them. However, the mismanagement of privatisation and institution building (cf. Račić and Cvijanović, 2005) contributed to underdeveloped capital market, high unemployment rate and insufficient technological and managerial upgrading of companies which results in their weak competitive position in the product/service markets<sup>8</sup>. Furthermore, institutional insufficiency (which was especially prevalent during the 1990s, but to some extent continues to date) has meant the lack, inconsistency or merely formal nature of institution building. Underdeveloped institutions have affected both the external and the internal incapacity of corporate governance mechanisms to steer business towards economically and socially viable goals and processes. Externally, weak legislation, ineffective judiciary and occasional political influences led to neglect of legal and social regulation, therefore increasing systemic risks and transaction costs. Within companies, the lack of independent external sources of authority that would facilitate best practices encouraged authoritarian tendencies in corporate governance and management. The lack of incentives to respect regulation and legitimise power by respecting principles considered just has made governance arrangements within companies into purely formal affairs (Račić and Cvijanović, 2005). On the other hand, only a small number of companies recognised the benefits of access to the capital market, including private equity providers.

Croatian financial system is similar to other transition economies; it is characterised by domination of banks and a relatively shallow and illiquid capital market (Cvijanović, 2004).

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<sup>8</sup> Moreover, the state still has control over a major share of the economy and provides rather sizable subsidies to companies it owns (cf. Račić and Cvijanović, 2005).

Banks own 77.6% of all financial assets of the financial sector<sup>9</sup> (Rohatinski, 2006). In addition, almost all investment funds, pension funds and leasing companies are also owned by banks, whose total assets have exceeded USD 49 billion. Although turnover and market capitalization of shares has constantly been rising since 1999, this was mainly because of regulatory reasons and positive impact of approaching EU (Cvijanović, 2004; Zagreb Stock Exchange, 2004, 2005, 2006). Primary capital market has underperformed in terms of number of IPOs and bond issues; as such it has not played a strong role in financing of companies.

When it comes to ownership structures, the analysis of basic data of public joint stock companies<sup>10</sup> in 2005 has shown that their ownership structures are highly concentrated. In 57% of the public joint stock companies 10 largest shareholders have more than 80% of the shares (Račić and Cvijanović, 2006). According to Hruška (2005), the largest owner of these companies has on average an ownership stake of 46.95%. Although this is not an exception in comparison with other countries of continental Europe, the problem arises in connection with independent functioning of the supervisory board. Membership of the supervisory board in Croatia is primarily connected with ownership function, rather than professional competence (Račić and Cvijanović, 2006). Besides, more concentrated ownership means fewer members of the supervisory board, i.e. stronger control by the dominant shareholders. Furthermore, an average supervisory board does not fulfil all the strategic functions that are within its area of responsibility (Hruška, 2005; Tipurić, 2006). Hence, the conclusion that 'ownership and control of Croatian corporations are rarely completely separated' (Hruška, 2005: 128) seems well founded. The latter is also correlated with inadequate protection of minority shareholders' rights and the lack of transparency in companies.

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<sup>9</sup> However, that figure exceeded 90% few years ago (Samodol, 2003).

<sup>10</sup> They make the bulk of share trading at Zagreb Stock Exchange.

Consequently, the key challenges for further development of the corporate governance regime in Croatia include definition and promotion of good practices, protection of minority shareholders' rights, stronger role of supervisory boards, higher transparency of remuneration of management board members and alignment of their compensation with the performance of the company, strengthening internal audit systems and promoting organizational cultures that facilitate transparency and sustainable value creation (cf. Račić and Cvijanović, 2006).

Competitiveness requires transparency and institutional credibility and stability which stimulate companies to focus on proactive long-term strategies of value creation based on investment, innovation and stakeholder engagement. Despite regulatory and capital market-related improvements in the last decade, the system of corporate governance is still relatively underdeveloped; as such it is insufficiently conducive to innovation.

### **3.2. Innovation strategies and performance**

In this section we tackle the level and characteristics of main innovation activities and the position of innovation within corporate strategies. The pilot Community Innovation Survey (cf. Račić et al., 2005) has shown that 34.8% Croatian enterprises are innovative. Product and process innovations are relatively frequent in manufacturing enterprises (53.8%), which even exceeds the EU-15 average (47%). Although the service sector predominates in the total structure of the economy, its level of innovativeness (19.3%) is less than half of the EU-15 average (40%). The innovation process brings along significant risks and expenditures, which can inhibit or slow down its progress. Innovation activities are often marginalised within corporate strategies or reduced to incremental modifications of existing products and/or

processes. Analysing the type of innovations<sup>11</sup> we observe that 12.2% of the firms have introduced radical innovations. Paradoxically (for a transition country of a relatively small size), such innovations tend to be linked with the company's orientation to the national market: 75% of radical innovators claim that national market for them is more important than international markets. Correspondingly, a high share of innovators in Croatia do not undertake research and development at all (33.8% in the manufacturing sector and 20.8% in the service sector), and enterprises that invest into research and development have generally a low level of research and development intensity<sup>12</sup>. Aralica, Račić and Radić (2005) found no statistical interdependence between R&D activities and the innovation propensity of Croatian companies. The capability to make additional revenues from innovation is weak and the economic effects of innovations (e.g. the share of revenues from new products in total revenues) are thus limited.

Inadequate economic effects point to the lack of resources and/or capabilities for innovation.<sup>13</sup> Among the obstacles to innovation, high innovation expenditures and insufficient state support and the lack of the appropriate source are emphasised by entrepreneurs most frequently. The complexity of innovative activities, which result in high risks and costs should stimulate sharing of potential risks and rewards. However, the cooperation among the Croatian enterprises in the innovation development is rather weak: 66% of product

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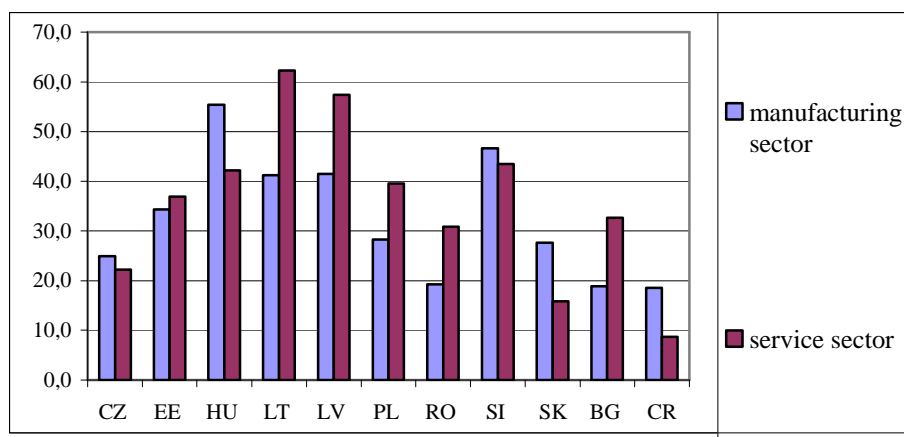
<sup>11</sup> Innovations can be divided into radical and incremental ones. Radical innovation can appear as significant improvements of the existing or introduction of new products or processes that can change the competition dynamics thoroughly in a sector. Incremental innovations are small improvements of the existing products or processes (OECD, 2005).

<sup>12</sup> The overall level of R&D expenditures in the business sector (0.52% of GDP in 2004) is also low, although Croatia performs better than several new member states. Low technology and medium low technology industries account for almost  $\frac{3}{4}$  of the value added (74.1%) in manufacturing (Aralica, 2007). These industries are mostly based on relatively stable technologies, unlike in the medium high technology and high technology sectors (cf. OECD 1997), which produce products using advanced and fast changing technologies that are usually accompanied by R&D investments. Consequently, companies in these sectors build their competitive position frequently by a product and/or process innovations (cf. Lall, 2001).

<sup>13</sup> A complementary explanation may also include structures of markets where firms operate. For example, markedly low levels of innovation in service sectors may be at least partly attributed to market concentration in those sectors, which are due to non-tradable nature of services and slow liberalisation.

innovations and 57% of process innovations are developed within the enterprise or within the group of enterprises. Only 2.0% of innovative enterprises are cooperating with other enterprises and institutions in the innovation development. In EU-15 19% of enterprises develop innovations in cooperation. A comparison with other countries of Central and Eastern Europe, which shows considerable lags, is given in Figure 1.

Figure 1: Innovation cooperation in CEEC (in %)



Source: EUROSTAT / Račić et. al. (2005)

The most frequent form of innovation cooperation involves suppliers of equipment, materials, components or software (manufacturing enterprises 10%, service enterprises 3.1%). The collaboration with academic institutions occupies the second place in manufacturing (6.2%) and the third place in service sectors (2.1%). Despite occasional positive examples, science-industry collaboration is still rather underdeveloped (cf. Radas, 2004, Radas and Vehovec, 2006).

Despite marginalisation of innovation within corporate strategies, their low economic effects and insufficient resources and capabilities as the main obstacles to innovation, it has been

observed that enterprises rarely engage in innovation cooperation. Consequently, the industrial structure is characterised by underdeveloped strategic alliances, clusters and industrial networks. This issue is related to both strategy and corporate governance, whereby the lack of cooperative stakeholder relationships becomes a hindrance to risk sharing that would facilitate more radical innovation projects with higher value added. A possible solution to these problems may involve external investments accompanied by technological and managerial improvements, which is the topic of the next section.

### **3.3. Corporate governance and external financing of innovation**

Improvements in corporate governance are often prerequisites and/or consequences of receiving external finance, because of transparency and reporting requirements and control mechanisms required by the providers of financial resources. Although debt may also entail strong commitments and induce governance improvements (especially in the case of debt securities) on the part of its issuer, our main focus will be on equity, given its higher risk and stronger monitoring prerogatives it implies. When discussing the effects of external finance on innovative activities in companies<sup>14</sup>, it is useful to distinguish two main beneficiaries of financial inflows - both of which are related to raising corporate governance standards in companies. The first group comprises existing companies that have attracted - usually foreign - capital (often in the course of privatisation) and undergone restructuring that includes product and process innovations<sup>15</sup>. The second group consists of emerging innovative SMEs

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<sup>14</sup> The pilot Community Innovation Survey (Račić et. al, 2005) has shown that innovations in Croatian enterprises are mainly financed from own resources (79.2%), followed by bank loans (8.5%) and supplier credits (9.6%), which also implicates a strong connection of present innovation processes with the equipment procurement, but also points to the economic restrictions of more important level of innovation activities in Croatian enterprises. Government subsidies to innovation activities are rather rare and they are focused on manufacturing and smaller and medium size enterprises.

<sup>15</sup> A wider definition of this group would also comprise greenfield FDI projects, which are expected to have adequate governance mechanisms from their establishment.

that require additional capital to finance their start up and expansion.<sup>16</sup> At the end of the section, we tackle the issue of venture capital - as a mode that is particularly suitable for innovation financing of smaller firms with growth potential. Namely, due to the intangibility of their assets, 'smaller firms pursuing innovation strategies may face greater difficulty in obtaining debt finance for start-up and the early stages of development than their conventional counterparts' (Brierley, 2001: 66).

As for the established companies, innovation in Croatian enterprises is related to the concern affiliation (62% enterprises belonging to the concern and 42.7% not belonging to the concern are innovative), which reflects positively on the transfer of innovations through the specific business systems (Račić et al., 2005). Higher innovativeness of enterprises with the foreign capital share is related to this issue<sup>17</sup>. Inflow of foreign capital usually brings about more effective governance and contributes to improvement of products and processes, but it is reasonable to assume that a significant part of innovations regards the product implementation or process innovation already present within the international concern or a business group. Since privatisation takeovers, as the most significant form of foreign direct investment, were until recently focused on conquering the domestic market, it was not possible to expect strong contribution to radical innovations and export competitiveness. A peculiarity of FDI inflows into Croatia is that almost 50 percent of the total FDI has gone into the services sectors, such as transportation and telecommunications and financial intermediation (cf. Bačić, Račić and Ahec-Šonje, 2004); given the non-tradable nature of most such services, it can be concluded that the investors have been motivated by market-seeking reasons. This is linked to seeking strategic control over the domestic companies through acquisitions of majority or controlling

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<sup>16</sup> Due to prohibitive costs for most venture capital and private equity providers, seed and start-up capital are rather rare in Croatia.

<sup>17</sup> 59.7% of enterprises with a share of capital of foreign origin innovate, in comparison with 33.5% innovators among enterprises that have not received any foreign investments (Račić et al., 2005).



stakes, which enables alleviation of aforementioned governance problems (see above), easier restructuring and reaping of the corresponding returns on investment. On the other hand, corporate strategies are characterised by weak linkages with SMEs and with academic institutions; their restructuring rarely involves spin-offs that can be attractive to private equity investors, or acquisitions of SMEs that have grown on their own or have been nurtured by venture capital companies. There is only one significant corporate venturing vehicle - a private equity fund of EUR 35 million founded by nine Croatian corporate investors<sup>18</sup>.

A comparison between the industrial structures of developed and Central and East European economies reveals that in transition economies SMEs play a comparatively smaller role in corporate production networks, and are characterised by lower levels of innovation (Iliev and Račić, 2004). In Croatia, the occurrence of innovations is related to the size of an enterprise: 35% of small firms, 50.4% of medium size firms and 60.6% of large firms innovate. Although this can be explained by more resources and very pronounced specialisation of employees in larger firms, an alternative interpretation emphasises the insufficient contribution of small and medium enterprises to innovation activities, lower level of inventiveness of new products and services<sup>19</sup> and thereto related lower level of economic effects of innovation (Račić et. al, 2005). The lack of innovative SMEs is related to underdevelopment of the science-industry collaboration in general and of technology transfer and academic entrepreneurship in particular – in terms of incentive systems and financial (subsidies, debt and equity sources) and organisational resources that would facilitate new technology based firms to go through seed and start up stages. When it comes to existing innovative SMEs, their prosperity and growth may be limited by the entrepreneurs' strategy to preserve maximal degree of strategic control and avoid accountability obligations external finance brings (cf. McMahon, 2000). In

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<sup>18</sup> Quaestus Private Equity Partners, [www.quaestus.hr](http://www.quaestus.hr)

<sup>19</sup> The lack of inventiveness entails imitation of products of established strategies and production programmes of existing companies, rather than offering novelties on the market.

a recently undertaken research, most of high growth export-oriented SMEs are owned by a single entrepreneur (or groups of entrepreneurs) who have recognised a business opportunity. Such enterprises tend to be managed in the style of enlightened paternalism. This is understandable, given the prevailing cultural norms and entrepreneurial climate during the transitional period, but it is questionable whether such ownership structures and management approach are suited for future enterprise development. If the aspiration to preserve maximal control over the enterprise prevails over optimal growth strategies, that can result in obstacles to collaboration within clusters or industrial networks, as well as to restructuring and mergers/acquisitions of companies, with reduced interest on the part of external investors (Račić, Aralica and Redžepagić, 2006).

Although enterprises list market reasons as key impediments to innovation, seen mainly through high costs and lack of adequate financing sources (cf. Račić et al., 2005), Young and Cvijanović (2006) found that supply of venture capital funds, as an inherent innovation financing source, exceeds demand, which implies lack of a qualified demand, due to the predominance of debt financing and the corresponding lack of equity financing culture among Croatian entrepreneurs<sup>20</sup>. Venture capital industry in Croatia is currently valued around USD 100 million. There have not been any initial public offerings initiated by venture capital or private equity companies; few exits that have been made occurred through trade sales (sales of portfolio companies to a corporation) or buybacks. Iliev and Račić (2004) identified several constraints on the deal flow (investment proposals that are made to venture capital companies) in the Central and Eastern Europe that are also applicable here. Some impediments are related to the rare emergence of SMEs with innovative products and/or significant growth potential that could be nurtured by venture capital involvement (exhaustion

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<sup>20</sup> This finding further reinforces the line of reasoning in this paper that abundance of finance is not primary, but rather only accompanying and complementary to innovation processes.

of the privatisation pool, weak linkages with academic institutions, limited number and quality of corporate spin-offs). Others occur due to the lack of available financial and managerial resources necessary for SME creation and growth and stimulating venture capital interest and involvement. These include the lack of business angels and referral networks and experienced senior venture capital managers, as well as the aforementioned caution towards equity investments. Innovation policy should thus incorporate measures to address these concerns.

#### **4. CONCLUDING REMARKS**

The level and characteristics of innovation activities within an economy depend upon both market and wider institutional determinants. We have thus attempted to analyse the relationship between the system of corporate governance and innovation activities, using the example of Croatia. There is a need for further research on systems of corporate governance, corporate strategies and innovation activities in transition economies, as well as on the policies that may positively affect institutional development and economic performance.

Institutional frameworks that constitute the system of corporate governance have an impact on the level and prevalent modes of innovation activities and ways in which innovations are developed, financed and implemented within enterprises. Hereby one can observe strong complementarities between the system of corporate governance, financial system and national innovation system. Despite emerging initiatives towards international standards and the harmonisation pressures induced by globalisation, a variety of national systems of corporate governance many differences are likely to be preserved, including the basic division between Anglo-American and continental European and East Asian governance systems. Particular

aspects of the corporate governance system - including modes of financing, level and types of coordination among stakeholders, corporate organisation and industrial relations are also useful for understanding the innovation activities and the national innovation system. The current debate about the relative merits of corporate governance systems regarding innovation cannot be automatically applied to transition economies. Their bank-based financial systems are often characterised by underdeveloped and/or inconsistent institutions, whereas their capital markets may suffer from being shallow and illiquid.

This has been the case in Croatia, whereby underdeveloped institutions have affected both the external and the internal incapacity of corporate governance mechanisms. Despite regulatory and capital market-related improvements, the system of corporate governance is still insufficiently conducive to innovation and, more generally, to corporate strategies based on investment, innovation and stakeholder engagement. In other words, there is a misalignment between the corporate governance system and innovative activities that characterise the emerging knowledge-based economy: the current conditions are conducive primarily to non-complex innovation activities. Enterprises with more ambitious business strategies based on innovation and higher governance and competitiveness standards may be burdened by higher risks and costs. This is reflected in the marginalisation of innovation within corporate strategies, which lead to their low economic effects. Despite insufficient resources and capabilities as the main obstacles to innovation, innovation cooperation is low - even in comparison with transition economies that have joined the EU in 2004 and 2007. The lack of cooperative stakeholder relationships precludes risk sharing that could facilitate innovation projects with higher value added. This can at least in part be addressed by external investments accompanied by technological and managerial improvements. This may involve domestic and foreign direct investments into greenfield projects, established companies,

including the innovative SMEs with a growth potential. The latter could be particularly effectively served by venture capital, whose involvement is limited by a limited deal flow. The lack of innovative SMEs is related to underdevelopment of the science-industry collaboration in general and technology transfer and academic entrepreneurship in particular – in terms of incentive systems and financial and organisational resources that would facilitate new technology based firms to go through seed and start up stages. The prosperity and growth of existing innovative SMEs may be limited by the entrepreneurs' strategy to preserve maximal degree of strategic control and avoid accountability obligations external finance brings.

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