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# **Business Freedom, Corruption and the Performance of Trusting Cooperation Partners: Empirical Findings from Six European Countries**

Isabella Hatak, Matthias Fink und Hermann Frank

## **Abstract**

In this study we investigate the impact of trust on the performance of cooperating firms, taking into account two core aspects: First, we look at environmental uncertainty, which shows in the degree of change there is in business freedom. Second, we account for behavioral uncertainty – captured as the average level of freedom from corruption in a country. Based on survey data from 791 firms engaged in national cooperation in Austria, the Czech Republic, Finland, Hungary, Slovakia and Slovenia, we find that behavioral coordination based on trust impacts on cooperating firms' performance positively in dynamic and negatively in stable contexts. Freedom from corruption enhances firm performance in dynamic contexts but is not a significant predictor in stable contexts. Further, we find the trust-performance relationship to be moderated by freedom from corruption in dynamic but not in stable contexts. The findings contribute to a more contextualized research on trust and interorganizational cooperation, as has been called for recently.

## **Keywords**

interorganizational cooperation, behavioral uncertainty, environmental uncertainty, business freedom, corruption, firm performance

## **JEL**

D23, D22, L25, M16, P20

## 1. Introduction

The sharp increase in various forms of interorganizational cooperation in the current economic environment has stimulated a profusion of research. A prominent stream focuses on the role of trust in coordinating economic activities between cooperating firms (interfirm cooperation). It has been shown that, by absorbing the complexity of the cooperative relationship, trust can have a positive impact on the performance of cooperating firms (for an overview of studies examining the trust-performance link within interorganizational settings see e.g. Mohr and Puck 2013; Robson et al. 2006). Scholars draw on theoretical concepts such as transaction costs (e.g., Van de Ven and Ring 2006; Dyer and Chu 2003; Zaheer et al. 1998), relational governance (Mohr and Puck 2013; Krishnan et al. 2006; McEvily and Zaheer 2006), transaction value (e.g., Robson et al. 2008; Carson et al. 2003) and game theory (e.g., Parkhe 1993; Kreps et al. 1982) to explain this performance effect of trust. Summarizing the existing theoretical and empirical research on trust in interfirm cooperation, Krishnan et al. (2006: 895) state that “[.] all else being equal, trust improves alliance performance.”

Now that the general effect has been identified, the *ceteris paribus* assumption can be relaxed and research can move from the question of *whether* trust relates to the performance of cooperating firms to the *identification of specific contextual factors* relevant for the unfolding of the trust-performance relation. First attempts show that the impact of trust on firm performance varies in strength between family versus non-family businesses (Fink 2010), national versus international cooperation and transition versus traditional market economies (Fink and Harms 2012). In this regard, Krishnan et al. (2006) identify environmental and behavioral uncertainty as contextual factors relevant to trust having a positive effect on firm performance in interfirm cooperation. In this study, we draw on these findings and take them one step further by adopting a more fine-grained look at the reasons for these uncertainties and thus at the central contextual factors in six European countries.

Following the theoretical approach to place-based entrepreneurship (Lang et al. 2013), the analysis takes into account the societal and organizational level as the context in which the manager in charge for handling the cooperation relationship (boundary-spanning agents, Zaheer et al. 1998) is embedded (Graham and Healey 1999). These boundary-spanning agents are the unit of analysis when researching the interpersonal trust in the boundary-spanning agent of the cooperating partner firm.

We find that behavioral coordination based on trust between the boundary-spanning agents impacts on cooperating firms' performance positively in dynamic and negatively in stable contexts. Freedom from corruption enhances firm performance in dynamic contexts but is not a significant predictor in stable contexts. Further, we find the trust-performance relationship to be moderated by freedom from corruption in dynamic contexts but not in stable ones.

With these findings, we contribute to a more contextualized research on trust and interfirm cooperation, as has been called for by, for example, Moellering et al. (2004), Bachman (2001, 2011), Bachman and Inkpen (2011) and Welter (2011). More specifically, our findings offer an in-depth insight into the relationship between trust and performance for cooperating firms in different business environments that are characterized by different levels of behavioral and environmental uncertainty: (1) Trust-based cooperation between self-committed partners not only may increase but also may threaten firm performance. (2) The impact of trust on firm performance depends on the level of dynamism and corruption in the business context. (3) Dynamic contexts with low levels of corruption are an especially fertile ground for interfirm cooperative relationships that rely on trust.

The paper is organized as follows: In section 2, we develop six hypotheses based on a focused literature review. We then discuss the sampling and operationalization of the

variables (section 3). In section 4, we present the empirical results, which are discussed and converted into implications taking into account the study's limitations in section 5.

## **2. Theoretical Background and Development of Hypotheses**

### ***2.1. Behavioral Coordination in Interfirm Cooperation***

We focus on interfirm cooperation as a specific type of organizational arrangement between two legally independent firms that adjust their behavior to a joint course of action in a specific area of their business activities with the aim of realizing joint benefits in the long run (Lado et al. 2008; Combs and Ketchen 1999; Das and Teng 1998). In fact, such a behavioral alignment implies the forgoing of short-term opportunism, which “refers to a lack of candor or honesty in transactions, to include self-interest seeking with guile” (Williamson 1975: 9), and advantages in favor of common long-term objectives (Das and Rahman 2010; Wathne and Heide 2000). This implies that a cooperating firm makes its own business performance dependent on the future, as it is contingent on the behavior of its cooperation partner: Due to the temporal split between inputs given and outputs received resulting from the long-term character of the exchange relationship, the party that delivers first places itself in the precarious position of not receiving the expected counter-performance (Macneil 1980; Emerson 1962). Moreover, as the impact of the cooperation on the performance of the firm is dependent on the behavior of its cooperation partner, a partner that behaves opportunistically directly endangers the firm performance. This combination of mutual economic dependence and simultaneous reciprocal uncertainty (double contingency; Luhmann 1989) turns interfirm cooperation into complex arrangements that imply an opportunistic threat (Williams 2001), for example as depicted in the prisoner's dilemma (Le and Boyd 2006).

The threat of opportunistic behavior is proportional to the number of opportunities to engage in behavior that is unfair to the cooperation partner without being detected (Wathne

and Heide 2000). This leeway for opportunism grows with environmental uncertainty (Lee 1998; Sako and Helper 1998). However, the opportunistic threat only materializes according to the partners' inclination to exploit the existing leeway, which rises with behavioral uncertainty (Rausch 2011; Fink and Kessler 2010; Goshal and Moran 1996).

Therefore, the core concept underlying the idea of an opportunistic threat in the context of interfirm cooperation is behavioral uncertainty between the boundary-spanning agents who are in charge of managing the interfirm relation. Behavioral uncertainty, which according to Krishnan et al. (2006: 895) refers to "the potential inherent in a situation for difficulty anticipating and understanding actions", is most relevant in an exchange context (Williamson 1985) as bounded rationality hinders the writing of complete contingent claim contracts (Lukas and Schoendube 2010; Zaheer and Venkatraman 1995).

Especially in highly complex exchange relationships, for example joint R&D or cooperative internationalization, neither the goals nor the contributions of the partners can be defined completely ex ante (Shane 2003) and thus hierarchical tools of control and sanction (e.g., Adler 2001; Williamson 1991) fail to coordinate cooperative behavior (organizational failure). Likewise, the market mechanism is not suitable for coordinating the behavior of specific interaction partners towards forgoing individual short-term profits in favor of joint long-term profits as it spontaneously matches compatible partners but does not motivate specific partners to engage in complex exchange relationships due to imperfect information regarding the characteristics of the potential exchange goods and the actors' preferences (market failure, e.g. Bradach and Eccles 1989; Ouchi 1979).

Because behavioral uncertainty cannot be eliminated in complex cooperative relationships (Ring and Van den Ven 1992), cooperation partners need to take a risk by providing advance performance (Moellering 2002) so as to bridge this gap resulting from the simultaneous organization and market failure, and by doing so they establish a trust-based

relationship (Lavie 2006; Van de Ven and Ring 2006; Adler 2001; Wieland 2001; Nooteboom 1996, 2002; Currall and Judge 1995; Anderson and Weitz 1992; Witt 1986).

In the context of interfirm cooperation, trust relations are established between the boundary-spanning agents since “it is the individuals as members of organizations, rather than the organizations themselves, who trust” (Zaheer et al. 1998: 141). We define trust as the “willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party” (Mayer et al. 1995: 712). In fact, the trusting party responds to subjective uncertainty regarding the cooperation partner’s behavior by expecting the latter to voluntarily refrain from behaving opportunistically (Adler 2001).

Such mutual trust relationships that are based on the actors’ self-commitment unfold their coordinative power over the boundary spanners’ behavior in a self-enforcing process: The starting point is the initiative-taking actor’s self-commitment to a set of cooperation-related maxims (Sharpe 2003), such as the maxim of fairness that justifies the leap of faith required to trust. In cooperative relations, taking a leap of faith means dismissing the risk of the cooperation partner exploiting the trustor’s vulnerability (Moellering 2002) and taking the risk of providing advance performance, e.g. irreversible commitments such as specific investments. In this way, the trustor communicates his or her trust to the trustee and provides a basis for trust on his or her part. Based on congruent expectations, both sides perform acts of trust, which in turn reinforce the initial expectations and justify additional risky acts of trust so that, as a result, a trust-based relationship evolves (Fink and Kessler 2010; Hatak and Roessl 2010; Ferrin et al. 2008).

Although the leeway for opportunistic behavior still exists in such a trust-based cooperative relationship, restricting the partner’s inclination to engage in opportunistic behavior reduces behavioral uncertainty (Sako 1998; Madhok 1995). Thus, the complexity of

the cooperative relationship and the risk of betrayal can be partly absorbed by trust. As a result, a general positive impact of trust on the firm performance of cooperation partners, *ceteris paribus*, has been shown across diverse studies, summarized for example by Mohr and Puck (2013) and Robson et al. (2006). For instance, it has been shown that trust enables the waiving of control and sanction mechanisms, which leads to a reduction of costs (Buckley et al. 2009). Furthermore, trust increases the sharing of information between cooperation partners (Wall and Greiling 2011; Lane et al. 2001), which results in the improved ability of firms to exploit the opportunities offered by new technologies and markets (Carson et al. 2003). In line with this reasoning, Kwon (2009) has demonstrated that trust improves flexibility and the speed of decision-making, thus contributing to the positive effect of trust on performance.

However, to get a more fine-grained understanding of the positive performance impact of boundary-spanning agents' trust in cooperative relationships, we need to relax the *ceteris paribus* assumption and investigate the specific contextual factors that foster the positive trust-performance relation.

## ***2.2. The Relevance of the Context***

Madhok (1995: 118) argues that a lack of trust “[...] prevents the exploitation of the full potential benefits of shared resources, and hampers recognition of the potential for effective reduction of the costs inherent in shared ownership through nurturing the social quality of the relationship”. Yet, current theoretical and empirical research provides good reasons to believe that the relationship between trust and firm performance for cooperation partners may be contingent on the context in which the cooperation takes place. To be precise, Krishnan et al. (2006) argue that the total effect of trust on performance not only depends on the level of behavioral uncertainty discussed above, but also on the level of environmental uncertainty,



which results from changes in conditions that are outside the control of the cooperating partners and that are hard to anticipate.

Fink and Harms (2012) show empirically that trust-based cooperation is a successful option only in specific country contexts. However, they did not integrate the levels of behavioral and environmental uncertainty into their model but simply assigned higher behavioral uncertainty to international compared to national cooperation and higher levels of environmental uncertainty to transition as against traditional market economies. While authors such as Eriksson and Sharma (2002), Smallbone and Welter (2001) and Tan and Litschert (1994) have shown that contextual factors vary between different country contexts, we take this one step further and integrate into our model the two contextual variables “change in business freedom” and “freedom from corruption” as proxies for the levels of environmental and behavioral uncertainty, respectively.

More precisely, in the course of investigating the trust-performance relation in interfirm cooperation we take into account two core aspects of the contexts in which the boundary-spanning agents of the cooperating firms operate: First, we look at environmental uncertainty, in other words the degree of change in business freedom. In fact, we distinguish between stable and dynamic business contexts at a country level. Second, we account for behavioral uncertainty – captured as the average level of corruption in a country.

*Change in business freedom.* Business freedom refers to the ability to establish and run a business without interference from the state. According to Miller and Kim (2013: 90), “burdensome and redundant regulatory rules are the most common barriers to the free conduct of entrepreneurial activity.” Governments can influence businesses’ environment and as such their level of environmental uncertainty by using authority over cooperating firms. This is done by directly and indirectly influencing strategy, management style, and structure, such as by appointing firm managers, participating on boards of directors, and providing direct or

indirect subsidies. Furthermore, the state can influence businesses by gaining influence through the markets, which can have varying degrees of openness (spanning from free markets to centrally planned markets). As an additional way to influence firms, the state can neglect the securing of property rights. In fact, the less established is the protection of property rights in a national market, the more opportunities the state has to influence business activities (Brouthers et al. 2007). Especially in transition economies, property rights tend to be less protected due to weak political authorities and ineffective enforcement institutions (Teraji 2008). Interestingly, two countries with the same set of legal regulations can impose different regulatory burdens by handling these regulations differently, thus creating more or less free business contexts (Miller and Kim 2013). The more the level of business freedom changes, the less predictable is the business environment, thus the higher is the environmental uncertainty in the business context.

In this regard, the Index of Business Freedom, a sub-index of the Index of Economic Freedom (Miller et al. 2013), provides a well-established measure that allows for cross-country comparison regarding the level of environmental uncertainty: The index ranges from 0, representing country contexts with the least business freedom, to 100, which represents those with the most. The index's practical implications for the economic actors in a market become obvious when one looks at the criteria used for the evaluation, such as the time (days) and number of procedures necessary to set up a business and the costs of closing it down again.

In the European context, the different intensities of change in business freedom in countries formerly located on either side of the iron curtain appear especially relevant for understanding the environmental uncertainty within these countries. The disruptive introduction of liberal economic policies in the formerly centrally planned economies after the break-down of the communist regimes resulted in a sudden change in business freedom in

Central and Eastern European countries (Whitefield 2002) such as the Czech Republic, Hungary, Slovakia and Slovenia, to a level even greater than in the traditional market economies such as Finland and Austria. However, the intensified European integration, reflected amongst other things by the accession of the Czech Republic, Hungary, Slovakia and Slovenia to the EU in 2004, with Slovenia introducing the Euro in 2007 and with Slovakia becoming a member of the eurozone in 2009, was accompanied by more and more harmonization of the regulatory regime, such as the introduction of the *acquis communautaire* that again introduced limitations on the business freedom in the CEE countries. At the same time, the idea of the lean state and the competitive pressures resulting from the emergence of new markets motivated the traditional market economies to liberalize their institutional environments, which in turn led to higher levels of business freedom. These developments can be seen most clearly in the dramatic changes in business freedom that have occurred in the Czech Republic and Finland.

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Figure 1 about here

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Bigger changes in business freedom imply more dynamic business contexts. With rapidly changing regulatory regimes, environmental uncertainty rises (Welter et al. 2004; Eriksson and Sharma 2002). As a result, in the context of cooperative relationships, the number of opportunities to behave unfairly towards one's counterpart in the partner firm without being detected grows so that it becomes harder for boundary-spanning agents to anticipate their business partners' behavior (Lee 1998; Sako and Helper 1998). This is compounded by the lack of predictability of legal decisions in dynamic business contexts.

Thus, for successful behavioral coordination and therefore high firm performance when cooperating in dynamic business contexts, boundary-spanning agents have to trust their counterparts in the cooperating partner firm to be self-committed to the maxim of fairness rather than relying on institutions to protect their interests. To be precise, in dynamic business environments, trust may show its full potential for encouraging behavioral coordination. Accordingly, we formulate the following hypothesis:

*H1a: In dynamic business contexts, the more the behavioral coordination between the boundary-spanning agents of an interfirm cooperation relies on trust, the higher will be the performance of the cooperating firms.*

Building up and maintaining trust between the boundary-spanning agents in a cooperative relationship is a resource-intensive task (Vangen and Huxham 2003). Besides the costs, the risk inherent in trust-based coordination also threatens firm performance: Trust enhances the risk of being manipulated (McEvily et al. 2003) or even cheated (Shapiro 1987) by the cooperation partner because trust reduces the level of skepticism towards the partner (Thorgren and Wincent 2011; Kautonen et al. 2010; Rennie et al. 2010; Kahneman et al. 1982) and as a consequence reduces monitoring activities (Williams 2001). It may make the trustor react too late (Thorgren and Wincent 2011) or even completely overlook the need to reevaluate the relationship, either when circumstances change (Barnett and Carroll 1995) or when the arrangements become negative for the firm (Patzelt and Shepherd 2008; Miller and Friesen 1980). Thus, if, due to the stability of the business environment, trust cannot fully exert its coordinative power over the behavior of the interaction partners because of low levels of environmental uncertainty, the costs of building and maintaining trust will outweigh its benefits.

*H1b: In stable business contexts, the more the behavioral coordination between the boundary-spanning agents of an interfirm cooperation relies on trust, the lower will be the performance of the cooperating firms.*

*Freedom from corruption.* Corruption can be defined as dishonesty or decay. In the context of governance, it can be seen “as the failure of integrity in the economic system, a distortion by which individuals or special-interest groups are able to gain at the expense of the whole” (Miller and Kim 2013: 89).

Corruption finds favorable conditions in country contexts that are characterized by system transformation, frequent changes in governments and/or reversals in ideological orientation (Sonin 2003; Katz and Owen 2005). The Czech Republic, Slovakia, Slovenia and Hungary have undergone a system transformation from centrally planned economies ruled by a communist political system to market economies embedded in democratic political systems (Whitefield 2002), thus serving as a breeding ground for corruption (Levin and Satarov 2000). In contrast, Austria and Finland have been politically and socially stable over the past few decades, indicating that they should have low levels of corruption. In this regard, the Index of Freedom from Corruption, a sub-index of the Index of Economic Freedom (Miller et al. 2013), provides a comparative quantification of this important behavioral aspect of uncertainty for different country contexts. The index ranges from 0 for the countries that are least free from corruption to 100, for those that are most free from it. This index can be cross-checked using the 2012 Corruption Perceptions Index published by Transparency International (2012). For Slovakia, the average value of the Freedom from Corruption Index for the period 1996-2008 is 39.4, which indicates that corruption is perceived as significant there (Miller et al. 2013). The 2012 Corruption Perceptions Index (Transparency International 2012) underpins this argument, with a score of 46 for Slovakia on a scale ranging from 0 (highly corrupt) to 100 (highly clean). Slovakia takes 62<sup>nd</sup> place out of 176 countries on

cleanliness. The Czech Republic's average score on the Freedom from Corruption Index for the period 1996-2008 is 42.2 (Miller et al. 2013). It ranks 54<sup>th</sup> out of 176 countries (with a score of 49) in the 2012 Corruption Perceptions Index (Transparency International 2012). Although convictions for bribery result in long prison terms and the police have been given greater power, such as wiretapping authority, to investigate such crimes, corruption remains a cause for concern in the country. In Hungary too corruption is perceived to be present (46.1; Miller et al. 2013). Hungary ranks 46<sup>th</sup> out of 176 countries (with a score of 55) on the 2012 Corruption Perceptions Index (Transparency International 2012). Due to the widespread cronyism in its business sector, Slovenia's average score for the Freedom from Corruption Index for the period 1996-2008 is 50.1 (Miller et al. 2013). It ranks 37<sup>th</sup> out of 176 countries (with a score of 61) in the 2012 Corruption Perceptions Index (Transparency International 2012). In contrast, corruption is perceived to be comparatively low in Austria (73.9; Miller et al. 2013). It ranks 25<sup>th</sup> out of 176 countries in the 2012 Corruption Perceptions Index (Transparency International 2012) as instances of corruption are prosecuted effectively (Miller et al. 2013). In Finland, corruption is perceived as almost nonexistent (81.9; Miller et al. 2013) making it tied for first place out of 176 countries (with a score of 90) in the 2012 Corruption Perceptions Index (Transparency International 2012).

According to the Index of Freedom from Corruption (Miller et al. 2013), even firms from different countries belonging to the European Common Market face dramatically different levels of corruption in their markets. For example, the neighboring countries of Slovakia and Austria show a spread of 34.4 points regarding corrupt behavior. Thus, corruption seems to be more strongly linked to the recent historical developments in a country's social and political systems than to geographical proximity. Although the countries that joined the EU in its first round of enlargement to the east in 2004 are currently in a late stage of transition (EBRD 2008) – which manifests in the structural shift away from firms

engaged in trade toward firms participating in the service sector and industries requiring a higher share of fixed resources (Smallbone and Welter 2001) – firms pursuing business activities there still face elevated behavioral uncertainty (Mandel and Tomsík 2008; Svetlicic and Sicherl 2006) due to high levels of corruption and low levels of accountability and transparency (Altman 2009). The equivalence of corruption and behavioral uncertainty results from “the multiple equilibria nature of corruption. The urge for an individual to be corrupt is stronger where many people are corrupt. This is because the moral cost of being corrupt is low when a society is already corrupt” (Kimuyu 2007: 203).

With regard to cooperation in highly corrupt contexts, if information on the actions of others is imperfect and one cannot rely on interaction partners’ word, achieving and sustaining cooperative arrangements becomes difficult (Kolstad and Wiig 2008). In fact, such settings open up the possibility of negative performance implications from cooperative relationships because, for honest individuals, it becomes “increasingly hard to do honest business, phantom firms are established for purposes of corrupt deals, and reputation matters increasingly less” (Kimuyu 2007: 200).

In dynamic contexts, high levels of corruption reduce the ability to rely on an interaction partner’s word, because changing structures in the economy break up established networks and cooperative relationships. Also, in dynamic environments the preferences of the market participants change quickly, which erodes the value of information drawn from experience with specific interaction partners. In such contexts corruption is a major obstacle to doing business (Blackburn and Forgues-Puccio 2009). It reduces firms’ ability to grow (World Bank 2002) and to penetrate new markets (Kimuyu 2007). Thus, we hypothesize:

*H2a: In dynamic business contexts, the higher the freedom from corruption, the higher will be the performance of the cooperating firms.*

While at the societal level corruption is always dysfunctional, from the perspective of the individual manager it might open up options that would otherwise be eliminated by regulatory institutions. This is especially true if a corrupt society is stable, or as Huntington (1968: 386) puts it: “In terms of economic growth, the only thing worse than a society with a rigid, over-centralized, dishonest bureaucracy is one with a rigid, over-centralized, honest bureaucracy.” Corruption in such stable environments replaces regulatory institutions, such as law, with social norms (Levin and Satarov 2000; Fukuyama 2002) that can actually improve efficiency and help growth (Bardhan 1997; Leff 1964). To be precise, with more doors open in a stable context due to high levels of corruption, managers can capitalize on additional opportunities when cooperating, and thus perform better than their cooperating counterparts in less stable contexts characterized by high levels of corruption. Thus, we formulate:

*H2b: In stable business contexts, the higher the freedom from corruption, the lower will be the performance of the cooperating firms.*

*The moderating role of freedom from corruption.* We argued earlier that trust reduces the cooperating partners’ inclination to behave unfairly (Sako 1998; Madhok 1995), thus eliminating certain behavioral options (Jarillo 1988). We also argued that corruption opens up additional illegal behavioral options to the economic actors. With both trust and corruption impacting on the boundary-spanning agents’ behavioral portfolios, which are relevant for firm performance, trust and corruption can be expected to interact. In fact, Kolstad and Wiig (2008: 524) argue that, in contexts where corruption is widespread, “[f]or individuals who have internal social motivations (such as a desire to reciprocate the actions of others), disguised actions and motivations of others may cause distrust, which may cause them to act opportunistically where they would otherwise act in more benign ways”. Thus, we hypothesize a moderating effect of the level of corruption on the trust-performance link within interfirm cooperation.



*H3a: In dynamic business contexts, the positive impact of trust between the boundary-spanning agents on the performance of the cooperating firms is moderated by freedom from corruption.*

*H3b: In stable business contexts, the negative impact of trust between the boundary-spanning agents on the performance of the cooperating firms is moderated by freedom from corruption.*

Figure 2 summarizes the hypothesized relationships.

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Figure 2 about here.  
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### **3. Empirical Study**

#### ***3.1. Data Collection and Sample Description***

The research team collected the data between 2006 and 2008 by sending postal questionnaires to the key informants (Kumar et al. 1993) (owners and managers) of 2,000 small and medium-sized businesses (SMEs) in Austria, the Czech Republic, Hungary, Slovenia and Slovakia and 2,700 in Finland, identified via national databases (Business Register, ALBERTINA and IPIS, respectively). SMEs were defined here as firms employing less than 250 employees (European Commission 2003). The response rates in the national surveys were 8.2% (164) in Austria, 9.1% (182) in the Czech Republic, 18.5% (499) in Finland, 5.1% (102) in Hungary, 4.4% (88) in Slovakia and 11.7% (234) in Slovenia.

The researchers examined each national dataset for potential nonresponse (Rogelberg and Stanton 2007) and common method (Podsakoff et al. 2003) bias and found no notable systematic bias. The final national samples used in this analysis feature only those firms that are currently involved in a national interfirm cooperation, defined loosely as a partnership with another firm that consists of more than just buying and selling activities. Hence, the final

national sample sizes and their shares of the total sample are 91 (11.5%) for Austria, 63 (8.0%) for the Czech Republic, 377 (47.7%) for Finland, 67 (8.5%) for Hungary, 49 (6.2%) for Slovakia and 144 (18.2%) for Slovenia.

A Kruskal-Wallis H-test indicated that the firms differ with regard to firm age, size and duration of cooperation. Hence, the inclusion of firm demographics as control variables is warranted. A Cramer' V-test indicated that the industry distribution (manufacturing, retail, service) does not differ significantly among the country subsamples. This indicates that a potential impact of environmental uncertainty resulting from different industry compositions on the relationship between trust and performance (Krishnan et al. 2006) is unlikely. Therefore, we did not include additional industry-based subsamples.

## **3.2. Measures**

### *3.2.1. Sample Split: Dynamic/Stable Business Contexts*

*Change in business freedom.* In our analysis we compare highly dynamic business contexts with stable ones. To split the total sample we draw on the Index of Business Freedom, a sub-index of the Index of Economic Freedom (Miller et al. 2013). Here, business freedom is a quantitative measure of the regulatory burdens involved in starting, operating, and closing a business. Values close to the minimum of 0 represent large burdens and values close to the maximum of 100 denote low burdens.

In 1996, the Index of Business Freedom was provided for all six researched countries for the first time. To account for the dynamism in the business context, we compute the amplitude of change in this sub-index between 1996 and the time of data collection in 2008. Two countries, the Czech Republic and Finland, show large amplitudes and thus are grouped under “dynamic business contexts”, while Austria, Hungary, Slovakia and Slovenia show only small amplitudes and are grouped under “stable business contexts”.

### *3.2.2. Response Variable*

*Firm performance.* The response variable in the econometric analysis is the performance of the focal cooperating firm. SMEs enter alliances for many reasons, for example to access international markets (Cullen et al. 2000), to reap scale benefits (Masurel and Janszen 1998) or to share knowledge in innovation and R&D (Levy et al. 2003). Therefore, the proximal, particular goals of alliances may be quite diverse, and firms that score highly for one goal may not even have attempted to achieve another (Mohr and Speckman 1994). Hence, we use a more general performance indicator, firm performance, as the response variable. This choice is also supported by the idea that an alliance should influence a firm's performance significantly. To measure firm performance, we employed a multidimensional scale (Fink and Kessler 2010; Roessl et al. 2008; Carton and Hofer 2006).

We measured all dimensions using four-point scales (“completely disagree”, “inclined to disagree”, “inclined to agree” and “completely agree”) and combined the responses into a formative construct (unweighted additive score).

A principal components analysis confirms the consistency of the scale: The first component has an eigenvalue well above 1 and all four items load on this factor with loading parameters ranging from .78 to .88. The Cronbach's alpha value for these items is .86. For the scale, the average variance extracted (AVE) is .70 and composite reliability (CR) is .90. For the detailed results concerning the assessment of the operationalization see Table 1. The subsequent regression analysis applies an index score that is the average of the four items.

### *3.2.3. Explanatory Variables*

*Trust.* As outlined above, mutual trust can only evolve if both boundary-spanning agents are willing to make a commitment to each other. However, as the questionnaire survey was kept anonymous in order to increase the return rate, we could not match the dyads to one another.

The operationalization of trust draws on the work of Fink and Harms (2012), Fink and Kessler (2010) and Adler (2001) and comprises several dimensions: As trust is reflected in the willingness to forgo individual short-term profits for the sake of joint long-term profits, self-committed cooperators have *no short-term perspective* (Becerra and Gupta 2003; Gulati 1995). Thus, trust also shows up in a firm's *willingness to take the risk* that its expectations concerning its cooperation partners' future behavior might not be met (Malhotra and Murnighan 2002). As the trusting actor does not rely on the safety net of monitoring and sanction threats, a cooperation partner that takes advantage of this self-inflicted vulnerability may cause it serious damage (Carson et al. 2003; Lavie 2006). Thus, the self-committed actor needs sufficient *frustration tolerance*, that is, belief in its ability to cope with situations resulting from a frustration of its expectations. Furthermore, trust in interfirm cooperation can be tackled by observing the actor's attitude towards attuning its behavior in the area of cooperation with the needs of its partner so as to enable synergies (*self-restriction*).

We assessed all four dimensions of maxim-based trust using four-point scales ("completely disagree", "inclined to disagree", "inclined to agree" and "completely agree") and combined the responses into a formative construct (unweighted additive score).

A principal components analysis confirms the unidimensionality of the scale: The first component has an eigenvalue well above 1 and all four items load on this factor with loading parameters ranging from .54 to .76. The Cronbach's alpha value for these items is .50. For the scale, the AVE is .43 and CR is .74. For detailed results concerning the assessment of the operationalization see Table 1. The subsequent regression analysis applies an index score that is the average of the four items.

*Freedom from corruption.* The levels of corruption in the six countries were not measured directly during the survey, as this would have implied another set of psychometric scales which would have further lowered the return rate. We thus draw on the Index of Economic Freedom (Miller et al. 2013), which is published annually for 177 countries by The Heritage Foundation in cooperation with the Wall Street Journal and comprises a sub-index expressing each country's freedom from corruption. In this index, values close to the minimum of 0 represent a low degree of freedom from corruption, while values close to the maximum of 100 express a high degree of freedom from corruption. The index was first published in 1996 for all six countries included in this analysis. To assess the level of freedom from corruption in each of the contexts in which the cooperating firms had been operating before the survey was conducted in 2008, we computed the average level of freedom from corruption between 1996 and 2008 for each of the six country contexts researched (for the exact values see section 2.2). The subsequent regression analysis applies this average index score directly.

#### *3.2.4. Control Variables*

The regression analysis controls for a number of factors that may influence the relationship between trust and firm performance of the cooperation partners. First, the analysis includes the duration of the cooperation measured in years (ordinal) as a control variable related to the features of the interfirm relationship. Two control variables capture the core features of the firms: Firm size is measured by the number of employees (ordinal). Firm age is measured by the number of years since founding (ordinal). Additionally, we control for the position of the responding boundary-spanning agent, as the perception of a manager may differ from that of an owner or an owner-manager.

### ***3.3. Analytic Strategy***

For hypothesis testing, we split the sample along the variable “change in business freedom”, resulting in one subsample consisting of 351 firms that operated in contexts characterized by only a little change in business freedom between 1996 and 2008 (stable business contexts) and another subsample comprising 440 firms that were active in fast-changing business environments during this time span (dynamic business contexts).

For each subsample, we estimated a three-step hierarchical linear regression model using the ordinary least squares (OLS) estimator with heteroskedasticity-consistent (robust) standard errors. The response variable in all estimations was the firm performance of the cooperation partner.

In the first step, we regressed firm performance against the control variables: (1) firm age, (2) firm size, (3) duration of cooperation and (4) position of respondent. While the first three variables control for the characteristics of the cooperating firm and the interfirm cooperation that are frequently discussed as having an impact on the profitability of cooperative arrangements, the fourth variable controls for a bias due to the position of the key informant in the surveyed firm.

In the second step, we added to the regression the explanatory variables, (1) trust and (2) freedom from corruption, as separate variables in order to test H1a, H1b, H2a and H2b.

In the third step, we introduced an interaction term (trust\*freedom from corruption) into the model to assess the interplay of these two explanatory variables with regard to firm performance in order to test H3a and H3b.

## **4. Results**

Table 1 displays the means (Mean) and standard deviations (SD). There are no unexpected correlations between the variables, suggesting that there is no serious multicollinearity. The

variation inflation factor (VIF) scores (Table 2) in the regression analysis support this conclusion, as the highest VIF score of 2.744 is clearly below the conventional threshold of 10 for serious multicollinearity.

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Table 1 about here.  
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The models (see Table 2) are significant in all specifications and the position of the key informant is not significant in any of them, confirming that there is no respondent selection bias in the data. We will present the detailed econometric results for the stable and dynamic contexts according to the three steps of the regression:

In the first step, we regressed firm performance against the control variables. For the *dynamic business context* subsample, the model explains 6.4 percent of the variance in the performance of the cooperating firm. While firm size does not show a significant effect on firm performance, we find a highly significant ( $p=.000$ ) and positive ( $\beta=.286$ ) performance effect of firm age, and a significant ( $p=.000$ ) but negative ( $\beta=-.195$ ) impact of the duration of the cooperation on firm performance.

For the *stable business context* subsample the model explains 3.6 percent of the variance in the performance of the cooperating firm. Firm age ( $p=.013$ ;  $\beta=.175$ ) and firm size ( $p=.025$ ;  $\beta=-.166$ ) are significant predictors in this specification, while the duration of the cooperation is not.

In the second step, we introduced (1) trust and (2) freedom from corruption into the model in order to test the first two sets of hypotheses. For the *dynamic business context* subsample the model gains substantial explanatory power over and above that in the first step ( $\Delta R^2=.198$ ), as the adjusted  $R^2$  rises to .262. While in this specification the only significant control variable is firm size, both explanatory variables are significant: Trust shows a

significant ( $p=.019$ ) and positive ( $\beta=.120$ ) impact on performance. Also, freedom from corruption has a highly significant ( $p=.000$ ) and rather strongly positive ( $\beta=.642$ ) effect on performance. The results support H1a and H2a, according to which both trust and freedom from corruption exhibit a positive impact on the firm performance of cooperating partners in dynamic business contexts.

For the *stable business context* subsample the model gains only a little explanatory power over and above the first step ( $\Delta R^2=.053$ ), as the adjusted  $R^2$  increases by .053 to reach .089. In the model we find that firm age and firm size are still significant ( $p=.017$ ,  $p=.021$ ), with firm age showing a positive performance effect ( $\beta=.168$ ) and firm size having a negative ( $\beta=-.167$ ) impact on firm performance. Interestingly, of the two explanatory variables, only trust shows a highly significant ( $p=.000$ ) but negative ( $\beta=-.246$ ) effect on firm performance, while freedom from corruption is not a significant predictor. These results support H1b, according to which trust leads to lower firm performance for the cooperating partners in stable business contexts, but challenge H2b that expressed the expectation that, in stable contexts, freedom from corruption would compromise firm performance.

In the third step we introduced an interaction term between the two explanatory variables to test for H3a and H3b. For the *dynamic business context* subsample the model gains only a little explanatory power ( $\Delta R^2=.005$ ), as the adjusted  $R^2$  reaches a value of .267. In this specification, firm size remains significant at the 5 percent level ( $p=.011$ ) and shows a positive effect ( $\beta=.109$ ) on firm performance. However, trust loses its significance in this step ( $p=.472$ ;  $\beta=.046$ ). Nevertheless, freedom from corruption is still highly significant ( $p=.000$ ;  $\beta=.582$ ). Interestingly, the interaction term – trust\*freedom from corruption – is significant at the 5 percent level ( $p=.049$ ), showing a positive impact on firm performance ( $\beta=.102$ ). These results support H3a, indicating that, in dynamic contexts, the trust-performance link for cooperating firms is moderated by freedom from corruption.



For the *stable business context* subsample, the model loses some explanatory power ( $\Delta R^2 = -.004$ ), with the adjusted  $R^2$  dropping to .085. Firm age shows a significantly positive ( $p = .017$ ;  $\beta = .168$ ) and firm size a significantly negative ( $p = .020$ ;  $\beta = -.169$ ) impact on firm performance. In this specification, trust ( $p = .002$ ;  $\beta = -.262$ ) remains a significant predictor, while freedom from corruption remains insignificant ( $p = .749$ ;  $\beta = -.030$ ). Interestingly, in contrast to the dynamic context, the interaction term – trust\*freedom from corruption – does not exhibit a significant effect on performance in the stable context ( $p = .732$ ), which challenges H3b.

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Table 2 about here.  
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**5. Conclusion**

Drawing on previous research, we expected trust and freedom from corruption to impact on cooperating firms’ performance positively in dynamic contexts and negatively in stable contexts, and we assumed the trust-performance relationship to be moderated by freedom from corruption. Summarizing the empirical results, we find that we were right with all our assumptions regarding dynamic contexts and with our hypothesis concerning the negative performance effect of trust in stable contexts. However, we were incorrect concerning our hypotheses on the role of freedom from corruption in stable contexts (see Table 3).

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Table 3 about here.  
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Basically, our findings indicate that the trust-performance link in interfirm cooperation is highly dependent on the context. The amplitude of changes in business freedom and the degree of freedom from corruption have proved to be key dimensions of the context.

In fact, in dynamic business contexts, corruption seems to be a threat to the performance of cooperating firms. Trust-based behavioral coordination within cooperative arrangements in such dynamic contexts, however, exerts a positive performance effect, which can be accounted for as follows: By developing a network of trust-based cooperative relationships, cooperators create spaces of stability in a dynamic business context. To be precise, trust restricts the boundary-spanning agents' inclination to behave opportunistically, which reduces behavioral uncertainty, thus stabilizing the cooperative relationships. At the same time, this network of reliable and durable trust-based relationships creates a space of stability by reducing the perceived number of opportunities for the interaction partners to behave unfairly without being detected, thus reducing perceived environmental uncertainty. These spaces of stability enable firms to seize opportunities arising out of the dynamic business contexts in which they are embedded. In fact, when operating in highly dynamic business contexts, firms with boundary-spanning agents who engage in trust-based cooperation create situations of simultaneous stability and dynamism. The capacity to create such situations is termed "ambidexterity" and is argued to be one of the keys to generating competitive advantages (Barney and Hansen 1994; Barney 1991).

When we move the focus from the dynamic to the stable business context, the contextual sensitivity of the impact of trust on the performance of cooperating firms becomes most apparent: The positive impact of trust turns negative. As expected, in stable contexts behavioral uncertainty seem to be more efficiently handled by the coordination mechanisms hierarchy and/or market. Investment in trust seems to be rather a waste of resources. However, in our data we do not find the expected compromising effect of low levels of

corruption on the performance of cooperating firms. Neither a direct effect of the level of corruption on firm performance, nor a moderating effect on the negative trust-performance relation can be detected. Obviously, when the business context does not change much, corruption does not open doors that lead to attractive business opportunities for firms.

The results presented here must be interpreted with the limitations of the study in mind. First, the anonymous survey does not permit to identify the key informants' counterparts in the partner firms. This means that the information given about the nature of the cooperation is based upon the evaluation of one boundary-spanning agent only. However, given the sensitive issue of trust in one's interaction partners, a non-anonymous survey would have resulted in much lower return rates. These limitations typically attached to quantitative surveys indicate that the findings of this study should be solidified by further qualitative analyses. Second, a limitation could lie in the cross-sectional design as we cannot rule out reverse causality. Thus, a longitudinal follow-up study seems to be an attractive option for future research. Such a design would also yield higher explained variance for performance. Third, we did not measure perceived environmental and behavioral uncertainty in the survey but relied on well-established secondary data.

However, we are convinced that we have been able to contribute to a more contextualized research on trust and interfirm cooperation by showing that (1) trust-based cooperation between self-committed partners may not only increase but may also threaten firm performance, (2) this relationship between trust and firm performance depends on the level of dynamism and corruption in the business context, and (3) dynamic contexts characterized by freedom from corruption are an especially fertile ground for interfirm cooperative relationships that rely on trust. Thus, our paper makes a case for a more differentiated perspective on the relationship between trust and performance, and a case for analyzing in depth the antecedents and consequences of different types of uncertainty and

different contexts with regard to the development and performance impact of trust-based cooperative relationships. In this way, our findings take an important step in the direction of a more contextualized approach in trust and business research, as has been called for by Bachman and Inkpen (2011), Bachman (2001, 2011), Welter (2011), and Moellering et al. (2004).

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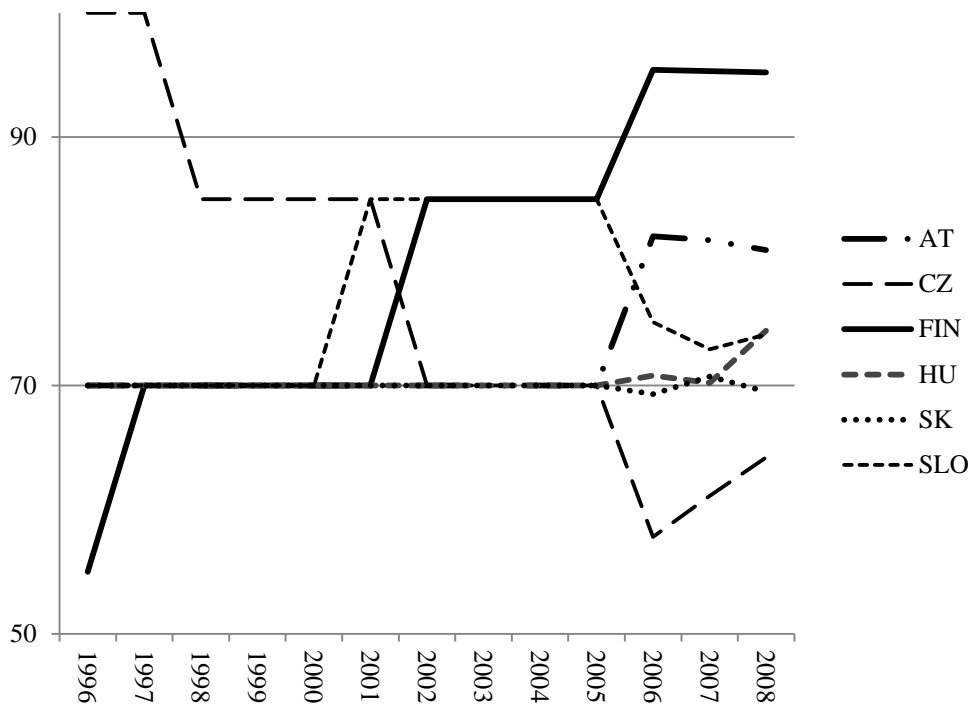
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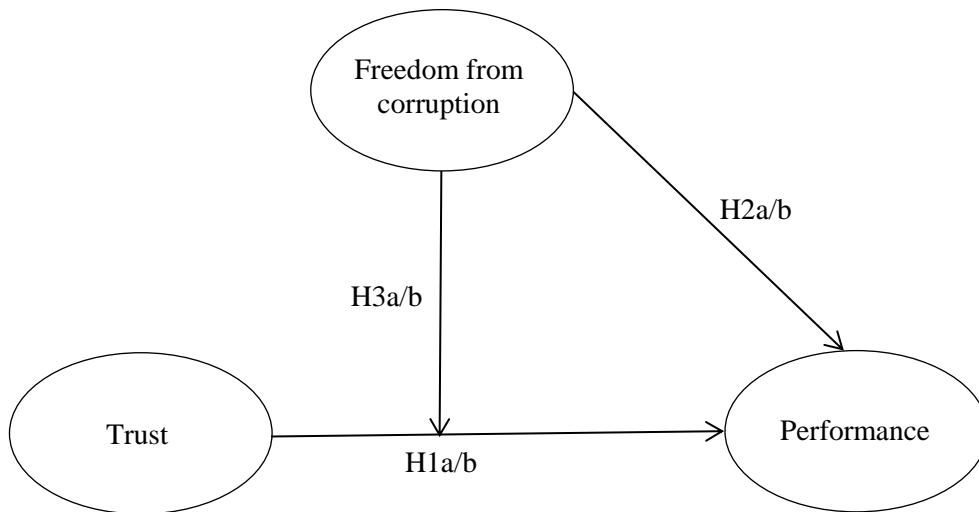
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**Figure 1 Trends in Business Freedom**



**Figure 2 Hypotheses**



*Sample split: Dynamic (a) / stable (b) business environment*

**Table 1: Measurement Model and Questionnaire Items**

Variables	Items in the questionnaire	Total sample <i>n=791</i>		Subsample: Stable business contexts <i>n=351</i>			Subsample: Dynamic business contexts <i>n=440</i>									
		Mean	SD	Mean	SD	Mean	SD									
<b>Control Variables</b>																
	<i>Firm age (categorized=0, 1-4, 5-15, 16-49, &gt;50)</i>	3.53	1.603	2.50	.793	4.35	1.608									
	<i>Firm size</i>	2.26	3.707	2.33	5.540	2.20	.579									
	<i>Duration of cooperation (categorized=&lt;1, 2-3, 4-5, 6-10, 11-20, &gt;20)</i>	3.79	1.586	3.69	1.706	3.84	1.510									
	<i>Position of respondent (manager=1; owner=2; owner manager=3)</i>	-	-	-	-	-	-									
<b>Independent Variables</b>		<b>FL</b>	<b>AVE</b>	<b>CR</b>	<b>Mean</b>	<b>SD</b>	<b>FL</b>	<b>AVE</b>	<b>CR</b>	<b>Mean</b>	<b>SD</b>					
<i>Trust (Cronbach's Alpha =.495)</i>			.43	.74			.38	.71		.30	.63					
	With the cooperative relationship, I aim to realize noticeable success as quickly as possible. (reversely coded)	.710			2.81	.928	.601			3.40	.714	.543			2.34	.800
	I am willing to take a risk.	.762			2.75	.979	.699			3.37	.697	.626			2.26	.885
	I am convinced that I am able to cope with setbacks.	.574			3.27	.645	.563			3.36	.657	.441			3.19	.625
	I attune my behavior to the aims of the cooperative relationship.	.540			3.13	.829	.583			3.26	.759	.574			3.03	.869
<b>Dependent Variable</b>		<b>FL</b>	<b>AVE</b>	<b>CR</b>	<b>Mean</b>	<b>SD</b>	<b>FL</b>	<b>AVE</b>	<b>CR</b>	<b>Mean</b>	<b>SD</b>	<b>FL</b>	<b>AVE</b>	<b>CR</b>	<b>Mean</b>	<b>SD</b>
<i>Performance (Cronbach's Alpha =.855)</i>			.70	.90				.69	.90				.71	.91		
	Since the establishment of the cooperative relationship, I have enlarged my market share.	.855			2.54	1.22	.880			2.24	1.387	.820			2.77	1.020
	Since the establishment of the cooperative relationship, I have boosted my cash flow.	.843			2.66	.933	.817			2.50	.982	.876			2.78	.875
	Since the establishment of the cooperative relationship, I have boosted my sales.	.883			2.70	1.05	.884			2.38	1.106	.869			2.96	.934
	Since the establishment of the cooperative relationship, I have boosted my investments.	.771			2.59	.960	.724			2.34	.976	.791			2.79	.901

*Note: FL=factor loading from confirmatory factor analysis; AVE=average variance extracted; CR=composite reliability; SD=standard deviation*

**Table 2: Test of Hypotheses**

Step 1	Stable business contexts				Dynamic business contexts			
	$\beta$	S.E.	sig.	VIF	$\beta$	S.E.	sig.	VIF
Constant		.284	.000			.204	.000	
Firm age	.175	.062	.013	1.031	.286	.025	.000	1.231
Firm size	-.166	.060	.025	1.140	.005	.063	.910	1.011
Duration of cooperation	-.084	.030	.229	1.024	-.195	.026	.000	1.220
Position of respondent	-.110	.056	.136	1.128	.006	.038	.895	1.021
	<i>adjusted R<sup>2</sup></i>	<i>.036**</i>			<i>.064***</i>			
<b>Step 2</b>								
Constant		.294	.000			.184	.000	
Firm age	.168	.062	.017	1.081	-.097	.028	.100	2.039
Firm size	-.167	.058	.021	1.147	.110	.058	.010	1.075
Duration of cooperation	-.094	.029	.169	1.030	-.002	.025	.962	1.433
Position of respondent	-.106	.055	.146	1.174	.021	.034	.618	1.025
Trust (mc)	-.246	.130	.000	1.027	.120	.090	.019	1.540
Average Freedom from Corruption (mc)	.009	.004	.899	1.116	.642	.003	.000	2.200
	<i>adjusted R<sup>2</sup></i>	<i>.089***</i>			<i>.262***</i>			
	$\Delta$ <i>adjusted R<sup>2</sup></i>	<i>.053</i>			<i>.198</i>			
<b>Step 3</b>								
Constant		.295	.000			.188	.000	
Firm age	.168	.062	.017	1.082	-.096	.028	.103	2.039
Firm size	-.169	.059	.020	1.150	.109	.058	.011	1.075
Duration of cooperation	-.095	.029	.166	1.031	-.003	.025	.950	1.433
Position of respondent	-.105	.055	.150	1.175	.021	.034	.619	1.025
Trust (mc)	-.262	.158	.002	1.508	.046	.112	.472	2.378
Average Freedom from Corruption (mc)	.030	.006	.749	1.968	.582	.004	.000	2.744
Trust (mc) * Average Freedom from Corruption (mc)	-.037	.011	.732	2.543	.102	.007	.049	1.585
	<i>adjusted R<sup>2</sup></i>	<i>.085**</i>			<i>.267***</i>			
	$\Delta$ <i>adjusted R<sup>2</sup></i>	<i>.004</i>			<i>.005</i>			

Standardized regression coefficients are displayed in the table; mc=mean-centered; significance levels: \* $p < .1$  \*\*  $p < .05$ ; \*\*\*  $p < .01$

**Table 3: Summary of Findings**

<i>Subsample</i>	<i>IV</i>	<b>DV: Performance impact</b>		
		<i>Expected</i>	<i>Empirical result</i>	<i>Test of hypotheses</i>
<i>Dynamic contexts</i>	<b>Trust</b>	+	+	H1a supported
	<b>Freedom from corruption</b>	+	+	H2a supported
	<b>Trust*Freedom from corruption</b>	Full moderation	Full moderation	H3a supported
<i>Stable contexts</i>	<b>Trust</b>	-	-	H1b supported
	<b>Freedom from corruption</b>	-	n.s.	H2b not supported
	<b>Trust*Freedom from corruption</b>	Full moderation	No moderation	H3b not supported

*Note: + positive impact; - negative impact, n.s. statistically not significant*