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Trust in Commercial Courts and Its Effect on the Performance of Ukrainian SMEs

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Abstract

A set of data from a survey of 285 small and medium-sized manufacturing enterprises from the three regions of Ukraine with the highest concentration of SMEs is used to study the determinants of trust in the contract-enforcing powers of commercial courts and its impact on the performance of firms. It is found that trust in courts has a significantly positive impact on the performance as measured by growth in sales and labor productivity. Several determinants of trust in courts are identified: entrepreneurs' experience of direct administrative corruption in the form of monetary bribes, informal relations between businessmen and public officials based on mutual trust, and perceptions of the general business environment. There is, moreover, a significant learning effect: Businessmen with positive experience with commercial courts are more trustful than their inexperienced fellow managers. When testing for direct effects of corruption, informal relations, quality of business environment and past experience with courts on performance no significant quantitative relationships are detectable. This is evidence in favor of the basic hypothesis that these institutional factors influence the performance of SMEs indirectly via their impact on the entrepreneurs' belief in the ability of the legal system to protect their property rights.

1 Introduction

Progressive economic development without private property rights, the assignment of asset control rights and return rights to individuals, is hardly imaginable. People would not invest if they could not reap the fruits of their investment. Though it has always been recognized by economists that defining and protecting property rights is one of the prime functions of government, the fulfillment of this task has often been taken for granted. The challenge of guiding the transition of the former socialist economies of central and eastern Europe to modern market economies, and the debate on policy reform in developing and emerging economies in general, has brought this topic, in particular the indispensable role of government, again to the forefront of economic theory and policy analysis. The transition from plan to market is fundamentally tantamount to the design and support of an adequate property rights structure by the government. Without the government fulfilling its tasks in this respect ("good governance"), through its legislative, judiciary and executive branches, property rights cannot be



effectively established (Olson, 2000) and efficient market institutions cannot emerge.

In transition economics the role of property rights in the restructuring of formerly state-owned firms has been intensely discussed with an emphasis on ownership structure and corporate governance. Another central topic in policy reform and transition economics has been the causes and consequences of corruption (e.g., Shleifer and Vishny, 1993, 1998; Wei, 1997; Basu and Li, 1998). Incentives to corrupt or to be corrupted are implied by the separation of asset control from cash-flow rights. Governmental regulation assigns certain control rights to the bureaucracy. Excessive and vague regulatory rules, and in particular their administration by a multitude of underpaid regulatory agents, as is quite typical of transition economies, form the basis of the widespread corruption which poisons the interaction between the private and the public sector in these countries. Likewise, excessive, unclear and contradictory taxation (i.e. ill-chosen assignment of cash-flow rights to the government) leads to large-scale tax evasion, hiding of a good deal of economic activity from the public view, and extensive administrative and political corruption (see, e.g., Johnson et al., 1997).

The question of the enforcement of commercial and credit contracts is closely related to the design and protection of property rights but nevertheless conceptually somewhat different. It arises when control rights include the right to trade the resources a person owns (alienability rights). Without such contracting rights and the effective enforcement of contracts individuals would, of course, have no incentives to reallocate resources by mutual consent and to mutual advantage, and there would be no markets. The role of government, however, does not seem to be as indispensable for contract enforcement as it is deemed with respect to the protection of property rights. For non-anonymous, long-standing commercial relationships in which the participants' outside options are poor, breaking off the relationship in case of the partner's non-fulfilment of the contract can be, as is well known from the theory of repeated games, a credible threat stabilizing self-policing efficient equilibria in which contracts are honoured. Williamson (1983, 1994), for example, has argued that economic agents rely on a variety of informal institutions (relational contracting, self-enforcement mechanisms, social networks) which do not depend on the government-provided legal system. In this view, the classical and neoclassical theory of contracts (e.g., Feinman, 1990; North, 1990) which, in accordance with Smith's famous dictum about the administration of justice being, besides peace and easy taxes, the basis of prosperity¹, emphasizes the importance of the state for contract

¹ "Commerce and manufactures can seldom flourish long in any state which does not enjoy a *regular administration of justice*, in which people do not feel themselves secure in the possession of their property, in which the *faith of contracts* is not supported by law, and in which the authority of the state is not supposed to be *regularly employed in enforcing the payments of debts* from all those who are able to pay. Commerce and manufactures, in short, can seldom flourish in any state in which there is not a certain degree of *confidence in the justice of government*." (Adam Smith, *The Wealth of Nations*, Book V, Chapter III, p. 445, Cannan edition).



enforcement, has exaggerated the role of the law and the courts in this respect.

The more recent literature on contractual relations in transition economies has underlined the significance of legal institutions like commercial courts for fostering efficient transactions even in countries with a still insufficiently developed institutional framework (see, e.g., Hay and Shleifer, 1998; Hendley et al., 1997; Raiser, 1999; Johnson et al., 1999, 2002). The shortcomings of the legal system are identified as barriers to economic development from both a macro- and a micro-perspective (Aslund, 1995; Eckstein et al., 1998; Ernst et al., 1996; Hendley et al., 1999) though empirical evidence in this area, in particular on the role of courts for contract enforcement in transition economies, is still sparse.

Using survey data for privately owned manufacturing firms in Poland, Slovakia, Romania, Russia, and Ukraine from 1997, Johnson, Mc Millan and Woodruff (1999, 2002) have found that, on the one hand, relational contracting settling disputes without third-party assistance is the basis of most of the transactions but, on the other hand, commercial courts matter nevertheless. They show (Johnson et al., 2002) that managers who have trust in courts as enforcers of contracts are willing to extend significantly more trade credit to their customers. Moreover, firms which deem courts effective are more willing to switch to new suppliers than firms which have no trust in courts. Investment too is positively affected by the belief that courts would be helpful in case of a dispute (Johnson et al., 1999).

Our paper seeks to contribute to this line of research in two respects. Firstly, using data from a survey of Ukrainian small and medium-sized manufacturing enterprises we focus on one transition country with overall weak legal institutions and show that the firms whose managers report to have trust in courts do significantly better in terms of several standard performance measures. Secondly, we identify some major factors that influence the businessmen's perception of the courts' effectiveness. It turns out that besides experience from using courts, the managers' perception of the general uncertainty of the business environment, their experience with bribing public officials, and their informal networking relations with representatives of public authorities have a significant impact on whether they express trust in courts or not. While in the cross-country study of Johnson et al. (1999, 2002) the variation in the managers' perceptions of the effectiveness of courts was interpreted as reflecting objective differences in the quality of the five countries' legal institutions, and the within-country variation was attributed either to a random disturbance or to characteristics of firms and managers that could be controlled for, such an approach would not make much sense in our case where all the variation across firms is within-country. We argue that in a country like Ukraine the problem of which is less the formal incompleteness of commercial law than the extent of its proper implementation, the heterogeneity of businessmen's perceptions reflects among other things the high degree of arbitrariness in the application of the law, not only across different courts and judges – which might be controlled for to some extent by regional dummies – but also across different law cases handled by the same court or judge. This arbitrariness is perceived by the businessmen not so much as a pure random error but rather as the



consequence of bribery or other biases and outside influences difficult to predict for the individual case.

The paper is organized in the following way: In Section 2 we sketch the present condition of commercial courts in Ukraine. In Section 3 we discuss the basis of the performance effect of trust in courts, the determinants of managers' perceptions of the effectiveness of courts, and formulate our hypotheses. Section 4 describes the data and methodology. In Section 5 we report the regression results for the effect of trust in courts on several performance measures, and for the determinants of the businessmen's trust in courts. Section 6 concludes.

2 Commercial Courts in Ukraine

In Ukraine, contract disputes between the legal entities (firms, organizations) are heard by commercial courts (which are called arbitration courts). The functioning of the Ukrainian legal system of contract enforcement has shown slow progress compared to the East European transitional countries and even some CIS neighbours. This is reflected in the low rank of Ukraine in international evaluations of legal environment for business conducted by different organisations. At the end of 1997, the Wall Street Journals' panel of investment professionals rated countries with respect to the rule of law on a scale from one to ten where 10 indicated the strongest observance of the rule of law. Ukraine scored 3.9, while Poland scored 9 and Russia 5.4 (Wall Street Journal, 1998). The EBRD's Legal Indicator Survey 2000 pointed at a gap between the extensiveness and effectiveness of legal reform² in Ukraine and put it in the group of the countries with a serious "implementation gap", which means that relatively comprehensive laws are not being properly implemented (Transition Report, 2000). In 2001, there was no significant success in overcoming the "implementation" gap (Transitional Report, 2001).

The "implementation gap", among other things, reflects a low efficiency of Ukrainian commercial courts. The courts claim to be overloaded with applications from creditors, and official time limits of the consideration of the claims are usually overdrawn. Even in case the commercial court rules in favour of the claimant, enforcement of the court's decision is not easy. The debtor might declare itself insolvent. Then the State Executive Service (which has the task to execute the decision of the court) initiates the conversion of monetary claims into property claims. However, very often the value of a debtor's property, which is finally available for sale, does not cover the debts. Besides, the order of execution is valid only during three months. If a claimant does not manage to recoup the debt within this period of time, he would have to apply to the commercial court for a renewal. All the problems associated with the legal enforcement of

² According to the methodology of EBRD Legal Indicator Survey, extensiveness of legal reform measures the extent to which key commercial and financial laws approximate internationally acceptable standards, while effectiveness reflects the degree to which these laws are implemented or enforced (Transitional Reports, 2000, p.33)



contracts are reflected in low trust of the entrepreneurs in the effectiveness of commercial courts. According to the survey conducted in 1997 by Johnson et al. (1999), only 56% of Ukrainian owners/managers of small firms were willing to use commercial courts in case of commercial dispute.

Another "implementation" problem of the legal system in transitional countries like Ukraine is connected to a high level of corruption. Widely spread administrative corruption makes actual implementation of the legal rules (even if they are well-developed) unpredictable and increases the uncertainty of the business environment. Hellman, Jones and Kaufmann (2000) in their cross-country study have found out that about one quarter of Ukrainian firms consider the sale of court decisions in commercial cases a real problem (the relative figure in case of Poland, for example, was 18%).

Our data on court effectiveness are in line with the results of expert evaluations and firm-level surveys mentioned above. Following the methodology of Johnson, McMillan and Woodruff (1999, 2002), we asked entrepreneurs/managers two questions about courts' efficiency. The first question was if the courts hypothetically could be used to enforce commercial contracts. Only 47.9% of the respondents said that they could use the courts in case of having a dispute with a trading partner.

In the second question the entrepreneurs/managers were asked whether their firms were involved in a contractual dispute with trading partners during the last 3 years and if they had used the courts for solving the dispute. More than a half of the firms (53%) reported having had a dispute, and among them only one third used the courts. Why two thirds of the firms with commercial disputes did not use the courts? The main reasons were the following: "courts can not enforce the contracts" (31.5% of the firms), "The court procedure takes too much time." (18.5), "It is better to postpone the payment of the debt than to deal with the debtor's bankruptcy, since the sale of its assets would not cover the debt." (30%), "Other reasons" (20%). While the first and the second reasons suggest a low efficiency of courts, the last two reasons of the firms' reluctance in using the courts might reflect a low level of legal culture and a bad quality of contracts that make them difficult to enforce.

Among the firms that used commercial courts, 43% reported that debts were already repaid by their trading partners (which can be interpreted as a positive experience), 30% were waiting for the positive decision of the court to be implemented, and 27% were waiting for the court's decision. The share of entrepreneurs which have trust in courts is significantly larger in the sub-group of the firms which had experience with courts comparing to that without such an experience (54.3% vs 25.9%, Chi sq = 33.2).

3 Perceptions of Courts' Effectiveness and their Determinants

The behavior of an economic agent in its systematic component is the result of maximizing some goal function while taking into account the relevant constraints as the agent perceives them. Strictly speaking it is



never the environment itself that impinges on an individual's behavior but only the individual's perception of its environment. Therefore, any theory of economic behavior has to be based on two fundamental hypotheses: one concerning the individual goal function, the other about the way the individual forms and changes its perception of the constraints on its actions (which constraints may be the actions of other identifiable individuals, like court rulings, or just the aggregate outcome of many other individuals, like prices). This may sound trivial but is sometimes forgotten, for example, when the effect of a change of prices on demand is described and it is tacitly assumed that each individual possesses the same and correct information about this change in prices. The rational-expectations hypothesis postulates the mutual consistency of individual perceptions about the environment (Sargent, 1993), clearly an equilibrium hypothesis that makes sense only in a sufficiently stationary environment.

These considerations are of direct relevance to the question whether we should try to capture the effectiveness of courts in enforcing commercial and financial contracts or in settling disputes by some "objective" measures, or should take the "subjective" opinion of businessmen (expressed, e.g., by their answers to the question whether they would use the arbitration court in case a customer does not pay his debts) as the relevant variable.

In the literature different approaches are pursued depending on the purpose and scope of the respective studies. First of all, several organizations (e.g., the EBRD, The Wall Street Journal, The Heritage Foundation) produce country-level indexes of the quality of the legal environment for business. These indexes are based on expert evaluations concerning the development of commercial legislation and its administration and enforcement in different countries. Being valuable for cross-country studies (e.g., La Porta et al., 1998; Modigliani and Perotti, 1997), such indexes can obviously not be used for the analysis of enterprise behavior in one country where both the content of commercial law and the quality of its implementation are apparently the same for all firms. Apart from this, these indexes too contain a strong subjective, judgemental component (on the part of the experts instead of the persons who respond in their decision making to the legal environment).

Another possibility is to assess the quality of legal enforcement by using indicators of actual court activity. Fabbri (2001) employed three measures of the effectiveness of regional commercial courts in Italy and Spain: the average length of civil proceedings, the ratio of law suits lasting more than one year to the total number of completed proceedings, and the ratio of completed proceedings to the total number of law suits pending at the end of the year. She was able to show that firms in regions with a more efficient judicial system display higher capital stocks and higher levels of credit financing since the better prospects for creditors to repossess collaterals reduces the costs of external finance. Again, measures like those used by Fabbri are capable of capturing the variation of court effectiveness across regions but, of course, not variation in the firms' perceptions within regions.

Generally speaking, objective data on the efficiency of courts in dealing with commercial disputes reflect the systematic perceptions of firms



reasonably well if a country's or region's legal institution are well established and backed by a long and widely recognized tradition of law enforcement. In this case, it is plausible that the entrepreneurs' perceptions of courts will have converged toward a picture consistent with objective facts, and that the remaining variation across firms will reflect idiosyncrasies of firms and their owner-managers.

Instead of measuring the entrepreneurs' trust in the effectiveness of courts by asking them directly the hypothetical question whether they would use the arbitration courts in case of conflicts with non-complying debtors, one may take their actual usage of courts in past disputes as a proxy for their perceptions. Though seemingly more "objective", reports on actual court use are neither an adequate measure of the entrepreneurs' trust in the court system nor of the latter's actual quality. For firms which have not yet experienced commercial conflicts with their business partners, actual usage of courts would obviously be a bad proxy for their trust in courts. Absence of commercial conflicts does not imply that the quality of the legal system is irrelevant for the economic agents' behavior. In case of an efficient legal system in which the courts' decisions are highly predictable and the costs of using the courts are positive, the number of actual disputes should be small (Johnson et al., 2002). Moreover, when a dispute arises, going to court very often means severing business relations with the delinquent customer, as Johnson et al. (2002) have shown for the transition economies they have studied. To avoid this consequence, firms try to solve the disputes informally even if they think that courts are effective. This holds not only for transition economies but for developed market economies as well, as was found by Arrighetti et al. (1997) in their study on contracting relations among Western European firms. Therefore, we follow Johnson et al. (2002) in maintaining that the relevant question is not whether a manager had actually used an arbitration court in his latest dispute but whether he believes he could use it successfully if a dispute arose in the future.

The principal reason why we expect that trust in courts will even in the short run, from one year to the next, exert a positive influence on a firm's performance (in terms of an extensive measure, like profits or sales, or an intensive measure like labor productivity) is that a firm which believes it can rely on the court's contract-enforcing function will be more inclined to enter into new contractual relationship with new suppliers and customers, and will be to a lesser extent locked into the established networks. Such a firm will find restructuring less risky and engage more actively in process and product innovation. This will also affect positively the firm's propensity to invest and the efficiency of resource allocation in the economy as a whole by lowering the barriers to entry and exit.

The impact of the entrepreneurs' perception of the effectiveness of commercial courts as contract enforcers on the performance of enterprises is the first stage of our analysis. The second stage consists in an inquiry into the factors which shape the entrepreneurs' trust in courts.

Why would the perceptions of managers concerning the effectiveness of courts vary within a given country? A manager i 's trust in the quality of court rulings at time t , T_{it} , may be conceived of as a function f_i of his



previous perception T_{it-1} and any new relevant information I_{it} on the basis of which the previously held opinion on the effectiveness of courts is adjusted:

$$T_{it} = f_i (T_{it-1}, I_{it}).$$

New information may be direct evidence on the current functioning of courts (based on personal experience or on reports deemed reliable) or other, more circumstantial information thought relevant for the formation of an expectation about the courts' effectiveness. Within the same country and, therefore, under the same law both the way in which the information is processed (f_i) may vary across individuals and the individual information itself may differ across different court jurisdictions (in Ukraine there is one arbitration court per region) as well as across different individuals within the same jurisdiction.

Variation in f_i may be due to unmeasured personal characteristics of managers (like age, education, adaptability to quick changes in the legal environment, personal trustfulness, etc.) or may be purely random. Information based on experience with courts may, as Johnson et al. (2002) have pointed out, differ between firms of different size because of significant fixed costs of using the courts, which make it more likely that larger firms go to court more frequently. Experience may also differ due to differences in location, age of the firm or its being a private start-up rather than a privatised former SOE. For such measurable variations we control in the respective regressions.

Contrary to Johnson et al. (2002), however, we argue that even after taking account of these variations among firms significant differences in their information sets remain that are consequently reflected in their perceptions of the court system's effectiveness. To some extent these differences are due to the arbitrariness of court decisions as such. The rulings of one and the same court may vary significantly and in an unpredictable way³.

The perception of the quality of a particular institution, e.g. commercial courts, will be affected not only by experience with this institution but also by the economic agents' perception of the institutional and business environment as a whole. The quality of one institution is usually related to that of others. Hence, it is a plausible hypothesis that managers who have experienced an improvement in their business environment (regarding regulatory rules, tax legislation, administrative controls etc.) or received

³ To quote Hay and Shleifer (1998) who refer to Russia but whose observation holds for other CIS-countries too: "The legal rules are incomplete in crucial areas needed to support existing business activity, ... when legal rules do exist, in many instances judges do not know what they are. ... Even when the law speaks to a particular matter, judges may not have the resources or inclination to verify the relevant facts. And when the facts are available and the legal rules exist, judges may be biased, corrupt, or partial to political sentiment, and hence it is by no means certain how they will rule. Finally, once a judge rules, there are often no institutions to enforce his ruling." (p. 398)



respective information are more likely to become more optimistic about the effectiveness of commercial courts, too.

A particular characteristic of the weak institutional framework of transition economies is wide-spread corruption (Shleifer and Vishny, 1993; Wei, 1997; Kaufmann et al., 1999). If a multitude of bureaucrats or bureaucratic agencies can independently impose bribe demands on economic agents without providing any assurance of results, the level of corruption-induced uncertainty is high. Again, the perception of the general level of corruption in the society (not just in the commercial courts) affect the perceptions of the firms' managers concerning the efficiency and reliability of the commercial courts. If managers of the firms are required to pay bribes for obtaining different licences and permissions or public services, they would expect corruption in the commercial courts as well and shape their perceptions of commercial courts accordingly. The size of the bribes paid to the representatives of different public offices (other than commercial courts) influence managers' expectations of the bribe's level in the commercial courts and thus shape there perceptions of costs of using commercial courts. A large dispersion in the size of bribe across the firms would be accompanied by a large dispersion in the level of expected cost of using commercial courts. Therefore, the managers who are forced to pay larger bribes (measured by a share in sales or profit) are likely to have higher expected costs of using the courts and lower trust in courts, respectively, than the managers who pay lower bribes (or do not pay bribes at all). Besides, if the outcome of "corruptive" transaction conducted between the entrepreneur and the representatives of other public offices is uncertain, the former will expect a high degree of uncertainty with respect to the similar transaction with the representatives of commercial courts.

To summarize, we expect a negative effect of administrative corruption in public institutions other than commercial courts on the managers' trust to the commercial courts.

In the economy with a high level of uncertainty, in order to survive the firms need to use various uncertainty-reducing mechanisms. One of them is the accumulation of social capital via establishing social networks. Social networks allow the pooling of resources, the sharing of information, the generation of trust among their members and securing their predictable behaviour. Recent studies shows that in the presence of weak institutions investment in social capital brings higher returns and is more crucial for the survival of small business unit than the organization-specific investment (Polos and Hahnan, 2000; Krug and Polos, 2001). Resource embeddedness is one of the important dimension of the social capital which determines its efficiency as an uncertainty-reducing device. Resource embeddedness is defined as the degree to which network ties contain valuable instrumental resources (Lai et al, 1998; Batjargal, 2001a)), i.e. contain high status contacts. There is evidence that individual social networks that are composed of resourceful and powerful ties, produce higher rates of return and better protection from the environmental uncertainty, and result in better firm's performance than the networks with low status contacts (Batjardal, 2001b). In transitional economies, where political power has a definite market value (Kryshtanovskaya and White, 1996), these high status contacts typically include connections with powerful bureaucrats that can provide the firm with important business information, state contract,



tax relief, protection from other bureaucrats. This type of social capital should be distinguished from the relations between the entrepreneur and non-bureaucratic members of individual networks, since the former is related to corruption, while the latter is “corruption-free”.

We call the former type of social capital “informal relations” and define it as the relationship which is established between the entrepreneurs and the representatives of public authorities on the basis of personal trust and is used by entrepreneurs for the support of business operations. Typically, informal relations represent a special form of corruption since the support is provided by public officials in exchange for favours. However, informal relations differ from the direct administrative corruption (which represents a direct payment to the government officials for “having things done”) in several ways. Firstly, direct bribery does not necessarily require a high level of personal trust and is more or less impersonal. In this respect direct bribery looks like any market transaction between a seller (public official) and a buyer (the firm). Informal relations, on the contrary, are of the personal nature and involve a considerable level of trust between the agents which is based on family relationship, friendship, etc. This sets entry barriers to the “informal relations” network limiting the number of participants (compared to a direct bribe) to those who can be entrusted on the basis of recommendation of the other network participants.

Secondly, contrary to a direct bribe, informal relations do not imply immediate delivery of a service. Informal relationship should be established before the support is provided, and they are maintained even during the period of time when there is no delivery of any service (otherwise no support can be expected in the future). Finally, direct bribery usually is practised in monetary form or pre-supposes receiving some kind of financial favours. Informal relations represent a non-monetary “corruptive” transaction (some sort of corruption in “barter” form), when in exchange for informal support of the firm government officials receive non-monetary favours⁴.

Therefore, we distinguish informal relations from a direct bribery and consider the former as an implicit form of corruption.

Informal relations is a powerful mechanism to reduce various types of uncertainty in the business environment of a firm. They could be used for obtaining a reliable information about the possibility of using the commercial courts thus reducing the informational costs of the firms. Informal relations could help to reduce the waiting time in court (which in case of Ukraine is considerable). They are useful for “optimization” of the corruption process, for example, for minimizing the searching costs of a corrupt bureaucrat that can most effectively provide a necessary service, as well as for ensuring the expected outcome of the bribe. Informal relations are not a substitute for direct administrative corruption and might

⁴ In this sense, informal relations are even less transparent than a direct bribery. For example, according to Basu and Li (1998) Chinese government officials provide informal support to SMEs forcing them to hire their relatives. The same evidence comes from Russia and Ukraine. Government officials provide informal support to SMEs which hire their relatives and friends, or friends of the other public officials who in turn are able to influence administrative carrier of the former or pay back with the other favours.



have no direct impact on the size of the bribes that are paid by the firms. However, informal relations reduce corruption-induced uncertainty, since they help to assure its outcome⁵. Therefore, we expect a positive impact of the level of informal relations of the firm's manager with the representatives of different public offices on his perceptions of the institutions, including commercial courts.

To summarize, in our paper, we test the following hypotheses:

H1. The firms where managers trust commercial courts show better performance results than the firms where managers do not trust commercial courts.

H2. The higher is the managers' perceptions of the general quality of business environment the more likely they trust commercial courts.

H3. The higher is the level of informal relations between the managers and the representatives of state authorities other than commercial courts, the more likely the managers trust commercial courts.

H4. Administrative corruption has a negative impact on the managers' perceptions of courts.

H5. The managers who have a positive past experience with commercial courts are more likely to trust them than the managers without similar experience.

4 Data and methodology

For our analysis we use the data from a survey of 285 small and medium Ukrainian business firms (with the number of employees less than 200) that are involved in manufacturing activity. The sample was generated from the official registries of the companies. The companies were selected according to three criteria: 1) the enterprise should have been established at least two years before the survey; 2) it should be involved in manufacturing activity (which does not exclude conducting trade operations or providing services in addition to the manufacturing activity); 3) the number of employees in 2000 should be less than 200. All the firms selected for a survey were officially registered as legal entities. Our focus on the manufacturing firms is connected to the importance of manufacturing sector for the economic development of Ukraine. A successful development of SMEs within the manufacturing sector which in former times included mainly large vertically integrated firms, is an

⁵ In our sample, the coefficient of bivariate correlation between the index of informal relationship and the variable for a level of total bribes as a share of sales is positive but not significant. Both firms that paid bribes („payers“) and „non-payers“ have reported having informal relations with the representatives of state authorities. This supports our conjecture that informal relations are not a substitute for a direct corruption. However, the mean value of index of informal relations for a sub-sample of the firms that paid bribes is significantly higher than for „non-payers“ (0.47 versus 0.44, $F=3.75$, $\text{sig}=0.05$). This might mean that the firms exposed to corruption are trying to use the informal relation mechanism for ensuring the outcome of bribes.



important part of the transitional process in Ukraine. Our study required an information on the firms' activity during the last 2 years, therefore we did not select "younger" firms.

The survey was conducted in the late fall of 2000 in three regions, namely Kyiv, Kharkiv and Donetsk, with the highest concentration of SMEs in Ukraine (one third of the total number of Ukrainian SMEs is located in these regions). It was carried out in a form of personal interviews with the managers/owners of the firms. The interviews were conducted on the basis of a prepared questionnaire which covered a broad range of problems, including peculiarities of business environment, participation of SMEs in a shadow economy, their financial and investment decisions, performance results and obstacles for growth. The questionnaire was pre-tested in the pilot study that included 11 personal interview with the owners of SMEs. The descriptive characteristics of the sample are presented in Table 1⁶. Our sample contains mainly small businesses (87,6%), which according to the Ukrainian statistics, are defined as the firms with less than 50 employees. Our sample is representative by the type of ownership and size: 96% of the enterprises in the sample are private start-ups or privatised firms (in the total population the respective number for the year 2000 is 95,8%), the average employment level for the small firms in the sample is 10 (9.8 in the total population)⁷. The sample is not fully representative by industry: comparing to the total population food industry is overrepresented (33% of the firms in the sample vs 21% in the total number of manufacturing SMEs), and machine-buiding and metal processing is underrepresented (17.1% of the firms in the sample vs. 30.7 % in the total population). However, since all the firms represent manufacturing and the analysis of sub-industry differences does not constitute the main aim of the study, we believe that this selection bias will not affect the main conclusions of the study.

We parameterize and estimate the hypotheses for the respective determinants of trust in courts and performance in terms of the following regression equations:

$$L(T_i) = a + b_i E_i + c_i AC_i + d_i IR_i + e_i BE_i + \sum_n f_n X_{in} + \varepsilon_i \quad (1)$$

$$L(P_i) = a + g_i T_i + \sum_n f_n X_{in} + \varepsilon_p \quad (2)$$

Both equations are logit regressions estimated by maximum likelihood methods. That is, $L(T_i)$ is the logarithm of the probability that firm i shows trust in courts minus the logarithm of the probability that it does not. Similarly, $L(P)_i$ is the logarithm of the probability that firm i has improved

⁶ More detailed description of the sample and survey can be found in: *Akimova and Oleksiv (2001)*.

⁷ The upper employment level for the medium-size firm is considered to be 200 employees. There is no official statistics on the middle-size firms, therefore discussing the representativeness of the sample by size we refer only to the statistics on the average level of employment in the small sector.



on the respective performance indicator minus the logarithm of the probability that it has not done so. Managers' perceptions of the effectiveness of courts (T_i) are represented by a dummy variable *TRUST* which equals 1 if the manager stated that he would use the arbitration court to solve a commercial conflict with non-performing trading partners. For performance (P_i), we employ two dummy variables *SALES* and *LABPROD* which represent the managers' assessment of the change in the volume of sales and, respectively, labour productivity (defined as sales volume per employee) in 2000 compared to 1999. They are equal to 1 if the manager reported an increase, and 0 otherwise. In addition, we estimate equation (2) for performance expectations represented by dummy variables *SALESF* and *LABPRODF* which take on the value of 1 if the manager expected an increase in sales or labor productivity, respectively, for 2001. Equation (1) is also estimated with the dummy *USEAC*, which is 1 if the entrepreneur reported to have actually used the arbitration court during the last three years, as dependent variable.

In order to capture past positive experience of the manager with commercial courts (E_i) we use the dummy variable *POSEXP* which is equal to 1 if the entrepreneur reports that he has used an arbitration court in a commercial dispute during the last three years with a favorable result (e. g., payment of the debt).

Administrative corruption in the public institutions other than commercial courts (AC_i) is represented by a dummy variable *BRIBE* which is equal to 1 if the firm reports making extra-legal payments for business registration, licences or protection, and is 0 otherwise.

The quality of business environment (BE_i) is measured by variable *BEINDEX* which is an index constructed by using the method of principal components (see Carlin et al, 2001). The raw measures of business environments are subjective ratings of the main obstacles to the successful development of the firm in 1999-2000 given by managers during the in-depth interviews (all on a scale of 1 –“not important”, to 4 –“very important”). The index of business environment is the first principal component extracted from unstandardized responses, and it is equal to a weighted average of the raw measures, where weights are the eigenvectors of the first component. Table 2 presents the results of the principal components analysis. The first of the 8 components explains 29% of the total variance, while the second explains only 19%. The heaviest weights in the index are given to access to external financing, high interest rates, instability of regulatory environment and tax legislation. The constructed index is normalized to lie in the interval [0,1], where 1 indicates a “bad” business environment and would be the score of a firm that had rated all eight measures as being a “very important obstacle” to the business success. The mean value for *BEINDEX* is 0.45 (standard dev.=0.07) indicating rather low quality of business environment.

The level of informal relations between the managers and the representatives of state authorities other than commercial courts (IR_i) is measured by an index for implicit corruption *IRINDEX*. We again use the method of principal components. Our raw measures are the subjective



rating of the firms' managers concerning the importance of having informal relations with the representatives of different state authorities for the business success of the firms, all on a scale of 1 (not important) to 4 (very important). Again the index of informal relations is a weighted average of the raw measures, where the weights are the eigenvectors of the first principal component. The results of the analysis are presented in Table 3. The first of the 10 components explains 18%, more than any of the remaining 9 (the second component explains 13%). The heaviest weights are given to customs, state prosecutor's office and state banks. The constructed index is normalized to lie in the interval $[0,1]$, where 1 indicates a high level of informal relations and would be the score of a firm that had rated all 10 measures as being very important for the its business success. The mean value for IRINDEX is 0.46 (standard dev=0.11) showing rather high level of informal relations.

As control variables we use three regional dummies (KYIV, KHARKIV, DONETSK), a variable of the firm's size (SIZE) which is measured by the number of employees in 2000, a variable of the firm's age (AGE) which is equal to $2000 - YF$, where YF is a year when the firm was founded, and a dummy for start-ups (STARTUP) which is equal to one if the firm was founded as a private or collective enterprise, and is 0 if the firm represented a former state enterprise which was privatized. In the performance equation, we also used nine sub-industry dummies.

In order to control for the initial performance of a firm we intended to use a dummy INITIAL, which was equal to 1 if the firm has reported to be a profit-maker in 1999, and is 0 otherwise. However, since only three firms from our sample reported to be loss makers in 1999, for the sake of simplicity we excluded them from the sub-sample used for the estimation of performance equation, and therefore, did not insert INITIAL in the equation.

The descriptive statistics for the variables in equations (1) and (2) is presented in Table 4.

We have considered the possibility of interdependence between the two equations in the sense that T_i depends on the value of the respective performance measure P_i , in which case T_i and ε_p would be correlated and the regression estimates would be inconsistent. We tried to insert the term hP_i into equation (1), which did not yield significant estimates \hat{h} . In addition, we used the estimated probability of $T_i=1$ from (1) as an instrumental variable for T_i in (2), the difference between the respective estimates of g prove insignificant in the Hausman test. Therefore, we dismiss the possibility of endogeneity with respect to these two variables.

However, the question of endogeneity may be raised concerning some of the explanatory variables in the above regression models. While experience with commercial courts in the past is without doubts an exogenous variable, this assumption seems more doubtful for the variables for quality of business environment BEINDEX, administrative corruption BRIBE and informal relations IRINDEX. We tried regressions of these variables on the remaining variables on the right-hand side of equation (1). The resulting



regressions turned to be insignificant. Hence endogeneity does not seem to be a problem with respect to these variables either.

5 Results

A) Trust in courts and performance

Table 5 presents the results of regressions with the short-run performance indicators as dependent variables. The first set of logistic regressions with an increase in sales volume and labour productivity in 2000 relative to 1999 as dependent variables is reported in columns 1 and 2 of Table 5. The coefficients of the variable for trust in courts are positive and significant at 5% level, which supports our hypothesis of a positive impact of trust in courts on firm's performance results. Among control variables only KYIV is significant for labour productivity regression indicating that location in Kyiv has a positive impact of the performance results of SMEs. Industrial dummies turn to be insignificant.

In the columns 3 and 4 of Table 5 we present the results of regressions with an expected increase in sales and labour productivity of the firms in 2001. Again the coefficients of TRUST variable are positive and significant in both regressions confirming our hypothesis that positive perceptions of the managers concerning the effectiveness of courts have a positive impact on their growth expectations. The size of the firms is found to have a positive impact on the expected growth in sales. In future-growth-of-labour-productivity regression, coefficient of the AGE variable turns to be significantly negative implying that the probability of having growth plans in terms of sales volume for younger firms is higher than for older ones. Industrial dummies are never significant. Both regional dummies, KHARKIV and KYIV, have significant and positive coefficients showing that firms located in these two cities have better growth expectations than their counterparts in Donetsk. These regional differences might reflect two effects: the effect of the different industrial growth rates across the regions, and the effect of the different efficiency of the regional courts. We test for the significance of the second effect in the next set of regressions with TRUST as a dependent variable: if regional dummies are significant, it will indicate differences in the efficiency of regional courts (e.g. the average length of civil proceeding or the average length of the period of actual implementation of the court's decision)

In this paper we did not intend to separate efficiency-enhancing effects of trust in courts and determine their relative importance for firm's performance. However, we have examined the coefficients of bivariate correlations between TRUST and variables that reflect some of the effects of trust in courts on performance results. We find a significant positive correlation ($\beta=0.12$, $p<0.05$) between trust in courts and dummy for changing more than 50 % of suppliers during the last three years. The correlation coefficient between TRUST variable and the a dummy for reinvestment of profits during 1998-2000 turns to be positive but insignificant. However, it is significant and positive for the correlation with a dummy for expected reinvestment of profits in 2001 ($\beta=0.18$, $p<0.05$).



To summarise, the results of the reported bivariate correlations provide a ground for a conjunction that, presently, trust in courts influences performance of Ukrainian industrial SMEs by encouraging them to switch to more efficient suppliers and increase the level of trade credit with trading partners, while the effect of trust in courts on investment decisions becomes more pronounced for the future period.

In order to test for the direct effects of corruption, informal relations, quality of business environment and past experience with commercial courts on performance results of Ukrainian SMEs we have run additional set of performance regressions where TRUST has been substituted by BRIBE, IRINDEX, BEINDEX and POSEXP – the variables which have served as explanatory variables in trust-in-courts regressions. As dependent variables we have tried the same four performance dummies (growth in sales volume in 2000, growth in labour productivity in 2000, expected growth in sales volume in 2001, expected growth in labour productivity in 2001) as in the previous series of regressions. Neither of regressions has turned to be significant. We interpret this result as evidence that, presently, direct and implicit corruption and uncertainty of business environment affect performance of Ukrainian SMEs rather indirectly by dampening the perceptions of the entrepreneurs concerning the ability of legal system to protect private property rights.

B) Determinants of trust in courts

The columns 1-5 of Table 6 report the logit estimates for the trust-in-courts equation (1). Our dependent variables are dummy ones, therefore a positive coefficient indicates that an increase in the level of the independent variable increases the chance that a firm falls into the category of those “who trust in commercial courts”. Across all specifications the estimated equations are significant and display relatively high explanatory power (with a correctly predicted percentage from 59.0 to 78.0). In column one we present the results of regression where only control variables are included as independents. As can be seen, only SIZE proves to be significant and positive indicating that the larger firms are more likely to trust in courts than the smaller ones. In column 2 we add POSEXP to the independent variables. As expected, past positive experience with commercial courts has a significant positive impact on managers’ perceptions of the effectiveness of courts. Then we add indexes for informal relations and bribes (column 3). In column 4, we show the estimates of the trust-in court-regression where independents represent a combination of controls, POSEXP and index of business environment. Finally, in column 5, we show the results when all variables are entered simultaneously.

In accordance with our second hypothesis, we find that corruption has a negative effect on trust in commercial courts. At the same time, as expected, informal relations with the representatives of state authorities have a strong positive impact on managers’ perceptions of commercial courts. The coefficient for index of business environment turns to be highly significant and negative with its magnitude being larger than that of any other variable in the regression. This indicates that the higher are managers’ perceptions of institutional uncertainties in business



environment, the less is the probability that they will trust commercial courts to be an efficient instrument of contract enforcement.

Among the control variables, AGE turns to be significant indicating that the “older” firms are more likely to trust in commercial courts than the “younger” ones. This might be related to a fact that the “older” firms that are already well-established in the market have a better access to the information about courts or to the courts themselves than the newcomers. Regional effects are not significant except for the regression with the controls and POSEXP as independent variables, where KYIV has a significant negative coefficient indicating that managers of the firms located in Kyiv indicated less trustful towards courts than their counterparts in Kharkiv and Donetsk. This might reflect a less efficient activity of courts in Kyiv, where according to the official statistics they are overloaded with commercial cases and the average length of the dispute is quite high.

In column 6, we show the estimates of the regression with USEAC as a dependent variable. There is a significant positive relationship between the size of the firm, on the one hand, and actual using of the commercial courts for solving a conflict with the business partners, on the other hand. The larger firms have better possibilities to bear the costs of a long court procedure or their access to the courts is better than in case of a smaller firms. We also run the regression with corruption-, informal relations- and business environment indexes as independent variables. However, this regression turned to be insignificant (Chi sq. was too low) showing that the level of corruption, informal relations and uncertainty of business environment had no significant impact on the actual using of commercial courts in the past.

Finally, in column 7 we present the results of trust-in-courts regressions, where USEAC is substituted by three alternative dummy variables. For this regression we used the sub-sample of the firms that had commercial conflicts with their business partners in the last three years. In case they did not use the courts for solving the conflict, the managers were asked to indicate the main reason for such a decision. Three alternative dummy variables represent the reasons of the refusal to use the commercial court: ACLONG stands for “procedure is too long”, ACINEFFECT- “courts can not solve commercial conflicts efficiently”, and ACBANKRPT- “we do not want to deal with the bankruptcy of our debtor which might prevent implementation of the court’s decision”. As can be seen from the Table 6, the inclusion of three alternative variables did not change the level of significance of corruption variable and indexes for informal relations and uncertainty in business environment. Among the three variables, only ACINEFFECT turned out to be significant. Its negative coefficient indicates that in case firms did not use courts in the past because they deemed them ineffective, they also mistrust them presently and are disinclined to use them. Our interpretation of this result ought to be cautious, however; the unfavourable impression of the court system that prevented businessmen from using it in the past may be not only due to the objectively poor functioning of the court but to other circumstances as the poor quality of contract writing. Anecdotal evidence from transition countries suggests that frequently contracts cannot be enforced by the arbitration courts because of their unprofessional formulation due to the low level of legal culture in



general and the SME sector in particular. In any case, the result implies that the error-correction learning mechanism which makes the individual perceptions of the courts' effectiveness converge to changed objective facts must be expected to work rather slowly.

The results are robust across the reported regressions, the level of significance of the main explanatory variables does not change if they are inserted in the equation separately (only together with controls) or simultaneously. The inserting of industry dummies (which themselves are insignificant) has no effect on the level of significance of the main variables or The results are also robust to modification in the sample criteria. The coefficients of main explanatory variables remain significant and close to the same magnitude when sample is limited to any two out of three regions, to start-ups, or to the group of the firms older than 5 years as well as younger than 5 years.

We also tried to check whether the variation in the trust in courts might be just due to the variation in the personal trustfulness of the interviewed businessmen. Since our questionnaire does not include questions relating directly to the trustfulness of the interviewers, we used an indirect method suggested by Glaeser et al. (2000) and Johnson et al. (2002). The argument is that personal trustfulness and trustworthiness can be expected to be strongly positively correlated, and that higher trustworthiness of an entrepreneur will be reflected in his receiving more trade credit (relative to sales) from his suppliers than his less trustworthy fellow businessmen. If trust in courts is due to personal trustfulness (and, therefore, trustworthiness) it should be able to contribute to the explanation of the variation of trade credit received across firms. We have run a regression with a firm's payables as dependent variable and TRUST together with controls as independents, and found no significant influence of TRUST. Following Johnson et al. (2002) we interpret this as evidence that the perception of courts by entrepreneurs reflects more than just their personal characteristics.

6 Conclusions

The successful transformation of the formerly socialist economies of Eastern Europe into well-functioning market economies capable of sustainable growth depends crucially on the effective protection of private property rights by properly designed legal institutions. The formal quality of laws protecting property rights and enforcing contracts is not sufficient for establishing the "rule of law"; what matters even more is the quality of implementation of commercial law by an effectively working court system. In particular, for the development of small and medium-sized manufacturing firms being the cornerstone of industrial innovation and growth, effective contract enforcement by commercial courts is indispensable. We have argued that entrepreneurial behavior, the extent to which it is focussed on innovative and productive activities instead of pure rent-seeking, is directly influenced by the firms' perception of the reliability and effectiveness of courts as protectors of property rights and enforcers of contracts – their "trust in courts". Trust in commercial courts is the channel



through which the more objective aspects of the firms' legal and administrative environment, their actual experience with court disputes, administrative corruption, etc., impinges on their behavior and performance.

We have used data from a sample of 285 small and medium-sized manufacturing enterprises from the three regions of Ukraine with the highest concentration of SMEs to study the determinants of trust in courts and its impact on the performance of firms. For such within-country data performance differences cannot be explained by variations in the extensiveness of legal reforms as in cross-country studies but only by the variation in the effective implementation of commercial laws across firms through more or less unpredictable and arbitrary court rulings and their execution reflected in the perception of managers, their trust in court. We have found that trust in courts has a significantly positive impact on the performance of enterprises as measured by growth in sales and labor productivity.

We have identified several determinants of trust in courts in the Ukrainian environment typical of a slow-reforming transition economy. The experience of direct administrative corruption in the form of monetary bribes (to public officials except judges) influences trust in courts negatively, while the businessmen's perception of the general reliability of the business environment (in terms of access to and costs of external finance, regulations and taxation) affects their trust in courts positively. We have also found a strong learning effect supporting our hypothesis that trust in courts evolves according to an error correction process: Businessman who have had some positive experience with commercial courts in the past are significantly more trustful than their "inexperienced" fellow managers. However, those managers whose experience was negative or who so far abstained from using courts are reluctant to trust them. This may mean that even if commercial courts succeeded objectively in improving their record, this might not change the business community's perception of the quality of the judicial system much to the better or would bring about such a change only rather slowly unless accompanied by a significant improvement in the general business environment and by a reduction in the level of corruption. These findings may be taken as further evidence to the strong complementarity of reform measures in transitional economies. Contrary to direct corruption, the form of implicit corruption based on informal relations between business and public officials involving not monetary bribes but reciprocally advantageous deals relying on mutual trust is not detrimental to trust in courts. We have found that such informal relations, which in a country with weak legal institutions are a means for reducing uncertainty (including direct-corruption induced uncertainty), have a positive influence on trust in courts.

When we tested for the direct effects of corruption, informal relations, quality of business environment and past experience with commercial courts on the performance variables we did not find any significant quantitative relationship. It is obvious that interpreting this result as evidence for the irrelevance of those institutional factors for entrepreneurial behavior and enterprise performance would be grossly misleading. It just corroborates our basic hypothesis that these factors influence the performance of SMEs indirectly by weakening the



entrepreneurs' belief in the ability of the legal system to protect their property rights.

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Appendix Tables

Table 1
Descriptive characteristics of the sample

	Number of the firms (% in total sample)
<i>Size:</i>	
<10 employees	112 (39.6)
11-50 employees	135 (48.0)
51-100 employees	30 (10.3)
101-150 employees	8 (2.1)
<i>Type of the firm:</i>	
Private start-ups	214 (78.9)
Privatized enterprise	60 (21.1)
State firms	11 (3.9)
<i>„Age“ of the firm:</i>	
2 years	71 (25.4)
3-5 years	64 (33.7)
>5 years	150 (40.9)
<i>Distribution by industry:</i>	
Food industry	94 (33)
Metal processing	43 (18.1)
Light industry	19 (6.7)
Construction materials	18 (6.4)
Wood processing	17 (6.0)
Chemical industry	10 (3.5)
Printing industry	8 (2.8)
Other industries	51 (16.7)
Industrial services	25 (8.8)
<i>Regional distribution:</i>	
Kyiv	103 (36.1)
Kharkiv	85 (29.8)
Donetsk	97 (34.0)



Table 2
Results of the principal components analysis: index of business environment

Factor	Eigenvalue	Percent of variance	Cumulative percent of variance
1	2.61	29.0	29.0
2	1.74	19.4	48.4
3	1.11	13.4	60.8
4	0.86	9.6	70.5
5	0.84	9.4	79.9
6	0.72	8.1	87.9
7	0.44	4.9	92.8
8	0.35	3.9	96.7
9	0.29	3.3	100.0

Importance of the obstacles for the business success in 1999-2000 (4 point scale)	Eigenvector of the 1 st component (weighting)
Difficult access to external financing	0.803
High interest rates	0.784
Instability of regulatory environment	0.754
Frequent changes of tax legislation	0.714
High administrative control	0.633
Complicated procedures of registration and business licensing	0.601
Inflation	0.516
Poor security of property rights	0.405
High rate of taxation	0.263



Table 3
Results of principal components analysis: index of informal relations

Factor	Eigenvalue	Percent of variance	Cumulative percent of variance
1	1.81	18.1	18.1
2	1.34	13.4	31.6
3	1.13	11.4	42.9
4	1.01	10.1	53.0
5	0.97	9.7	62.8
6	0.89	8.9	71.7
7	0.81	8.2	79.9
8	0.76	7.7	87.6
9	0.66	6.6	94.2
10	0.57	5.8	100.0

Importance of informal relations with different state authorities for the business success of the firm (4 point scale)	Eigenvector of the 1 st component (weighting)
Customs	0.739
State Prosecutor's office	0.602
State banks	0.589
Tax inspections	0.527
Regional administration	0.517
Police	0.499
Verhovna Rada	0.494
Presidential administration	0.477
Central executive authorities	0.450
Municipal administration	0.404



Table 4
Descriptive statistics for main variables in equations

	Mean	St.deviation
BEINDEX	0.45	0.07
IRINDEX	0.46	0.11
AGE	5.5	5.5
SIZE	25.8	28.8
% in total sample		
TRUST		42.1
POSEXP		8.1
USEAC		18.9
BRIBE		59.3
SALES		45.3
SALESF		43.9
LABPROD		38.2
LABPRODF		39.3
STARTUP		78.9

Table 5
Performance equations (standard errors in parantheses)

	SALES (1)	LABPROD (2)	SALESF (3)	LABPRODF (4)
TRUST	0.71** (0.25)	0.57** (0.26)	0.55** (0.25)	0.51** (0.25)
STARTUP	0.14 (0.32)	0.48 (0.34)	-0.28 (0.32)	-0.12 (0.37)
AGE	-0.02 (0.02)	-0.03 (0.05)	-0.04(0.028)	-0.06** (0.03)
SIZE	0.007 (0.005)	0.006 (0.005)	0.01**(0.005)	0.006 (0.005)
Kharkiv	-0.29 (0.31)	-0.22 (0.33)	1.0** (0.32)	0.88**(0.35)
Kyiv	0.03 (0.34)	0.82** (0.30)	0.83**(0.39)	0.96** (0.36)
Industry	Y	Y	Y	Y
Constant	-0.54* (0.38)	-1.4** (0.39)	-0.88(0.40)	-0.38 (0.36)
Percent correct	68.8	73.3	74.2	62.0
Chi sq.	14.2**	23.6**	26.5**	16.8**
N	277	277	277	277

*p<0.1; **p<0.05; Y- industrial dummies included



Table 6
Determinants of trust in courts (standard errors in parentheses)

	Dependent: TRUST	Dependent: TRUST	Dependent: TRUST	Dependent: TRUST	Dependent: TRUST	Dependent: USEAC	Dependent: TRUST
	Controls	Past experience	Corruption	Overall business environment	All independ- ents		Sub- sample of the firms which had commercial conflict
	1	2	3	4	5	6	7
POSEXP		2.3** (0.43)	3.0** (0.58)	2.57** (0.52)	3.6** (0.74)		
ACLONG							-1.6 (1.4)
ACINEFFEC							-3.2** (1.4)
ACBANKRPT							-0.68 (1.0)
BRIBE			-1.3** (0.50)		-1.2** (0.61)		-2.1** (1.0)
IRINDEX			3.73* (2.0)		6.2** (2.8)		14.8** (7.8)
BEINDEX				-8.1** (3.0)	-15.6** (4.5)		-13.1** (7.6)
Controls							
STARTUP	0.15 (0.30)	0.22 (0.46)	-0.38 (0.60)	-0.21 (0.54)	-0.54 (0.67)	0.40 (0.46)	-0.52 (0.95)
AGE	0.03 (0.02)	0.06 (0.04)	0.10* (0.055)	0.07* (0.04)	0.13** (0.06)	0.001 (0.02)	0.25** (0.12)
SIZE	0.008* (0.005)	-0.002 (0.006)	-0.01 (0.008)	-0.004 (0.007)	-0.009 (0.008)	0.01** (0.005)	-0.02 (0.02)
Kyiv	0.003 (0.29)	-0.85* (0.48)	-0.43 (0.66)	-0.74 (0.54)	0.01 (0.70)	0.68 (0.37)	0.42 (1.30)
Kharkiv	-0.10 (0.30)	-0.32 (0.49)	0.23 (0.72)	-0.33 (0.59)	0.69 (0.90)	0.33 (0.54)	1.8 (1.4)
Constant	-0.80** (0.36)	-0.24 (0.58)	-1.4 (1.2)	3.2** (1.5)	4.2* (2.2)	-1.9** (0.56)	-1.9** (0.56)
Percent corr.	57.4	71.6	78.8	71.4	77.2	69.2	69.2
Chi sq.	8.7*	39.8**	48.8**	39.3**	58.8**	11.5**	11.5**
N	277	189	189	189	189	277	277

*p<0.1; **p<0.05