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Informal Institutions in Transition: How Vietnam's Private Sector Boomed without Legal Protection[A]

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Abstract

We examine the role of informal and formal institutions behind the remarkable growth in the private sector in the Vietnamese economy since the start of the economic transition in the late 1980s. We show that firms in Vietnam have increasingly taken on risks in their transactions, in spite of weak or non-existent formal institutions. We find that risk taking by firms can be explained by the use of informal institutions such as relational contracts and networks along with the recourse to emerging formal institutions such as written contracts. Our results suggest that formal and informal institutions can act as complements during the process of transition, and that informal institutions may remain important as mechanisms of risk management even as the economy matures and new formal institutions gradually developed.

1 INTRODUCTION

It is widely recognised that institutions are central to the understanding of why some economies have performed better than others (Hall and Jones [1999], Acemoglu, Johnson and Robinson [2001], Rodrik, Subramanian and Trebbi [2004], and Banerjee and Iyer [2005]). Recent experience of transition and developing countries with market-based reforms suggests that these reforms are unlikely to be successful if the appropriate institutions that 'support economic activity and dispense its fruits' (Rodrik, 2008) are not in place (McMillan, 2002). However, there remains considerable debate on what the right institutions are for economic development to occur. This debate is to a large extent on the role of formal institutions – laws and regulations, the court system, written contracts – versus informal institutions – unwritten rules of behaviour, kinship ties, social norms – in bringing about economic growth, especially in low income countries. An influential school of thought has argued that well functioning formal institutions are necessary if not sufficient for economic development. It argues that a functioning legal system matters significantly for growth in the long run (Kaufmann, 2002; World Bank, 2004). According to this view, informal institutions can play a complementary role to formal institutions in supporting economic activity by making the latter function more effectively (Johnson, McMillan and Woodruff, 2002). In contrast, there are others who have argued that strong informal institutions such as social and business networks can help solve the problems of economic exchange, even in contexts where formal institutions do not exist or are ineffective (North, 1990). Whether informal institutions are substitutes or complements to formal institutions in the process of economic development is an unresolved issue in the literature.

Even among those who agree that strong informal institutions can contribute in the early stages of economic development by being a substitute for ineffective formal institutions, there is disagreement on whether these informal institutions will play an equally important role as the economy in question matures over time and continues to grow. One view is that as economic exchange become more complex with the process of economic development, informal institutions wither away as more efficient formal institutions take their place (Williamson, 1996). An alternate view, most clearly articulated by North (1990), states that informal institutions are slow-moving, and that while 'formal rules may change overnight as a result of political or judicial decisions, informal constraints embodied in customs, traditions and codes of conduct are much more impervious to deliberative policies' (North, 1990, pp. 6). Thus, there is disagreement on whether informal institutions persist or wither away in the process of formal institutional change.

In this paper, we contribute to the debates on whether formal and informal institutions are substitutes or complements in economic development and whether informal institutions survive or wither away with emerging formal institutions. We present new empirical evidence on Vietnam, a transition economy which has seen significant economic growth and rapid poverty reduction in the past few decades.[1] A distinctive feature of the Vietnamese economy is that the private sector has boomed since the start of the economic transition in the late 1980s. In 1992 there were only around 1,000 private Vietnamese firms in operation. During the 1990s another 100,000 were born. Half died during the decade, but by the early 2000s there were well over 50,000 in operation, most making profits. As we will argue in this paper, all of this happened without proper legal recognition of the private sector and formal protection of property rights. We examine how informal institutions – ties with friends and family, and social and business networks – could have contributed to the management of risks of market transactions by firms in the private sector and allowed them to survive and grow. We also examine how emerging formal institutions such as written contracts and the court system have also allowed firms to manage risks.

Our study uses a primary data-set of 305 firms collected in 2004 specifically to address issues relating the use of formal and informal institutions by private sector firms in Vietnam to manage transactions risks. The data-set builds on and extends an earlier data-set compiled in 1995 by McMillan and Woodruff (1999a), which we will refer to as MW. The latter study is among the first of its kind to study the role of informal institutions in determining whether firms engage in risky transactions in Vietnam. The MW study examines the role of relational contracts and business networks in determining whether a firm is willing to offer trade credit to its supplier or customer. In our survey, we extend the measures of transactions risk by including asset specific investments, production to order and customisations made by firms for specific customers. The survey is also based on a more comprehensive sample. Since our sample of firms comprises a sub-set of firms which were also surveyed by MW(1999), we are able to see whether firms in Vietnam have been take on more risks with the passage of time. Given the detailed nature of our survey, our data allows us to explore in a more systematic way than the MW study the nature of risks in market transactions in Vietnam have been willing to bear, and how both informal and formal institutions have been responsible for risk-taking by firms.

The remainder of the paper is in eight sections. In Section II, we provide a description of the growth of the private sector and the nature of formal institutions in Vietnam. In Section III, we define our measures

1 Since 1990, Vietnam has more than halved its poverty, achieving the 1st Millenium Development Goal well before the 2015 deadline. Betwen 1990 and 2004, the percentage of the population living in poverty fell by roughly 3 percentage points per year. The transition has been supported by strong and persistent economic growth. Between 1995 and 2005, GDP grew at 7.2 percent on average. Moreover, Vietnam has not only grown fast but has also done increasingly better than others in the region (World Bank, 2006).

of transactions risk and discuss the institutions, both formal and informal, that firms use to manage these risks, drawing from the theoretical and empirical literature. In Section IV, we describe the survey that has been used in collected the data used in the paper, and present a summary of the data. Section V traces out the trends and patterns in the willingness of firms to engage in risky transactions, using the panel of firms resurveyed from the MW sample. In Section VI, we describe the use of informal institutions by firms in Vietnam to manage transactions risk. Section VII provides a corresponding description of the use of formal institutions by firms in Vietnam as mechanisms of risk management. In Section VIII, we examine the determinants of risk management by firms, and in particular, the use of formal and informal institutions, employing econometric methods. Section IX concludes.

2 Emerging Private Sector and Institutions in Vietnam: 1992–2002

The introduction of private enterprise in the economy came with the mass collectivization of agriculture in the late 80s and the official (legal) recognition in the early nineties.[2] A number of further steps were taken in subsequent years to gradually clarify the rules under which the business sector could operate. These culminated in a major milestone in the official recognition of private initiative in the year 2000 in the enactment of the Enterprise Law.

The gradual official recognition of private enterprises was accompanied by an exponential increase in the number of company registrations in the second half of the 1990s and the early 2000s. The total number of non-farm household enterprises increased from 1 million in 1992 to well over two million in 2002. And even more impressive growth, albeit from a very small base, occurred in the formal private sector in which the total number of enterprises increased fifty-fold in less than a decade – from around 1,000 to 50,000.

Table 1: Structure of Enterprise Sector

Total number of enterprises	1992	1995	2000	2002
Private enterprises	1,114	15,296	31,767	51,132
Households (x1000)	1,066	1,783	1,780	2,280
State enterprises	6,365	5,784	5,759	5,364

Source: Statistics on number of enterprises were collected from the General Statistics Office – Vietnam. Except for 1992 data, all data are based on Economic (1995) and Enterprise (2000/2002) Censuses.

The observed growth in private enterprise is particularly impressive, given that during most of the decade domestic entrepreneurs had to do business in the absence of well-functioning institutions needed to ensure efficient transactions and manage risk. These institutions generally do three main things: channel information about market conditions, define and enforce property rights and contracts; and establish rules relating to the use and abuse of market power. In most developing countries these institutional services are highly imperfect (Kauffmann and Kraay 2003). In Vietnam in the 1990s they were largely absent or incomplete. Surveys have consistently found that the problems of finding markets and understanding the 'rules of the games' in interacting with trading partners have been crucial obstacles to private sector growth (see Ronnas and Ramamurthy 2001).

When Vietnamese entrepreneurs want to trade they have generally faced high search and information costs. There have been few formal sources of information about products, markets and technologies, and still less information on the reliability of potential trading partners. Part of this has been due to cultural and political factors. Publishing and the media have been under state control,[3] access to the internet is restricted, and costs of telecommunication have been prohibitively high.[4] Businesses are reluctant to share market information, and the business services sector providing market information is not well developed (Riddle 2000).[5]

Of particular importance to this discussion, risks related to property rights and enforcement of contracts have been high. Legal documents related to contracting have overlapping jurisdictions and contradicting rules, which has made them largely ineffective (Nghia 2002). Confidence in courts has also been weak. In a study of private manufacturers in the mid 1990s less than 10 percent of the managers in Vietnam said

2 In 1990, 'The Law of Private Enterprise' laid down the legal infrastructure for the formal private sector, and in 1992 the legality of private enterprise was re-affirmed in the new Constitution.

3 All technical books, magazines and newspapers are imported through a state enterprise that has monopoly powers.

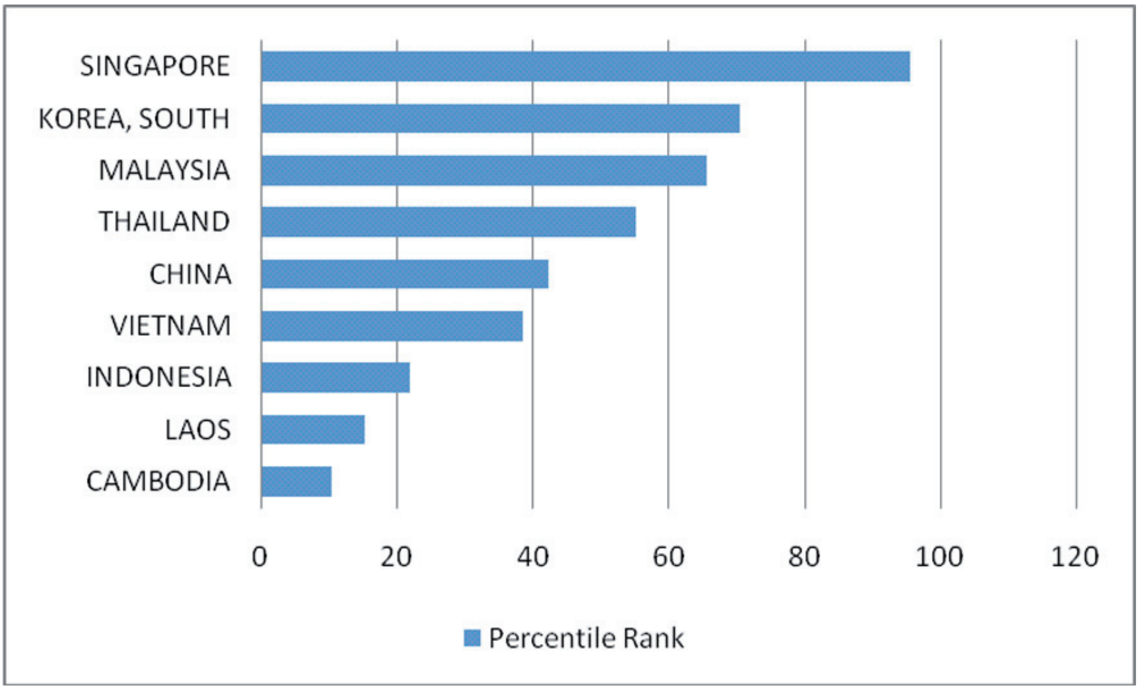
4 Competition between internet suppliers in Vietnam has increased considerably in recent years and this has resulted in a recent reduction in prices. However, compared to other countries in the region prices remain relatively high.

5 The service sector was not a target of development attention for quite some time. That attitude and perception has gradually changed over the past few years and guidelines on domestic investment have been amended to include a beginning of attention to business supporting services. The Law on Domestic Investment, for example, includes incentives for the establishment and promotion of private service firms. The current legal framework is not favourable however to the professionalism of business service providers and provision of these services is still largely dominated by a (largely ineffective) public sector.

they could rely on courts (in comparison to over 50 percent in Russia) (McMillan and Woodruff 1999a). In our survey in 2004, firms had a more positive assessment of the ability of courts upholding contracts but still about 40 percent believed contracts could not be enforced in court.

Vietnam's weak institutional performance is also confirmed by its score on the 'rule of law' index, which includes the effectiveness and predictability of the judiciary and the enforceability of contracts. Even though progress in establishing a legal framework was made in the late 1990s and early 2000s, Figure 1 shows that at the time of our survey, Vietnam still scored worse than many of its major competitors in the region.

Figure 1: Rule of Law Index 2004



Notes: Percentile rank indicates the percentage of countries worldwide that rate below the selected country (subject to margin of error). Countries are presented on the chart ranging from 'best' (top of the chart) to the 'worst' (bottom of the chart) for year 2004.
Source: Kaufmann et al. (2005)

The absence of information or contract enforcement mechanisms increases the potential for opportunistic (cheating) behaviour. The potential for cheating can be large in product markets when the exchange does not occur instantly but involves a passage of time and trading partners may fulfil their commitments at different points in time. For example when a supplier produces now and the buyer promises to buy or pay later. The vulnerability of a supplier is especially increased when specific investments are made or goods are uniquely designed for a certain customer (and would be hard to resell). This passage of time and the 'sequence of performance' create substantial uncertainties and risks, as trading partners may renege on their promises.[6] This paper focuses on how firms – as they have grown – have managed to cope with these risks.

3 Measures and Determinants of Risk Management by Firms: Theoretical Perspectives

The economic exchange between firms and their suppliers is subject to considerable risk due to the lack of information that firms have on the reliability of their suppliers and quality of the inputs they purchase. Similarly, there is significant risk that firms face when selling their products to their customers to do with the proper settlement of the dues that they may have to incur in the act of sales, and with the monitoring and enforcement of agreements that they may have with their customers in the production of certain goods. The more complex the transaction, the higher is the risk, and less likely the firm will be willing to bear this risk in the absence of appropriate institutional mechanisms of risk management. As argued by the new institutional economics, economic development is usually associated with a larger frequency of more complex transactions and it is the presence of well-functioning institutions, formal and informal, which ensures that firms are willing to engage in more frequent and more risky transactions over time (North, 1990; Williamson, 1996). In this section, we first propose a set of measures of the willingness

6 Note that also in instantaneous or simultaneous exchange (e.g. goods for cash) some future promises – like a warranty or a promise that the goods will live up to a certain quality standard – may be transferred.

of firms to bear transactions risk, drawing both from the theoretical and empirical literature that we can use in our empirical analysis. We then discuss the various institutional forms that allow firms to manage transactions risks, using theoretical insights derived from new institutional/transactions cost economics and game theory.

a) Measuring Transactions Risk:

Every transaction can be characterized by certain attributes or dimensions which will determine the degree of risk to be managed. One of the attributes widely discussed in transaction cost literature is asset specificity. Another dimension at the core of the contracting literature is credit risk i.e. the lapse of time between order, delivery and payment (trade credit).

Asset specificity relates to the degree to which an asset can be redeployed to alternative uses and by alternative users without sacrifice of productive value (Williamson, 1996). It can take many forms. The measures we use are investments that firms make in physical or human assets to meet the needs of a specific customer, the degree of customization of goods and production to order. These measures of transaction risks are well established in the empirical transaction cost literature (see Richman and Macher, 2006 for an overview). The majority of studies have been focused on Western economies but Hendley & Murrell's (2003) analysis of firms' asset specificity and institutions in Romania is an example of an empirical study of transaction risks in a developing and transition economy.

Most of the empirical transaction cost literature treats transaction risks *as exogenous* (Boerner and Macher, 2001). However, in fact they involve a degree of choice. Firm managers make decisions regarding whether to invest in specific assets, produce customized goods, produce to order. This means that these risks should be treated as endogenous, or dependent, variables to be explained.

Our second measure of risk is the extent to which firms extend *trade credit*. Transactions in cash, paid at the time of delivery, involve, of course, much less risk than transactions in which customers pay with some delay. Similarly pre-payment (i.e. paying suppliers before delivery) involves more risk. The decision to take this payment risk will depend on the perceived trustworthiness of the trading partner or the ability to enforce contracts in case of breach. This measure of transactions risk is also used by the MW study, which allows us to compare the willingness of firms to engage in this type of risk between 1995 (the year of the MW survey) and 2004 (the year of our survey).

b) The Determinants of the Ability to take Risks:

Vietnamese firms are able to take risks because they have a number of strategies at their disposal to manage those risks. Two strands of institutional theory shed light on the question of how these firms manage risks in the presence of weak formal institutions: New Institutional Economics and Game Theory. New Institutional Economics includes a number of branches which study the problem of market imperfections, transaction costs and associated coping strategies or 'governance mechanisms'. There are two broad approaches The agency literature, asymmetric information and property rights literature has emphasized incentive alignments and *ex ante* bargaining solutions, formalized in contracts which can be enforced in courts. The transaction cost literature disputes the efficacy of ex ante contracts and court enforcement and maintains that different types of institutions (or governance mechanisms) will arise as transaction cost-economizing instruments (Williamson, 1985 and 2005).

Transaction cost theory describes how institutions emerge as a response to the existence of three dimensions of transactions: asset specificity, uncertainty and frequency. Investments in specific assets for example will result in opportunism and – in the absence of complete and perfect information (i.e. complete contingent contracts can not be written) – governance organizations evolve to cope with this problem. Examples of such governance mechanisms range from relational contracts, networks, quasi integration to vertical integration.

In Vietnam, in the 1990s, with the inadequate structure of property rights (and associated limited access to capital) and still some residual suspicion of large private firms,[7] we expect that Vietnamese firms will avoid integrating vertically, and instead rely on other more *hybrid governance forms* such as *relational contracts* with selected and close partners. These close (personal) ties rather than legal contracts will provide assurances that the terms of the transaction are met. High levels of transaction frequency will support strong reputation effects.

Another relevant question addressed in the literature is how informal institutions (or private ordering mechanisms) respond to economic change and reforms of the legal system. Williamson contends that over time, governance structures evolve to adapt to changing transaction technology. But the work of economic historians, such as Douglas North (1990), contradicts this assumption. North maintains that history matters and that institutions are path dependent and do not necessarily adjust optimally. There is an ongoing debate among economic and legal scholars on whether institutions are complements or

7 Webster (1999) describes Vietnam 'tall poppy' syndrome: big firms take greater risk in Vietnam by virtue of their size. Those who stand tall are the first to be chopped down. In the past, relaxation of restrictions on the private sector has typically been followed by a crackdown that punishes those who were too enthusiastic or too successful in their enterprises. Given this environment, most of the private sector prefer to keep their heads down, i.e. stay relatively small. Note however that public opinion and the government's attitude towards the private sector has changed dramatically in the past five years.

substitutes, but some recent empirical evidence suggests that informal mechanisms can persist in the presence of a rule of law, and can even be enhanced by these formal institutions (for example Johnson et al. [2002] and Durlauf and Fafchamps [2004]).

Transaction cost theory is conceptually attractive but it is weak in providing either systematic evidence or a clear explanation why certain concepts, such as frequency of exchange for example, matter (Lyons, 2002). Moreover, despite conceptual extensions to the original market-hierarchy model which have increased the generality of the transaction cost framework,[8] some serious theoretical deficiencies remain in applying the analysis to relations between independent firms. In the basic framework control is assumed to follow naturally from vertical integration, but it is much less clear how control (or enforcement) is achieved in relationships between non-integrated firms (Heide and George, 1992). These weaknesses are partly addressed by the theory of repeated games.

Game theoretic models help explain the emergence and effectiveness of two types of economic governance mechanisms that are employed to solve information and contract enforcement problems, and of particular relevance here: (1) self-enforcing agreements and (2) multi-lateral reputation mechanisms. When buyers and suppliers have conflicting interests and contracts are incomplete or formal enforcement mechanisms are inadequate, trade (or co-operation) can still take place based on reputation mechanisms, supported by long term relations (repeated interactions) and networks.

There is a relatively large literature studying the various conditions under which these mechanisms work. The theory was first applied to contractual relations by Telser (1980) and Klein and Leffler (1981). Cooperation will happen with a limited number of trading partners and in small closely-knit communities where information flows freely and trading partners can be sanctioned in case of breach. New relations will likely build up gradually, in which partners trade at a low level to start with and move to a higher level when the initial phase is passed successfully.

Evidence of informal enforcement mechanisms has emerged from various studies by economic historians. The analyses of Greif (1993), Greif et al. (1994), and Milgrom et al. (1990) have pointed to the importance of institutions like merchants' guilds, the Magribi traders' coalition and the community responsibility system in Mediterranean and European trade. Informal institutions have also been studied in developing and transition economies. Evidence on the role of long term relationships and networks has for example been found in Africa. Using data collected in seven countries in Africa, Bigsten et al. (2000) demonstrate that long-term and relational contracting is the norm between manufacturers, their suppliers and clients. These relationships are a guard against contract non-performance and are especially important when the transaction costs of using the legal system are high. Fafchamps and Minten (2001a) show how relational contracting is one of the key contract enforcement mechanisms among grain traders in Ghana and Madagascar. Woodruff (1998) shows how trade associations allowed footwear manufacturers in Mexico to maintain information about the behaviour of retailers and gave retailers strong incentives to maintain reputations. In transition economies, 'self-ordering' mechanisms were observed in Russia (Hendley et al., 2001) and in other countries of Central and Eastern Europe (Johnson, et al. [2002] and Raiser, et al. [2001]).

Studies on informal institutions in Vietnam are scarce. Only one study – carried out early in the transition – has studied informal governance mechanisms in Vietnamese business transactions (McMillan and Woodruff 1999a; 1999b). The study suggests that in the early stages of the transition, Vietnamese entrepreneurs used long term relationships and closed network mechanisms to secure their market transactions. Reforms in the past few years, however, have dramatically changed market conditions. Trade reforms have vastly increased the access to markets and buyers and the new Enterprise Law has led to a surge in new business registrations. New opportunities for business may be opening up, but at the same time it may be difficult to identify *reliable* partners,[9] which means that – with weak formal institutions – existing long term relationships and networks would remain important. As the transition progresses however and the market continues to open up, we expect that new and better organized reputation mechanisms will emerge (such as for example business associations) that enable individuals to trade across membership boundaries (or at least across a wider membership) and facilitate a broader range of exchanges.

The two theoretical perspectives provide insights as to how informal institutions may emerge as useful instruments to enable firms to manage risks and grow. We test two broad hypotheses. First, that in the absence of a fully developed legal system Vietnamese firms will seek to manage risks in transactions by using a number of informal safeguarding strategies. These strategies will determine the degree of risk taking and hence the characteristics of the transaction. More specifically, enterprises involved in riskier transactions will rely on bilateral and multilateral monitoring and reputation mechanism such as frequent interactions and communication with the customer and/or other enterprises who may have information about the customer (e.g. other suppliers).

Second, that as the transition progresses and both formal and informal institutions develop, enterprises will adjust their behaviour and safeguarding strategies. Developing formal institutions – even if incomplete

8 The original framework presented the governance decision as a discrete choice between spot-market transactions and complete vertical integration. Recent analysis has extended to intermediate situations.

9 There is some evidence that a number of the newly registered firms are in fact 'ghost' firms (Steer and Taussig, 2002).

– will complement informal institutions as a safeguard in transactions. Firms with written contracts and firms that express faith in courts – even though they are incomplete – will take more risks. As institutions improve, enterprises will be able to take bigger transaction risks.

4 The Survey

a) Methodology

The core data used for the analysis was generated through an original survey with (formal) private manufacturing firms in three urban locations (Hanoi, Ho Chi Minh City and Haiphong). The survey was carried out between November 2003 and February 2004. The manufacturing sector was chosen on the grounds that it is likely to have the most interesting and rich transaction and contract enforcement problems. The sector also has a higher degree of formality than the service sector and has shown remarkable growth in the past few years. Hereafter the survey will be referred to as the Vietnam Business Survey (VBS).

The VBS survey is based on and broadens the only earlier study on informal institutions in Vietnam, carried out by McMillan and Woodruff in 1995 (MW). The MW survey is unique as it analyses informal institutions in the early stages of Vietnam's transition, when the private sector was still very small and the target of much public hostility, and formal mechanism had not yet fully emerged. In 2004 by contrast, Vietnamese firms were operating in a much more vibrant and competitive environment, with weak but developing formal institutions. Apart from providing data to compare institutional development over time, the VBS extends the MW survey in two further ways. First, the sample was based on the entire population of registered private firms.[10] Since firm registries did not exist in the early 1990s, the MW sample was constructed using a much more limited membership list of Vietnam's largest business association, the Vietnam Chamber of Commerce and Industry (VCCI). This somewhat biased the sample toward larger enterprises. The VBS sample included all MW firms that could be re-located and added a number of firms drawn from a more complete list of private firms compiled for another survey on the entire formal manufacturing sector in Vietnam. This survey, called the SIDA survey, is the largest survey of private enterprises in Vietnam and randomly selected enterprises from a list of officially registered private enterprises. Combining both MW and SIDA sample frameworks a total of 305 firms were surveyed.[11] Finally, the VBS survey extended the MW survey by using a more diverse set of measures of risks. The MW survey was focused on trade credit risk, while the VBS investigated additional risks associated with specific investments, customized production and production to order.

Data was collected with a semi-structured questionnaire administered in face to face interviews with company CEOs. Questions were designed based on a review of existing research, combined with lessons from pre-survey interviews. The majority of the questions are on the nature of commercial transactions, contracts, their enforcement and dispute resolution and a limited number on more general enterprise development data. The survey also repeats a number of the questions from the MW survey in order to be able to compare the answers to the ones of the 1995 survey.

Because of the large number of questions included in the questionnaire the decision was made to design two similar questionnaires. One questionnaire asked the manufacturer questions about their customer and a second questionnaire included similar questions about suppliers. In each urban location, firms were randomly assigned either a customer or a supplier questionnaire. The sample thus consisted of 153 questionnaires with observations on manufacturer-customer relationships and 152 questionnaires with observations on manufacturer-supplier relationships. Each questionnaire collected information on two specific customer or supplier relationships. Thus information was gathered for a total of 306 manufacturer-customer relationships and 304 manufacturer-supplier relationships.

b) Characteristics of surveyed firms

The size of the surveyed firms ranges from 3 to 2700 employees, with a mean of 69. Their annual total sales averaged just over USD 700,000 in 2002. The enterprises manufacture a range of products, with the largest number producing chemical, plastic and rubber products (22 percent), metal parts and products (16 percent) and electrical equipment (14 percent). Over 40 percent of the firms started their operations before the 1990s, and only 8 percent started business in the past 3 years, after the passing of the Enterprise Law. This suggests that many of them began their activities informally and without the comfort of a sound legal framework, and formalized only later. About one third of the formal enterprise firms (such as sole proprietor, limited liability, joint stock) originated from household enterprises, and about 5 percent originated from cooperatives. Interestingly, despite their larger average size, Ho Chi Minh City firms are relatively younger than firms in the North.

10 Including sole Proprietorships, limited Liability Firms, Joint Stock Firms and Co-operatives. Smaller household enterprises were excluded from the analysis.

11 The last SIDA survey was carried out at the end of 2002, just nine months before the VBS survey, so almost all firms could be easily relocated. Of the total number of enterprises that participated in the 2002 SIDA survey, 244 firms (75 percent) agreed to participate again. Since the MW survey was carried out in 1995, even though we had some record of company names and addresses it was much harder to relocate the firms in the sample. Of the 259 firms we managed to identify 111 firms, of which 61 agreed to collaborate in the survey.

5 Have Vietnamese Firms Taken Bigger Risks Over Time?

In this section, we examine whether firms in Vietnam have been taken on more risks in their market transactions, using the measures of transactions risk proposed in Section 3. To do this, we use the panel of firms that we have constructed from a repeat survey of some of the firms in the MW sample (as explained in the previous section). We first look at specific investments in capital equipment and personnel that firms have undertaken for their customers. One-fifth of manufacturers invest in specific equipment for their customers, and 10 percent invest in special personnel or training. Suppliers to manufacturers – mainly supplying raw materials and inputs – invest less heavily in specific assets. There are no data on specific investment in earlier years of the transition, but we would expect it to be less. By way of comparison, a study of specific investments by manufacturers in the UK reports that 30 percent of manufacturers made substantial investments in capital equipment specifically to meet a particular customer's requirements (Lyons, 1994).[12]

We now look at trends in customisation and production to order. Vietnamese manufacturers supply customized goods to 40 percent of their customers. Producing to order also represents higher risks, as larger or specific orders could be difficult to resell. Our manufacturers produce to order nearly half of their total sales, while 20 percent of goods purchased from suppliers are ordered.

Table 2 compares both customization and production to order over time using the panel of firms that were interviewed in both 1995 (MW) and 2004 (VBS). The degree of customization is much higher than earlier in the transition. Only 17 percent customized their products in the mid nineties, compared to 34 percent in 2004. Transactions to order have also become much more common. Manufacturers supplied just under half of the goods to order in the mid 1990s, while in 2004 this had risen to more than two thirds (71 percent). Suppliers of manufacturers also produce more than twice as often to order than in earlier years of the transition.[13] The SIDA data confirm that firms are increasingly selling to order but also show that over time firms (of the same size) are selling to a larger and more diversified customer base. In 2002, 84 percent of firms sold to more than 10 customers, up from 77 percent in 1997 and only 54 percent in 1991.

Table 2: Customization and Production to Order over Time – Panel Data

(Percentage in total relations)	Goods produced for customers (N=68)		Goods produced for suppliers (N=46)	
	MW 1995	*VBS 2004*	*MW 1995*	*VBS 2005*
The goods are customised	17	34	17	10
The goods are produced to order	48	71	19	49
Available alternatives: would be able to find alternative buyer or supplier	91	71	100	97

Sources: VBS 2004 and MW 1995.

The more specific the assets, or the more customized the production, the harder it will be to find alternative customers and suppliers in case delivery fails, and the more exposed the producer will be to risks of opportunistic behaviour and exogenous shocks. As expected, therefore, with a much higher share of goods being customized, firms report that it is considerably harder to find alternative buyers than in the past. Thus, almost 30 percent of manufacturers in 2004 said that it would be impossible to find alternative customers in case a particular existing customer refused delivery, in comparison with only 9 percent in 1995 (see table 3). This is consistent with a greater trend of asset specificity and customization which would in turn be expected as the institutional environment for market transactions improves.

Finally, we examine the change in risk extending trade credit. Vietnamese enterprises extend trade credit to more than 80 percent of their customers, and nearly half of those customers pay the *entire* bill after delivery. Similarly, about 80 percent of supplies are bought on trade credit. For slightly less than half of those supplies, the bill is paid fully after delivery.

Manufacturers appear to be taking considerably more risk in 2004 than in the earlier years of the transition. Using our panel of firms surveyed in both 1995 and 2004, we find that that in 1995 only 55 percent of customers received trade credit, compared to over 80 percent in 2004. In 2004, 45 percent paid the entire bill after delivery, while in 1995 this was only 16 percent. Also suppliers are extending more trade credit. In the mid 1990s, about 59 percent of supplies were bought on trade credit compared to 77 percent in 2004 (see table 3). We should note also that the SIDA data show that firms are not only extending more trade credit but are also much less dealing in cash. In 2002, cash was the most important

12 The question on specific investment in our survey were adopted from this survey.

13 This finding is also confirmed in the SIDA survey. In this survey were also asked how often they produced their goods to order. In 1996 about 26 percent of the firms said they produced their good almost or almost always on order, while in 2002 this percentage had risen to 50 percent. This again confirms that firms are taking higher transaction risks.

mode of payment for 70 percent of the respondents, down from 90 percent in 1997.

Table 3: Trade Credit in Relations with Buyers and Suppliers – Panel Data

(Percentage in total relations)	Relations with customers (N=68)		Relations with suppliers (N=46)	
	MW 1995	*VBS 2004*	*MW 1995*	*VBS 2005*
Firm gives trade credit to customer/receives trade credit from supplier	55	81	59	77
Percent with *entire* bill paid ***after*** delivery	16	45	30	42
Percent with *entire* bill paid ***before/on*** delivery	45	19	41	23

Sources: VBS 2004, and MW 1995.

6 Informal Mechanisms of Risk Management: Social Ties and Networks

In this section we examine the type of informal risk management strategies or governance mechanisms Vietnamese firms rely on. In section III, we predicted that, in the absence of complete formal institutions, firms will use informal mechanisms to manage transaction risks. These mechanisms can be self-enforcing (bilateral) or involve small groups or communities (multilateral). They can be used at the start of relationships when firms choose a trading partner and throughout the relationship to monitor behaviour. We also hypothesized that over time, as formal institutions develop, informal mechanisms will be complemented by formal ones. We start this section with analyzing informal mechanisms at the start of a relationship with a customer, and then turn to informal monitoring and reputation mechanisms in ongoing relationships.

a) Informal Mechanisms Used to Search and Select Trading Partners

In Vietnam's uncertain business environment, it may be difficult for firms to identify trading partners who are less likely to behave opportunistically. With weak formal information mechanisms, they will gather information from alternative (informal) sources. Our survey asked enterprises about their sources of information about the customer or supplier (e.g. through friends, business contacts, the government, or through direct inspection of the customer's facilities) before the start of the relationship. In table 4 we summarize the most important sources of information. Almost all enterprises gather information about their trading partner before starting the relationship, with social networks; friends, family and informal associations being by far the most important source of information (67 percent). Formal and informal business networks were somewhat less important, as was the collection of direct information acquired through visits to their trading partner before entering an agreement.

The important role of personal and social networks is also confirmed by the SIDA data. In the 2002 survey, 40 percent of the respondents said that personal networks were the most important factor in identifying suppliers. More anonymous ways of information collection, such as through marketing efforts of the supplier, were important for only 15 percent of firms.

Table 4: Sources of Information about Customers before the Start of the Relation*

N=301	% in total relations	Customer located within province	Customer located outside province
Friends, family, personal relations	67	72	57
CEO worked for the customer	9	9	9
Business association	5	4	6
Other enterprises	17	19	14
Government agency	4	5	3
Visits to trading partner	17	17	17
Other sources	17	18	14
No information	14	10	22

Note: Multiple response question - percentages do not add up to 100%
Source: VBS 2004

Our data, as well as the SIDA data,[14] show that informal networks remain important sources of information for business, but their relative importance and nature may have changed over time. The SIDA data show that social networks are relatively less important in the early 2000s than earlier in the transition. The data show a slight decrease in the importance of personal relations in identifying suppliers from 48 percent in 1997 to 40 percent in 2002.[15]

The importance of business networks, in particular the more formalized business associations, seems to have increased. About 12 percent of our panel of firms used associations as a source of information, compared to 7 percent earlier in the transition. Moreover, we also note a decrease in firms who obtain information from government agencies from 15 percent in 1995 to only 6 percent in 2004. Finally, we observe an increase in more modern and anonymous sources of information such as marketing and advertising. In the 2002 SIDA survey, 15 percent of firms said suppliers' marketing was the most important source to identify them, compared to only 10 percent in 1997.

Guthrie (1998) noted a similar change and relative decline in the role of guanxi (personal connections) in China's transition. In interviews with firms in Shanghai, he found that as institutional changes (in particular changes in legal institutions) were taken more seriously in society, the role of guanxi somewhat changed. While friends and connections remained important 'to do good business', they became less important to take care of procedures in economic situations (or to go around or substitute for the law). One important reason for this change was that as firms and transactions reached a certain size, adherence to the law was perceived to be more efficient to get things done. Another reason was that the competitiveness of China's emerging economy brought with it pressures to select projects that would succeed in the market. In choosing partners, firms had to put greater emphasis on price, quality and speed of production instead of 'embeddedness' in networks of social relations.

Information is likely to be more incomplete and harder to access when firms are located outside the city or province. In table 5 (above), we show that firms dealing with customers outside the province generally have less access to information from informal networks, in particular social networks. Up to the mid 1990s internal travel and trade was heavily restricted in Vietnam (Van Arkadie and Mallon 2003). These restrictions combined with incomplete formal institutions may have initially led firms to limit their trade across provincial borders. In 1995, only 29 percent of the customers were located across provincial borders. Restrictions on internal trade have now been largely removed and access to information on trading partners has improved, which may in part explain the increased trading across provincial borders. In 2004, nearly 45 percent of the customers of firms in the MW panel were found to be located across provincial borders.

b) Informal Monitoring and Reputation Mechanisms

Williamson's hypothesis is that not only ex ante but also ex post monitoring and adaptation should be considered in studying contractual relations. Monitoring gives information that can help the firm assess the prospects of opportunistic or involuntary breach of contract. There are a number of variables in the survey that reflect direct monitoring activities by private firms.

Most directly, firms collect information from the customer or supplier through, for example, frequent visits and communication. In just over 20 percent of all relations, manufacturers would visit their customers or suppliers at least once a month. Long term relationships are also important as enterprises are able to learn about their partner's reliability over time. Our survey confirms that Vietnamese firms have a long time horizon with their trading partners. When we asked firms whether they expected to be doing business with their customer in 5 years time, over 80 percent strongly agreed. In 2004, the average length of relationships with customers was just under 6 years. Not surprisingly, the average length of relationships has increased over time (by the simple fact that firms have been around longer). In 1995 the average length of relationships was just over 2 years.

Our panel data in table 5 show the changes in monitoring (and reputation mechanisms) over time. Direct ex post monitoring seems to have reduced, or at least changed its nature over time. In the mid 1990s, entrepreneurs would visit their customer more frequently than in 2004. This reduction does not represent a decline in overall monitoring, but rather more efficient ways of communicating. In 2004, in about half of the relations (46 percent), entrepreneurs communicate via phone, fax or email at least on a weekly basis.

14 And also other surveys such as, for example, Tenev et al. (2003).

15 We were unable to analyze the role of social networks over time using the MW survey as it did not analyze the role of wider social relations (outside family).

Table 5: Ex Post Monitoring and Reputation

N=68 *(Percentage in total)*	MW (1995)	VBS (2004)
Visit customer at least monthly	36	31
Communicate with customer at least weakly	NA	46
Talk to other suppliers of customer	30	36
Member of association providing information about customer/supplier	28	32
If a customer of mine cheats another firm, I will find out about it	18	29

Sources: VBS 2004, and MW 1995

Long term relations and visits to customers are forms of bi-lateral governance, but reputation mechanisms can also be multi-lateral. Business associations are an important example of such networks (see Woodruff, 1998). In our survey, almost 40 percent of all firms in the survey were members of a business association. Table 5 also shows that the role of associations as provider of information on buyers and suppliers has increased since the mid 1990s.[16]

Businesses also interact in looser and more informal networks. In 42 percent of relations with suppliers, the owner would talk to other customers of his/her trading partner. In table 6 we show that in 36 percent of relationships entrepreneurs would talk to other suppliers about their customer compared to 30 percent in 1995. This type of reputation mechanisms seems to have gained in importance over time. In general, it seems that manufacturers are better informed about the actions of their trading partners than in earlier periods. About 30 percent of firms indicated that if a customer would cheat another firm, they would find out about it. This percentage is also significantly higher than in the mid 1990s.

7 Emerging Formal Institutions: Use of Contracts and Belief in Courts

Under the assumption that laws and formal institutions in developing economies are lacking or incomplete, researchers have assumed that formal contracts play a limited role in transition economies. But do they? According to the VBS 2004, in Vietnam nearly 70 percent of transactions with customers are based on a written contract (i.e. the main provisions such as price, quantity, time of delivery and payment are stated in a written form). Some contracts are more 'complete' than others. Over 90 percent of respondents said that they would agree in advance with their customers on the quality specifications, about 65 percent would agree on renegotiation conditions, about half on penalties in case of breach and about one third would agree on a mediator or arbitrator in case of dispute. Contracts with suppliers differ from customer contracts in that they are significantly less likely to be written. Just over half of the firms said they had written contracts. They also put significantly more emphasis on quality specifications and less on penalties in case of breach.

The basis and meaning of contracts in Vietnam may have changed during the transition. Unfortunately, it is hard to compare the role of the use of formal contracts over time as the MW survey does not provide us with much information on the type of contracts that firms used in the mid 1990s. They did find however that *orders* of customers were written in just over 60 percent of the relations. In 2004 this percentage had risen to 76 percent. They also found that in 64 percent of the relations with customers quality specifications were written in a contract or order, while in 2004 this had increased to over three quarters.[17]

It seems, however, that writing orders had much less of a 'legal' basis in the mid 1990s than it did in 2004. Entrepreneurs in the early stages of transition would write more than half of their orders, but less than 10 percent believed that those orders or contracts could be enforced by a third party.[18] In 2004, nearly 80 percent of entrepreneurs believe contracts can be enforced by a third party. Importantly, half of all the respondents believe that their contracts can be enforced by the court system. This result is in line with findings of similar surveys carried out in Eastern Europe (Johnson, et al., 2002).

The increased importance of the 'legal' basis of contracts is also confirmed by firms' knowledge of the 'law on contracts' and the 'laws and procedures related to court action'. One third of the firms report to have good or excellent knowledge of contract law, and half report to have average knowledge.[19]

Interestingly, firms seem to have a more positive assessment of the ability of courts upholding contracts than one would expect based on observations of actual court use. While 60 percent believe contracts can be enforced in court, in reality courts have played a very minor role, and have not been regarded as a credible unbiased enforcement mechanism by expert observers. Indeed, only 10 percent of our surveyed firms have ever used or contemplated using the court. It is not possible to state whether Vietnam stands

16 Trang and Stromseth (2002) document how associations have emerged and evolved over the transition.
17 Comparison over time is based on the data from the panel, including 68 customer relations.
18 We should keep in mind that economic courts in Vietnam were only established in 1994, just one year before the MW survey was carried out.
19 The question asked firms to rate their knowledge of various laws on a 5 point scale, ranging from 1=no knowledge; 2=poor knowledge; 3=average; 4=good knowledge; 5=excellent knowledge.

apart from other countries in this finding. Recent research has shown that even in countries with developed legal systems courts use varies considerable (and can be quite low). Deakin et al. (2000) report that while German firms are more likely to have formal contracts than English firms, they are also much less likely to take legal action against a supplier or buyer committing a breach of contract.

Thus, while the courts are certainly playing a more positive role than in the past, the formal legal system is still not regarded as a key institution protecting commercial contracts. This then raises the question as to why, if written contracts are often not considered legally binding, they are written at all? How do they help mitigate risk if they can not be (formally) enforced? Empirical research in more developed economies has demonstrated that even where enforceability is weak, formal (written) contracts can have value outside the legal framework. Macaulay (1963) first observed that US manufacturers often entered into written contracts, even where there were little prospects for legal enforceability and minimal advance planning for contingencies for defective performances.

The institutional foundation of contracts is also a much discussed topic in relational contract theory (see Macneil, 1980; 1983). Contracts may act as relational or social norms that foster cooperation. Our qualitative interviews revealed that contracts in Vietnam are often primarily intended as a clear record of the agreement, which in the ambiguous commercial context of Vietnam in the 1990s can serve over time the purpose of creating a new 'way of doing business'; i.e. it may produce (social) norms to which the participants expect to adhere to. This suggests that in Vietnam writing contracts in itself – whether or not the contract can be enforced in a court of law – can play a role in building trust, and hence facilitate the transition to a market economy. We examine this proposition more rigorously in the next section, where we attempt to statistically establish whether the use of written contracts and belief in courts enabled firms in Vietnam to take on more risks.[20]

8 The Determinants of Risk-Taking by Firms: The Role of Formal and Informal Institutions

In this section we examine the relationship between risk assumed by firms and the use of risk management mechanisms. In section III, we hypothesised that access to informal and formal institutions will determine the risk assumed by firms. Our dependent variable is the risk taken by firms in their relationships with *customers*. As discussed in section III, we use two measures of transactions risk. The first is specific investment (as a binary variable), the second is a composite measure of risk (including the four types of risk discussed in section III). Our explanatory variables are various types of institutions as discussed in the two previous sections and a number of control variables. The models are estimated using discrete (probit) regression models.

a) Empirical Specification

Denoting the dependent variable with AR* (assumed risk), we estimate the effect of 3 sets of variables and a set of control variables:[21]

$$ARi^* = \beta X_i + \delta Y_i + \gamma Z_i + \eta W_i + \mu_i$$

With:

X_i – vector measuring the bilateral and multilateral networks

Y_i – vector measuring formal institutions and contracts

Z_i – variable measuring the degree of 'lock-in'

W_i – vector controls for industry dummies and firm characteristics

μ_i – the error term.

In table 6 we summarize our hypotheses about the effects of various institutional variables on risk taking. All variables, apart from the 'lock-in' variable were discussed in the previous section. If few alternative suppliers are available due to for example high search costs or high transportation costs, a customer can be locked in a relationship. Game theory predicts that in such circumstances, bilateral relations and networks are more effective. If fewer alternatives are available, termination threats become more effective. In other words we would expect to find a negative relationship between the availability of alternatives and the degree of risk taking. As in the MW survey, we use the number of alternative suppliers and the presence of the most important competitor nearby as a proxy for the degree of lock-in. However, we also test an alternative hypothesis that more intense competition may result in firms

20 A study in Ho Chi Minh City shows that legal papers play a similar role in the real estate market. In theory property rights are established by legal titles, but for many properties in Ho Chi Minh City these legal *titles* are missing, instead legal *papers or documents* serve as 'property rights' (Kim, 2004).

21 This model is inspired on McMillan and Woodruff's (1999a) trade credit model. We augmented the MW model by adding a set of variables to capture the effect of formal institutions and contracts.

taking higher transaction risks. Following the promulgation of the Enterprise Law and further reforms liberalizing trade, a large number of new firms have entered the market. In this increasingly competitive environment, manufacturers may try to obtain a competitive advantage by taking risks in the form of differentiation (for example by producing unique goods) (Porter, 1985).[22]

Table 6: Summary of Determinants of Risk Behaviour

Independent Variable	Predicted Sign
Informal Institutions	
Manufacturer's own information	
- Duration of the relation	+
- Visits to the customer (at start, currently)	+
- Customer is foreign	+
Networks	
- Information from social networks	+
- Information from business networks	+
Formal Institutions	
Written contract	+
Belief that courts can enforce in disputes	+
Lock In	
- availabilty of alternatives/competition	- or +

Note that in the regressions in this section we only consider the relations between manufacturers and *non-state customers*. Relations with state customers seem to be clearly of a different nature, and thus we find the results to be more robust when state relations are excluded from the regressions. The survey contains complete information on 301 manufacturer-customer relationships and thirty one percent of the customers are either state owned enterprises or government agencies. Eliminating these relationships leaves a sample of 205 manufacturer-customer relationships.

b) Specific investment

We estimate the determinants of whether or not the firm has made any specific investments in equipment or has trained or organized workers specifically to supply a particular customer. Table 7 presents marginal (for continuous independent variables) and discrete (for dummy independent variables) effects of a change in the independent variables.

Firms invest in specific equipment and workers in 15 percent of the relations with private customers. The first set of variables includes the effects of information on partners available to the manufacturer. We expect that, *ceteris paribus*, longer relations will involve more trust and correlate positively with risk taking. We use two variables to test this effect: the length of the relation between the supplier and his customer (in years); and a dummy variable on whether the relation is the oldest or the newest. *Firms are found to take significant larger risks on their oldest partner, but interestingly the link between risk taking and the overall length of a business relationship is ambiguous.* We probed this relationship further in our qualitative interviews. Here we found that views towards risk differ significantly among different types of entrepreneurs. Specifically, it seems that a new generation of (often younger) entrepreneurs are entering into private business with a more 'modern' approach. This approach involves newer and more complex production techniques and investment in human resources. Long term relationships remain important, but firms are taking risks more rapidly and earlier in the relationships. This may help explain why we sometimes find an inverse relationship between the length of the business relationship and the willingness to make specific investment. (By definition these newer firms have not had time to have long relationships).[23]

We also found other evidence that seems to support our hypothesis that younger firms are taking more risks in Vietnam. For example newer firms are also found to export and import relatively more. They also seem to sell and buy significantly more outside the province in other parts of Vietnam and transact less with state owned firms.

Other sources of information and familiarity with business partners are also found to be significant in determining the degree of specific investment. Thus, for example, firms that visit their (potential) partners before the start of the relationship often seem to acquire more trust, resulting in a willingness to take more risk in the form of making specific investments. Ex post monitoring in the form of ongoing visits

22 Note that market structure or competition is a critical dimension largely neglected in the transaction cost literature (Maher, 1997).

23 We tried to control for this effect by adding other variable such as age of the firm and entrepreneur as extra controls, however the effects were not significant.

is also important. If manufacturers visit their customers at least once a month, their predicted probability of making specific investment raises 13 percent.

We also predict certain signals will help entrepreneurs to distinguish between firms who are more or less likely to behave opportunistically. In qualitative interviews entrepreneurs referred to good relations with foreign customers. Trust in these relations seemed to be based on the general reputation of these firms, rather than information collection or experiences gathered by the entrepreneur. Our probit regression confirms that *if the customer is a foreign firm, the probability of the manufacturer making specific investments* will be .16 greater than if the customer is domestic (private).

The extent to which firms are part of business and social networks is also found to be significant in influencing willingness to take risks. The regressions confirm the importance, in particular, of social networks. If firms receive information through family or friends, their probability of investing is .06 greater than those who did not receive information through these networks. If entrepreneurs have parents operating a private enterprise, their expected probability of investing is .24 greater. Business networks were found to be significant as an ongoing monitoring mechanism. If firms talk to other suppliers of their customers, the predicted probability increases .15 points.

The third set of independent variables measures the effect of formal institutions on specific investments. We expect that when contracts are written and more complex, the entrepreneur will be more likely to engage in specific investments. We use a contract index as a proxy of the type (written or oral) and completeness of the contract. The variable takes values from 0 to 5 depending on whether the contract is written and what kind of specifications are included (quality, renegotiation arrangements, penalties, dispute resolution etc.). Oral contracts take a value of zero, while positive and larger values signify more complete written contracts. In column (2) of table 7, we observe that *as contracts become more formal (written) and complete, enterprises will be more likely to invest in specific assets*. The table shows the marginal effect of the contract variable, but calculated discrete effects (not presented in the table) for the contract index indicate that as the index changes from its minimum (0) to its maximum (5), the probability of firms making specific investments is 0.22 greater.

Stated confidence in courts surprisingly does not have a significant effect on the decision to make specific investments. This may be due to the fact that courts are not (yet) considered as an effective and impartial enforcement mechanism. An additional reason here may be that courts are not expected to be effective in complex transactions involving specific investments. One of the basic predictions in the transaction cost literature is that in the presence of specific investments courts become less relevant because they have an 'informational disadvantage'. In such circumstances transaction cost economists predict relational contracts to be more appropriate governance mechanisms (Williamson, 1985). Contracts are bound to be incomplete and information about complex contracts and relationships may not be 'verifiable' (i.e. can not be proven) in court. Courts can not judge whether a breach of contract has occurred if they can not verify whether the circumstances that call for an action have actually taken place (Dixit, 2004). Verifiability is probably worse in Vietnam due to two reasons. First, firms are still afraid of disclosing any information about their business activities. Secondly, judges currently still lack the experience to handle perhaps more complicated cases such as those involving specific investments.

The final group of variables investigates the impact of 'lock-in'. Here the relationship could be either positive or negative. Game theory predicts that if there are few alternatives available (to the customer), and thus customers are locked into the relationship, there will be a higher propensity for the supplier to take risks. Following this line of reasoning we would expect a negative relation between the availability of alternatives to the business partner and the willingness of the supplier to invest in specific capital stock to meet the needs of the customer. On the other hand, theory would suggest that greater competition among suppliers would drive them to take greater risks than they would otherwise choose to do, implying a positive relationship between competition and fixed investment. It is not clear from this regression however which effect dominates; the effect is insignificant.

Table 7: Probit Regressions on Specific Investment

	(1)	(2)
	Specific investment	Specific investment
Own Information		
First information from visits(d)	**0.250**	**0.122**
	(3.37)***	**(2.47)****
Currently visit customer at least monthly (d)		**0.134**
		(2.99)***
Length of relationship (c)		-0.005
		(1.61)
Oldest customer (d)		**0.111**
		(2.72)***
Customer is Foreign Investor (d)	**0.157**	**0.161**
	(2.09)**	**(2.54)****
Networks		
Parents operate enterprise (d)	**0.177**	**0.242**
	(2.99)***	**(3.38)*****
First information from family and friends (d)	**0.073**	**0.064**
	(2.36)**	**(2.98)*****
First information from business network (d)	0.031	-0.018
	(0.77)	(0.84)
Talk to other suppliers of customer (d)		**0.148**
		(3.18)***
Member of business association (d)		-0.005
		(0.18)
Contracts and courts		
Contract Index (c)	**0.027**	**0.027**
	(2.58)**	**(3.29)*****
Could use court in dispute (d)	-0.012	-0.007
	(0.36)	(0.29)
Competition or lock-in		
Most important competitor within 1km (d)	-0.034	0.025
	(0.82)	(0.61)
Controls		
Log of number of workers (c)	**-0.039**	**-0.026**
	(2.53)**	**(2.39)****
Located in Ho Chi Minh City (d)	**0.089**	0.040
	(2.60)***	(1.57)
Industry Dummies (3)	Yes	Yes
Number of Observations	**205**	**205**
Chi-squared	59.51	77.14
Prob>Chi2	<0.001	<0.001
Pseudo R-squared	0.37	0.51

Notes: i) Robust z statistics in parentheses - * significant at 10%; ** significant at 5%; *** significant at 1%; ii) Table reports marginal changes for continuous independent variables (c) and the discrete change in probability for dummy variables (d)

A number of regression diagnostics were carried out to check for the robustness of the regression results. For example the regressions were checked for possible simultaneity effects in the ongoing monitoring variables. Variables such as talking to other suppliers and long term relationships could potentially be seen as effects rather than determinants of increased risk taking. To do this, we ran regressions excluding these variables. In Column (1) of table 7, we estimate the effects of formal institutions and information available *at the start of the relation only*. The results show that the coefficients remain positive and significant. The regressions also control for possible biases caused by differences among industries. Dummy variables were included for three industry groups in which specific investments are relatively high. We also controlled for some firm characteristics, such as the size and location of the firm. Standard tests for heteroscedasticity, multicollinearity and outliers also indicated no causes for concern.[24]

c) Risk Index

We close our discussion of determinants of risk taking with a summary regression on a risk index. We use the four variables representing risk taking as components to construct a composite measure of risk. The index is constructed by summing up the individual binary risk measures.[25] The measure can take values from zero (no risk taking) to four (company takes all risks). Using this measure we try to *explain* the degree of risk taking. We use the risk index regressions to address one of the weaknesses of our binary measures of risk i.e. the lack of variation. All our measures (apart from trade credit) do not allow us to distinguish firms that take bigger risks from firms that take a smaller amount of risk. The regression is also used to confirm our earlier conclusions and to assess the economic significance of various enforcement mechanisms. For this we analyzed the coefficients in table 8 but also calculated the marginal effects (not shown in the table) of our independent variables on the probability that firms take a certain level of risk.

In this regression, access to social networks, in particular family related, has by far the biggest effect on risk taking. Information obtained through business networks and information obtained through own experience have somewhat smaller and similar effects on risk. Membership in associations is not significant, but more loose forms of association such as talking to other suppliers is. The ability to acquire information through initial and ongoing visits is also important, as is information gathering through experience. Finally, a competitive environment encourages firms to take more risks. Firms also take significantly more risk when their customer is foreign.

We also find that both contracts and belief in courts now have a significant effect on the degree of risk taking in Vietnam. Firms which have more complete contracts and believe that courts could be used in case of a dispute take more risk. The effect of these formal mechanisms is relatively smaller however than the effects of informal mechanisms.

24 All regressions include adjustments for heteroscedasticity using the Hubert/White sandwich estimator of variance instead of the conventional MLE. We also further tested the results by running a heteroscedastic probit model, which generated similar results. All Variance Inflation Factors for independent variables (which test for multicollinearity) were smaller than 2.5, indicating no cause for concern.

25 Risk Index = specific investment (0,1) + unique production (0,1) + production to order (0,1) + manufacturer extends trade credit (0,1). Note that trade credit is measured by a binary variable instead of the continuous variable used in the tobit regressions.

Table 8: Determinants of Risk Index

	RISK INDEX
Own Information	
First information from visits	**0.547**
	(2.55)**
	0.549
	(2.68)***
Length of relationship	-0.033
	(1.29)
Oldest customer	**0.439**
	(1.76)*
Customer is foreign investor	**0.891**
	(3.13)***
Networks and reputation	
Parents operate enterprise	**1.083**
	(5.16)***
First information from family and friends	**0.615**
	(3.20)***
First information from business network	-0.076
	(0.41)
Talk to other suppliers of customer	**0.501**
	(2.49)**
Member of business association	-0.039
	(0.17)
Contracts and courts	
Contract index	**0.302**
	(4.81)***
Could use court in dispute	**0.337**
	(1.94)*
Controls	
Log of number of workers	-0.078
	(0.95)
Located in Ho Chi Minh City	-0.005
	(0.03)
Industry Dummies (7)	Yes
Observations	**205**
Chi-squared	131.5
Prob>Chi2	<0.001
Pseudo R2	0.22

Notes: a) Robust z statistics in parentheses - * significant at 10%; ** significant at 5%; *** significant at 1%; b) Table presents coefficients of ordered probit regression (not marginal effects).

9 Conclusions

In recent years, there has been a shift in the understanding of the causes of economic development to account for institutions. It is now widely accepted that getting institutions right is no less important than getting prices right, and that markets are unlikely to work well without appropriate legal institutions that protect property rights. But much less well understood is the extent to which informal institutions can compensate well in the absence of formal institutions. In general, institutional reforms have been focused on best practice models without paying much attention to existing institutional arrangements (Rodrik, 2008). By analyzing market transactions of Vietnamese manufacturing firms, this paper shows how, during its economic transition, Vietnam maintained many of its existing 'home grown' institutions while new institutions were gradually developed.

Despite the absence of fully developed formal contract enforcement mechanisms, firms take considerable risks, and this risk taking has increased over the transition period. Informal networks have retained their significance as instruments of risk management. Firms acquire information and trust through long term relationships and social and business networks are significant reputation mechanisms. However, the nature and importance of informal mechanisms seem to have changed somewhat over the time. Social networks – even though still by far the most important source of information – seem to have become somewhat less important. We also observe a degree of *formalization* in informal networks. For example, the role of business associations as providers of information on buyers and suppliers has increased since the mid 1990s.

Risk management strategies have also shifted as more market friendly/formal mechanisms have started to emerge. Firms express more confidence in the court system than in earlier times and contracts have become more formalized, in turn affecting the way that firms manage risk. Firms appear to assume higher risks when they have faith in courts or use written contracts. These findings confirm that formal and informal institutions are acting as complements in Vietnam's transition process, and that informal institutions remain important as mechanisms of risk management as formal institutions begin to emerge in Vietnam's industrial landscape.

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