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The Central Role of Entrepreneurs in Transition Economies

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All sorts of small enterprises boomed in the countryside, as if a strange army appeared suddenly from nowhere," remarked Deng Xiaoping, reflecting in 1987 on the first eight years of China's economic reforms (Zhao, 1996, p. 106). These startup firms drove China's reform momentum; they were arguably the single main source of China's growth. But their rapid emergence, Deng said, "was not something I had thought about. Nor had the other comrades. This surprised us." The reformers had not foreseen the key to their own reforms. The other ex-communist economies had similar experiences. As in China, new firms were drivers of reform. They strengthened the budding market economy by creating jobs, supplying consumer goods, mobilizing savings and ending the state firms' monopoly. As in China, also, the reformers usually did not anticipate the force of entry.

Of the two routes to a private sector—privatizing the existing firms and creating new ones—the policy debates focused almost exclusively on the former. Little attention was given to what reform policies would foster entry. Dusan Triska, for example, the architect of Czechoslovakia's privatization program, said privatization "is not just one of the many items on the economic program. It is the transformation itself" (Nellis, 2001, p. 32). It is not surprising that those who had spent their lives under central planning did not foresee the impact of entrepreneurship, but few analysts from the West predicted it either.

The reason for underestimating entrepreneurship, perhaps, was a sense that setting up a business, risky anywhere, is especially risky in an economy undergoing

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deep reform. With prices volatile as a result of the reforms, it is unclear which lines of business are going to be the most profitable. State firms, fearing competition, harass the new firms, and corrupt bureaucrats extort bribes. Without the normal market-supporting institutions, the new firms usually cannot rely on the courts to enforce their contracts; bank loans are unobtainable for most; and there is little legal or regulatory provision for shareholding.

These handicaps notwithstanding, large parts of the new market economy arose spontaneously, through the initiatives of entrepreneurs. They succeeded by self-help: they built for themselves substitutes for the missing institutions. Reputational incentives substituted for court enforcement of contracts. Trade credit (loans from firm to firm along the supply chain) substituted for bank credit. Reinvestment of profits substituted for outside equity.

In this paper, we summarize entrepreneurial patterns in the transition economies, particularly Russia, China, Poland and Vietnam.[1] Markets developed spontaneously in every transition country, but they were built at varying speeds. Some governments impeded the entrepreneurs' self-help by creating conditions that made it hard for informal contracting to work; others created an environment that was conducive to self-help. The spontaneous emergence of markets, furthermore, has its limits. As firms' activities became more complex, they came to need formal institutions. Some governments fostered entrepreneurship by building market-supporting infrastructure; others did not (Frye and Shleifer, 1997). We will argue that the success or failure of a transition economy can be traced in large part to the performance of its entrepreneurs.

The Environment for Entrepreneurship

All the transition economies, from the former Soviet Union and central and eastern Europe to China and Vietnam, were similar in one important respect: their planned economies had been dominated by large firms, producing few consumer goods. Small and medium-sized firms were almost nonexistent, although they are a large part of every market economy. Trade and services were also a much smaller part of the transition economies than is typical for a market economy. As reform led to greater flexibility in prices, wages and production decisions, the imbalances inherited from the planned economy created enormous profit opportunities for entrepreneurs. Entrepreneurs responded by starting enterprises at a rapid—though varying—rate in each of the transition countries.

Some governments actively made it hard for entrepreneurs to operate. Expropriation of profits through official corruption was the most conspicuous of such actions. Managers of startup manufacturing firms were asked in a survey whether "extralegal" payments were needed in order to receive government services or a

[1] Our focus will be on the state's role in encouraging startup firms, not on efforts to create a market sector by revamping the old state firms; on that issue, see Djankov and Murrell (2002), Megginson and Netter (2001) and Nellis (2001).

business license (Johnson, McMillan and Woodruff, 2002b). More than 90 percent of Russian managers said they were, compared with about 20 percent of Polish managers. Corruption deters investment. Those firms in the sample that were the most concerned about corruption invested nearly 40 percent less than those least concerned. The mafia is a further deterrent to entrepreneurship. Asked whether payments to private agencies were necessary for "protection" of their activities, more than 90 percent of Russian managers and 8 percent of Polish managers said they were.

Managers were asked in the same survey whether they would invest $100 today if they expected to receive $200 in two years (an implied annual rate of return of 40 percent). The responses to this question give an indication of both the opportunity cost of money and the security of property. A striking 99 percent of the Russian managers said they would not, compared with 22 percent of the Polish managers.

Illegitimate takings aside, official policies often make it expensive to set up firms. Entrepreneurs must apply for business licenses to establish that their company's name is unique and provide proof of their startup capital; then they must file with the tax and labor authorities. In Russia, setting up a new business takes an entrepreneur over two months and costs 38 percent of per capita GDP in official fees (Djankov et al., 2002). In Poland, it takes nearly a month and costs 28 percent of per capita GDP. In Vietnam, it takes nearly six months and costs a striking 150 percent of per capita GDP.

The government's decisions on privatizing state firms may also have affected the environment for new firms. Mass privatization could add to the general uncertainty, thus deterring entry. Across Russia's regions, more new firms have been formed where there was less privatization of small state enterprises, though more entry has occurred where there was more privatization of large-scale state enterprises (Berkowitz and Holland, 2001). The continued presence of state enterprises also raised barriers to entry. They absorbed scarce capital and received regulatory favors (as did the privatized firms). Anecdotes abound of state firms stifling new entrants to prevent them from becoming competitors.

Not only did governments impede entrepreneurship, formal institutions to underpin entrepreneurial activity developed only slowly. In Vietnam in the mid-1990s, for example, after a decade of reform, the market institutions were still inadequate. Banks almost exclusively served state-owned firms. There were no credit-reporting bureaus. Courts able to enforce contracts between private firms were just being created. Among manufacturers we surveyed between 1995 and 1997, less than 10 percent said that courts or the government could enforce a contract with a buyer or seller, and just 10 percent said that they had received credit from banks when they started their business (McMillan and Woodruff, 1999b). In another survey carried out in 1997, 74 percent of private firms reported having no debts to banks, and such debts represented only 20 percent of the capital among the 24 percent of the firms that did have them (Ronnås, 1998).

Profits and Entry

Four transition countries, Poland, Russia, China and Vietnam, span the range of entrepreneurship patterns. Poland was among the most successful in fostering new private firms. Russia was among the least successful, though entry occurred even there. China took a distinctive path with entry of competitive enterprises run by local governments. Vietnam offers an example of robust growth of private firms even with an almost total absence of formal institutions to facilitate business.

A telling measure of the success of a transition economy's reforms is the time path of entrants' profits. Figure 1 shows the path of profits in the five years following the start of transition in China (1979–1984) and in Poland and Russia (1990–1995). In China, at the start of the reform era in 1979, the average profits of nonstate firms were 28 percent of invested capital. This is very high in comparison to earnings in a mature market economy: small businesses in the United States typically earn returns between 9 percent and 15 percent of assets.[2] As China's transition proceeded, the new firms' profits declined steadily through the first decade of reform, falling to 15 percent of invested capital in 1984 and leveling out at 6 percent in 1991 (Naughton, 1995, p. 150).

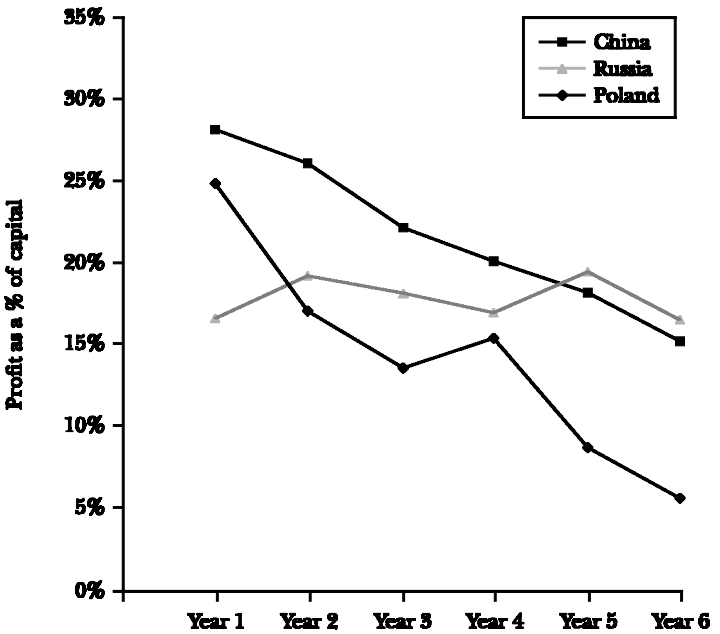
In Poland, profit rates of manufacturing firms in their first year of operation fell from an average of 25 percent of invested capital for firms formed in 1990 to 6 percent for firms formed in 1995. In Russia, also, profits earned by entrants were high at the start of the reforms: firms established in 1990 earned an average profit of 17 percent on invested capital in their first year of operation. By contrast with China and Poland, however, profits did not decline over time: first-year profits for firms established in 1995, at 16 percent, were almost as high as those for the firms established in 1990 (Johnson, McMillan and Woodruff, 2002b).[3]

The high profits earned in all three countries early in the transition are easily explained. The starting point was a heavily distorted economy with unfilled market niches. Firms that were able to overcome the impediments to doing business and produce and sell goods and services were very profitable. In Poland and China, as market-supporting institutions developed, the impediments declined and so rents

[2] The U.S. data are from the National Survey of Small Business Finances (Federal Reserve Board of Governors, 1994). The NSSBF sampled 273 manufacturing firms with between 10 and 250 employees. The return on invested capital averages 15 percent. However, in the surveys of firms in the five eastern European countries, profits as a percentage of assets were obtained in categories, with the lowest category being "negative" and the highest category being "41 percent or greater." When these categories are used with the U.S. data, the average return on invested capital is 9 percent rather than 15 percent. It is likely, then, that the data from Poland and Russia discussed in this section understate somewhat the return to capital.

[3] A word of caution about comparing the profit data from China on the one hand and Russia and Poland on the other: The Polish and Russian data are from surveys of about 300 manufacturers in each country in 1997 (Johnson, McMillan and Woodruff, 2002b). Firms were asked about profits in their first year of operation. Figure 1 shows the average profit rate of firms beginning operation in each year. As such, they are subject to possible recall and selection bias. The China data were gathered contemporaneously from firms operating at the time.

Figure 1
Time Path of Profits



Notes: The horizontal axis shows the number of years into reform. For China, year 1 means 1979 and year 6 means 1984. For Poland and Russia, year 1 means 1990 and year 6 means 1995.
Sources: China: Naughton (1996, p. 150). Poland and Russia: Johnson, McMillan and Woodruff (2002b).

fell. Russia's stalled transition shows up in the absence of any decline in profit levels.

Data on the rate of entry of new firms are consistent with the profit paths shown in Figure 1. Entry occurred rapidly in China. Most of the new entrants there were not private firms, but rural enterprises run by local governments, called township and village enterprises. The share of China's industrial output accounted for by rural enterprises increased from 9 percent in 1978 to 30 percent in 1991 (Naughton, 1995, p. 164). Since none of the increase in output of rural firms in China came from privatized state firms, all of it is attributable to newly formed firms. The entry of these new enterprises was driven by the extraordinarily high rates of profit available early in the reforms. The competition engendered by rapid entry was the primary cause of the fall in profits.

Entry in Poland was also rapid. Industrial employment in Poland's private sector firms increased from 15 percent in 1991 to 37 percent in 1994, according to Konings, Lehmann and Schaffer (1996), using data collected by the Polish Central Statistical Office. The 21-percentage-point increase was apparently largely the result of new entrants, since privatized firms represented only 6 percent of industrial employment in 1994. At least one-sixth of industrial employment in Poland in 1994, then, was in de novo firms ("de novo" meaning started from scratch rather than

being spun off from state-owned firms). The level of self-employment in Poland increased from 6 percent of the labor force in 1988 to 12 percent in 1993 (according to Earle and Sakova, 1999, using labor market surveys).[4] Although most of the firm-level studies in transition countries focus on manufacturing, entry may have been even more important in the service sector, given the underdevelopment of the service sector in the centrally planned economies. In Poland, the service sector grew from 40 percent of nonagricultural GDP in 1989 to 66 percent of GDP in 1997.

Russia, by contrast, saw less rapid entry. A 1995 study found that just 6 percent of manufacturing employment was in de novo firms (Richter and Shaffer, 1996). Self-employment in Russia in the early years of the transition increased only from 2 percent of the labor force in 1988 to 3 percent in 1993 (Earle and Sakova, 1999). Confirmation of the slowness of entry comes from data collected by Djankov and Nenova (2001) on employment in manufacturing firms with fewer than 50 employees in 1997. Since small firms were uncommon in the planned economy, small size is a rough proxy for de novo startups. They find that small firms represented 24 percent of manufacturing employment in Poland, but only 10 percent in Russia, and that the employment share of small firms in the Russian service sector more than doubled from 13 percent in 1989 to 30 percent in 1997.[5] All data on increasing shares in Russia need to be interpreted in the context of a shrinking economy. For example, Russia also saw services increase from 40 percent of the nonagricultural economy in 1989 to 62 percent in 1997. The share of services increased in spite of the fact that output of services actually declined by 1 percent per year during the 1990s; manufacturing declined much more rapidly.

The speed of entry in China, Poland and Russia was consistent with the time path of profits shown in Figure 1. Robust entry in China and Poland brought plummeting profits. In Russia, entry was slower, and profits remained high.

In Vietnam, also, the available data indicate that entry of private firms was robust (though we are unaware of any profit data there). Vietnam is an intriguing example, for it is an extreme case in its lack of formal market-supporting institutions. Yet Vietnam's private sector boomed. The number of registered private firms grew by 40 percent per year between 1993 and 1997. Private sector employment grew from 3.8 million to 10.2 million between 1988 and 1992, while employment in state firms fell from 4.1 million to 3.0 million and in cooperatives fell from 20.7 million to 18.6 million. In the following three years, from 1992 to 1995, private

[4] The labor survey data indicate that the majority of the self-employed work for their own account. These workers may represent not robust entry, but desperation in the face of unemployment (Earle and Sakova, 2000). Nevertheless, in 1993, over 4 percent of Poland's workforce were self-employed people who also hired others, a level much higher than in the other transition countries examined by Earle and Sakova.

[5] Djankov and Nenova (2001) data also show that employment in small firms grew rapidly in Poland during the 1990s, from an average of 8 percent in 1990–1992 to 23 percent in 1996–1998. (Comparable data for Russia are not available.) For Russia, small manufacturing firms are defined as those with fewer than 100 employees, rather than 50, as in Poland, hence the difference between Poland and Russia is understated. The service sector data for Russia and Poland are from the World Development Indicators database.

sector employment grew by more than 2.4 million, during which time state sector employment remained constant.[6] Substantially all of this private sector growth came from new entry or expansion of household enterprises, mostly retail and repair shops or small manufacturing enterprises. Vietnam has had no formal program of privatization. Though there were some ad hoc spin-offs from state-owned firms, these represent a minority of the private firms. For example, only 6 percent of firms we surveyed in 1995 said that more than half of their equipment came from state-owned firms (McMillan and Woodruff, 1999b).

Entry was robust, then, in Poland, Vietnam and, in its own way, in China, while it was comparatively weak in Russia. Other transition countries saw entry to varying degrees. Ukraine and the rest of the former Soviet Union were like Russia, for example, whereas Slovakia was more like Poland. Profits were high early in the transition because the inefficiencies of the planned economy left unsatisfied demands and unfilled market niches. Where reform was successful, it brought competitive markets, eroding profits. Where it was less successful, the entrants' profits remained high.

Entrepreneurs' Strategies

In the early years of economic transition, the absence of credit markets, courts and other market institutions created substantial impediments to entry. Potential entrants had to find money with which to purchase equipment and inputs. They had to identify reliable suppliers and customers when most firms were new and little information was available. The unusually high profit rates early in the transition provided a strong incentive for entrepreneurs. But what substituted for the missing formal institutions?

How did the entrepreneurs succeed in overcoming the lack of market-supporting institutions? Ongoing relationships among firms substituted for the missing institutions. Firms relied on the logic of the incentives to cooperate that arise in playing a repeated game. Where courts and laws are unreliable for settling disputes, firms trust their customers to pay their bills and their suppliers to deliver quality goods out of the prospect of future business. Interviews with Vietnamese managers, for example, indicate that they think quite consciously in terms of building relationships with specific customers and suppliers (McMillan and Woodruff, 1999a).[7]

Early in the process of transition, repeated game incentives work especially

[6] Registration data are from McKenzie (2000); employment data from Wolff (1999, p. 63). Joint ventures between state firms and foreign investors are included in the state sector. Beginning in 1993, statistics for collectives and private firms were combined. The increase of 2.4 million jobs is for private firms and collectives combined; however, it is reasonable to presume that collectives continued to decline (their output shrank from 2.7 percent of GDP in 1992 to 0.8 percent in 1998), meaning the employment increase is attributable to private firms.

[7] On the interaction between formal and informal contracting mechanisms, see Baker, Gibbons and Murphy (1994).

well. When it is hard to locate alternative trading partners, because firms are scarce or market information is inadequate or transport costs are high, firms make efforts to maintain their existing relationships. They recognize that they are to some extent locked in with their trading partners, which provides an incentive to behave cooperatively (Kranton, 1996; Ramey and Watson, 2001). The evidence we present in this section suggests that self-enforcing contracts are all that is needed to support a lot of entrepreneurship, especially at the start of the reforms.

Evidence from Vietnam is especially pertinent here, since formal institutions were almost nonexistent for some years after its transition began. Consider access to capital. Even in developed market economies, a major source of capital for small- and medium-sized firms is trade credit from suppliers. The lack of formal financial markets meant that credit from suppliers was even more important to private sector firms in transition countries. In 53 percent of the relationships between the manufactures we surveyed and their customers, some portion of the bill was paid on credit. That suppliers were willing to offer credit in the absence of formal enforcement of contracts is noteworthy. What gave the suppliers confidence that they would be paid? The willingness to sell goods on credit depended upon repeated interactions, according to the managers we surveyed (McMillan and Woodruff, 1999a). Trading relationships most often began with cash transactions, as the partners "tested" each other. Firms got contractual assurance by dealing with firms they knew through having dealt with them before.

Informally enforced trade rests on the shadow of the future. A firm lives up to its agreements because it wants to go on doing business with this trading partner. For the future to weigh heavily enough to induce cooperative behavior, the discounted value of the future profit stream must outweigh whatever immediate profits could be squeezed from the deal. Some of the conditions in the transition economies actually worked against cooperation. The scarcity of credit meant the opportunity cost of capital was high. With high discount rates, firms have an incentive to take current profits rather than wait for future profits. Moreover, as we saw, profits tended to decline over time. To the extent that this was predictable, the gains from forward-looking behavior were lowered. That firms were nevertheless able to operate mutually beneficial relationships is striking.

Other circumstances of the transition aided informal contracting. Cooperation is easier to sustain when severing the relationship results in higher costs. Early in the transition, trading partners were most often located in the same city or even the same neighborhood. There were usually few firms nearby producing any given product. When a supplier severed a relationship with a customer, the customer had to incur a high cost of searching for another trading partner. As a result, trading partners tended to be locked in with each other, inducing them to try to sustain their existing relationships (Kranton, 1996; Ramey and Watson, 2001).

Cooperation is more easily sustained, also, if punishment for malfeasance comes not only from the trading partner who has been cheated but also from other firms in the community. We found that gossip was important in Vietnam's manufacturing community. Firms gathered information about potential or existing trading partners from other firms. Sometimes this information gathering was

organized. Trade associations helped firms to work productively with each other, by spreading information about who had breached contracts and coordinating the sanctioning of them. This meant that reneging brought more severe consequences than merely losing the business of the offended party and thus increased the likelihood of cooperation (McMillan and Woodruff, 2000; Recanatini and Ryterman, 2000).

The self-help mechanisms evolved over time to support more complex transactions. Early in the transition, firms sold mostly to customers located in the same city or limited sales to customers about whom they had prior information from family members, friends or other firms with whom they did business. They were likely to inspect a customer's factory or store before selling to it. These are ways to reduce the risk of dealing with new trading partners, though they involve costs of exclusion or of time spent investigating trading partners. Relationships with firms located in distant cities are harder to manage than local sales, but limiting the circle of trading partners means passing up some opportunities for growth. Sales to customers located in other cities, and to customers about whom the manufacturer had no prior information, became more common as the transition progressed.

Table 1 illustrates these changes using data from surveys in three transition countries, Vietnam, Poland and Russia. The surveys asked firms about the characteristics of their oldest and newest customer relationships. The table splits relationships into those that began earlier and later in the transition. Relationships labeled "old" are those begun in the first six years of reform, before 1993 in Vietnam and before 1995 in Poland and Russia, while those labeled "new" were formed between 1994 and 1997 in Vietnam and between mid-1995 and 1997 in Poland and Russia. All of the variables shown on Table 1 are measured at the start of the relationship and, as such, are indicators of the formation of new relationships rather than the development of the specific bilateral relationships.

These data show statistically significant increases in transactions with customers from other cities, with customers about whom nothing was known at the start of the relationship, and in relationships that were initiated without the seller having visited the buyer's factory or store. In Poland, for example, 35 percent of the customer relationships started by surveyed firms between 1989 and mid-1995 involved customers from a different city, compared with 45 percent of relationships started in 1995 or after. About 39 percent of the newer customers in Poland were anonymous when the trading relationship began, compared with 27 percent of the older customers. Trading started in 38 percent of the new Polish relationships without the seller visiting the buyer's facility, compared with 29 percent of the older relationships.

The patterns in the other countries are similar, both for Vietnam and Russia, as shown in the table, and for Slovakia, Romania and Ukraine, which are not shown. Further evidence on the increase over time in the sophistication of dealings comes from Bulgaria, where quality incentives developed. Suppliers became increasingly willing to guarantee quality and to replace substandard goods based on their trading relationships (Koford and Miller, 1998).

These data suggest that the problems of governing more complex relationships

Table 1
Development of Relationships with Trading Partners

	Vietnam Relationships		*Poland Relationships*		*Russia Relationships*	
	Old	*New*	*Old*	*New*	*Old*	*New*
Located in a different city	28.8%	38.9% (2.27)	35.0%	45.0% (2.40)	14.5%	31.8% (3.44)
Previously unknown	57.6%	65.5% (1.74)	27.0%	38.9% (2.94)	n.a.	n.a.
Did not visit before first transaction	36.6%	50.5% (3.00)	28.8%	37.5% (2.16)	35.3%	30.8% (0.70)
Number of firms	191	281	226	342	344	66

Notes: Old relationships are those initiated prior to 1993 in Vietnam and prior to 1995 in Poland and Russia. In parentheses: *t*-values for differences between old and new relationships. The data on "previously unknown" for Vietnam and Poland are not directly comparable because of differences in the survey instrument. Entries marked "n.a." are not available in the survey used in the given country.
Sources: Johnson, McMillan and Woodruff (2000); McMillan and Woodruff (1999b).

can be overcome not only where courts work relatively well, as in Poland, but even where courts do not function at all, as in Vietnam. Receiving no help from the state, entrepreneurs made do for themselves, by relying on the incentives that arise in ongoing relationships. Repeated games substituted for the courts; trade credit and profit reinvestment substituted for financial markets. The mechanism of self-help supported increasingly sophisticated transactions—at least in the early years of transition.

State Support for Entrepreneurship

Self-help in creating market institutions is not a permanent solution for entrepreneurs. It faces a number of natural limits.

First, the development of the market as the transition proceeds lowers the costs of searching out new trading partners, which weakens a firm's threat to cut off dealings if a trading partner reneges on a deal. The cost of breaking a relationship falls. Firms then become less willing to cooperate with each other, and the need for workable laws of contract and courts able to enforce them becomes more pressing.

Second, repeated games entail personalized interfirm relationships. When firms are small, they need only deal with customers and suppliers with whom they have a particular connection: those located nearby, or managed by a friend or relative, or coming via personal recommendations. Firms were able to some extent to overcome these limitations, as noted above: even in Vietnam, they were able to trade at a distance. Such informal mechanisms are limited, however. To grow beyond a certain size, firms need to manage arms-length anonymous dealings: for example, to begin trading with firms in distant cities rather than just with

geographically nearby firms. Anonymous trades need a greater extent of formal contractual assurance.

Third, as products become more complex, there is an increased need to order them, and to commit to buy them, in advance of production. Without the courts, suppliers may be unwilling to switch to producing complex goods and services.

Fourth, although firms can for a while grow incrementally by investing their retained earnings, they reach a point where, to take advantage of economies of scale, they must make big discrete jumps in their investments. Having a long-delayed return, such investments are unlikely to be made on the basis of ongoing relationships. Sunk costs tempt someone to renege: a purchaser after the costs are sunk may renegotiate the buying price, or the government after the costs are sunk may impose a specific tax. Large-scale investments require legal protection.

Finally, as profits decline through the process of economic transition, while investments often become larger and longer term, firms can rely less on retained earnings to grow and increasingly need access to external finance.

A role for the government, even early in the transition, is to set a stable platform for entrepreneurs' self-help. Macroeconomic instability, common at the beginning of a reform program, can undermine informal cooperation. Consider a trading relationship in which the seller allows the buyer to pay with a 30-day delay. In stable times, the ability to delay payment has a predictable value to the buyer and cost to the seller. The value of continuing the relationship is also predictable. The level of credit offered can be set in such a way that repayment is in the seller's interest. But now suppose that, after the goods are delivered by the seller, there is some unforeseen shock that increases the value to the buyer of not making the required payment and affects only the trading partners' current payoffs, not the stream of future gains from the relationship (such as a sharp decrease in bank credit or a rapid decline in the buyer's demand). If the shock makes the gains from reneging large enough, the buyer will not pay.[8]

Risks were inherent in any trading relationship in all of the transition countries, but the policies of some governments magnified them. Unstable macroeconomic conditions made it harder to predict the behavior of trading partners. High and variable rates of inflation and economic growth led to fluctuations in a trading partner's gain from breaking the cooperative relationship. Macroeconomic stability was conducive to the development of informal trading relationships. On this score, countries like Slovakia, where inflation peaked in 1991 at 35 percent, and Poland, where inflation peaked in 1990 at 75 percent, fared well. Russia and Ukraine, where price stability was longer in coming, fared worse. Of course, the lack of entry in Russia and Ukraine may have contributed to macroeconomic instability as well as the other way around. We know of no data that would allow us to separate the

[8] The situation we have in mind is similar to the Rotemberg and Saloner's (1986) model of price wars during economic booms. In their model, collusion is most likely to break down in a boom when the demand for the product is high, because that is when an individual seller's gain from undercutting the group-maximizing price is highest. Hence, collusion is harder to sustain in industries with more variable demand.

directions of causation. But given the importance of informal trading arrangements early in the transition, theory suggests that, by making relationships harder to establish, macroeconomic instability created a barrier to entry.

While contracting is mainly supported by informal relationships among firms, the courts also foster it. The courts in the transition economies are still inadequate; it takes a long time to build a well-functioning legal system. The evidence shows, however, that even these highly imperfect courts facilitate doing business. Managers of startup firms were asked in a 1997 survey whether they could appeal to the courts to enforce a contract with a trading partner. In Poland, 73 percent said they could, and in Russia, 56 percent said they could. Belief in the courts affects behavior. Those who say the courts are effective offer more trade credit and are more willing to take on new trading partners (Johnson, McMillan and Woodruff, 2002a; see also Frye and Shleifer, 1997; Hendley, Murrell and Ryterman, 1999). By making it easier for new firms to enter, workable courts improve on relational contracting and boost overall productivity. Even weak courts can be useful.

The absence of well-functioning credit markets matters less early in transition than later. In place of external funds, firms reinvest from their own profits. The high profits mean that entrepreneurs have the resources they need for expansion, without needing to borrow. Retained earnings has been the biggest single source of investible funds for startup firms in transition economies. In addition, where interfirm relationships are working well, firms receive trade credit from their suppliers. Trade credit was almost nonexistent among Russian firms as of 1997, but in Poland it was as large a source of firms' capital as bank loans (Johnson, McMillan and Woodruff, 2002b). As entry occurs and profit rates are driven downward, however, credit markets become more important. In Vietnam, there is some evidence that credit markets were beginning to reach new private firms: 24 percent of firms in a 1997 survey reported having bank credit, up from 8 percent in 1991 (Hemlin, Ramamurthy and Ronnås, 1998).

An alternative source of capital is equity markets. State support is needed for an equity market to develop. In Poland, a regulatory agency that intervened to protect minority shareholders from expropriation by insiders allowed the stock market to develop rapidly (Glaeser, Johnson and Shleifer, 2001). New issues were offered regularly. In the Czech Republic, by contrast, the absence of regulatory oversight meant people were, rightly, reluctant to invest in firms because they feared the managers would misuse their money, and so the stock market stayed inactive. Why is regulation needed for equity markets? Informal creation of share ownership is difficult. Fixed costs of issuing shares to a large group of investors prevent a slow buildup of the relationship, with investors testing entrepreneurs as trading partners in Vietnam reported doing. Because outside shareholders lack information on the firm's internal affairs, managers can easily expropriate the returns owed to the shareholders (Johnson and Shleifer, 2001). Prospective shareholders need legal and regulatory protection before they are willing to hand their money over to firms.

Entrepreneurs running de novo startups in Poland reported that an average of 25 percent of their equity capital was owned by private firms or people other than

the top manager's family. This is a somewhat higher level of outside ownership than other countries for which such data are available: Vietnam, at 19 percent, Slovakia, 19 percent, and Romania, 14 percent (Johnson, McMillan and Woodruff, 2000; McMillan and Woodruff, 1999b). The lesson, once again, is that informal mechanisms work only up to a point. Investors are willing to entrust their money to managers they have some reason to believe in, perhaps because of ties of family or ethnicity or because the manager comes recommended by a trusted third party. Large firms with diversified shareholding cannot develop by such informal mechanisms, but some degree of outside ownership can.

Evidence that self-help mechanisms in financial markets have limits comes from Earle and Sakova's (2000) study of entrepreneurship in Poland, Russia and four other eastern European countries. Employers, as compared to wage workers, are more likely to have received property during posttransition restitution and to have had higher earnings in 1988. Also, the parents of those who became employers were more likely to have owned a business prior to communism and more likely to have had a university degree than are the parents of wage workers. These findings suggest that access to capital was a binding constraint on entry, one not entirely overcome by informal credit.

China did things differently with its new firms. Entry occurred in the nonstandard form of the township and village enterprises (Che and Qian, 1998; Whiting, 1996). These firms were publicly owned, by communities of a few thousand people. They were managed by village government, and the profits were shared between villagers and local government by explicit rules. Around 60 percent of profits were reinvested, and the remainder was paid as bonuses to workers or used for local public goods such as education, roads and irrigation. Managerial discipline in the township and village enterprises came from the fact that these enterprises had no access to government subsidies to cover any losses and faced intensely competitive product markets.

The township and village enterprises received some benefits from having the village government as a partner. Access to state banks and to rationed inputs was eased. Public ownership helped remedy the lack of laws protecting against arbitrary expropriation by the state, as well as helping with contract enforcement. Moreover, China's local governments, arguably, did not sabotage their township and village enterprises by overtaxing them because they could see that if they did, the firms would fail and their own revenue source would be lost.

The township and village enterprise organizational form was a transitional device. After a decade and a half of growth, they began to be privatized. By the late 1990s, more than half of them were partially or fully privately owned (Li and Rozelle, 2000). By the turn of the century, the township and village enterprises were well on their way to becoming conventional firms.

Entrepreneurs require more from the state, in the medium and long run, than the absence of interference. If firms are to be able to grow to yield economies of scale, they need laws of contract so they can take on anonymous dealings and financial regulation so they can get bank loans and outside shareholding.

Welfare Effects of Entrepreneurship

The creation of jobs has been arguably the most important welfare benefit of the new entrants. Given the distortions and inefficiencies in the communist planned economy, the old firms had to shed jobs during the transition, and new entrants were needed to take up the slack. New firms have usually been the fastest-growing segment in transition economies. In Poland and in Russia, de novo manufacturing firms grew faster, invested at a higher rate and generated faster employment growth than did privatized firms (Belka et al., 1995; Richter and Schaffer, 1996; Johnson, McMillan and Woodruff, 2000). In Vietnam, the private sector created (in net terms) some 10 million jobs in the seven years from the start of reforms, while the state-owned and collective firms shed workers.

This pattern is repeated in most of the transition economies for which data exist. In Estonia, small privately owned firms—mostly startups—created almost all of the new jobs between 1989 and 1994 (Haltiwanger and Vodopivec, 2000). In Romania, 86 percent of de novo manufacturing firms created jobs between 1994 and 1996, while only 13 percent of privatized firms did so. In Slovakia, 79 percent of de novo firms grew, against 52 percent of privatized firms (Johnson, McMillan and Woodruff, 2000). De novo firms in Bulgaria, Hungary and Romania between 1990 and 1996 grew more quickly than did privatized or state-owned firms (Bilsen and Konings, 1998). Though de novo firms represented less than 3 percent of employment in the samples in Bulgaria and Romania, they created more than half of the new jobs. In a sample of firms from 25 transition countries, Carlin et al. (2001) find that sales and employment grow faster in de novo firms than in privatized or state firms; they also find that productivity gains are smaller, probably reflecting that new firms start at a higher level of efficiency than the state firms and thus have less room for productivity growth.

The key difference does not seem to be between state-owned and private firms, but rather that de novo firms outgrew all other firms. Many studies find little difference between the performance of state-owned firms and privatized firms. The finding that de novo firms perform better than privatized and state-owned firms is not quite universal, however. The Johnson, McMillan and Woodruff (2000) data show essentially no difference in the growth rates of startups and privatized firms in Russia and Ukraine. Lizal and Svejnar (2001) find that the rates of investment of private firms in the Czech Republic were somewhat lower on average than those of state-owned firms in the 1992–1998 time period and that small firms in the Czech Republic were credit constrained while large firms were not (which may explain in part their first finding). Taken as a whole, then, the evidence indicates that de novo firms were more dynamic than privatized state firms, except perhaps where the latter had favored access to capital.

Entrepreneurial firms provide other benefits. Small new firms are dynamic. They learn and change rapidly, and thus they provide a large number of independent experiments on how to do business. One measure of this dynamism is their job churning. In a study of Estonia, Haltiwanger and Vodopivec (2000) separate the net change in employment into the creation of new jobs by expanding firms and the

destruction of existing jobs by shrinking firms. For state-owned firms, in the first half of the 1990s, job creation was small and job destruction among these enterprises was large. In the private sector, there was a lot of job creation. Yet, surprisingly, the private sector also had higher rates of job destruction than the state enterprise sector. These data indicate more flux in the private sector, with some firms expanding rapidly and others contracting. The simultaneous high rates of job creation and job destruction were especially pronounced among the smallest firms, those with fewer than 20 workers. This could be attributable to learning by the small firms, which is especially important in the transition setting, where costs and demands are subject to far wider uncertainty than in a stable economy.

New firms also provide competitive discipline for the pre-existing firms. State-owned and privatized firms in eastern Europe and the former Soviet Union are significantly more likely to have undergone restructuring if they faced competition (Carlin et al., 2001; Djankov and Murrell, 2002). In China through the 1980s, while the township and village enterprises burgeoned, the state firms' markup of price over marginal cost fell by 15 percent; the increased competitiveness of the output market was associated with an increased total factor productivity for the state firms (Li, 1997).

There is some evidence, also, that a transition economy's overall performance is correlated with entry. Comparing economic growth rates of the different regions of Russia, Berkowitz and DeJong (2001) find that the faster-growing regions have more entry of new firms.

Implications for Policy

In the early 1990s, a common view among those advising the reforming countries was that the overriding objective was to get the government out of the economy. Once the prohibitions on market activity were abolished, the argument went, the private sector would quickly take over. Later, in light of the grim performance of Russia and the rest of the former Soviet Union, this simple view was supplanted by a recognition that reforming an economy is exceedingly hard. Success requires a complex package of microeconomic reform, macroeconomic stability and institution building.

Our analysis speaks to both views. On the one hand, it says there is something in the leave-it-to-the-market view. Profit-driven entrepreneurs can do a remarkable amount, even to the extent of creating temporary replacements for the key social institutions of property rights and contract.

On the other hand, our analysis says getting the government out achieves its aim only in a narrow set of circumstances. The self-help substitutes for market-supporting institutions work well only for firms that are small. Larger firms, dealing with many suppliers and customers and trading at a distance, cannot rely solely on personalized relationships to undergird their transactions. Formal institutions are needed, therefore, both by privatized firms and, after a while, by startup firms if they are to grow to an efficient scale. Moreover, government policy does matter even at the level of the small startups, for the business environment must be

reasonably stable and predictable if the shadow of the future is to give firms reason to be able to trust each other. If you keep your word only because of the prospect of future gains, you are more likely to renege when the business environment is very noisy. Corrupt bureaucrats and politicians, by extorting bribes, discourage entrepreneurs from investing (Johnson, McMillan and Woodruff, 2002b). High and volatile inflation could undermine firms' attempts at self-help contracting. Mass privatization, by adding to the uncertainty about which lines of business are going to be profitable, might disrupt the nascent interfirm relationships.

The same ambivalence between the force of informal mechanisms and their limits, by the way, is seen in many developing countries. In Africa and Latin America, firms lacking access to the courts engage in a remarkable range of productive activity (de Soto, 1989; Fafchamps, 2001; Woodruff, 1998). The lack of market-supporting institutions, however, makes it hard or impossible for these firms to grow into sophisticated corporations.

The economic transition has been far more painful in some ex-communist countries than in others. Relative success came in those countries where new market activities were quickly established. Ironically, and contrary to the leave-it-to-the-market view, markets arose faster where the government did not completely withdraw, but rather set a stable platform. New firms entered and grew more slowly in Russia, where the government abruptly ceased controlling prices and rapidly privatized the state firms, than in China, where the government mostly continued doing what it had been doing before. [9]

Conclusion

The importance of entrepreneurs in the transition economies is a reminder that the task of economic transition is not just a matter of government officials enacting certain policies or setting certain rules of operation for the new economy. Entrepreneurs acted as reformers, too. Indeed, much of the task of devising the new ways of doing business in transition economies has been taken on by entrepreneurs.

"By pursuing his own interest," Adam Smith (1776 [1976], volume 1, pp. 477–78) famously wrote of the merchant, "he frequently promotes that of society more effectually than when he really intends to promote it." The entrepreneurs in the transition countries exemplify Smith's dictum. By creating jobs, supplying consumer goods, constraining the market power of the state firms and building reform momentum, they have produced real welfare gains.

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[9] On the parallel roles of bottom-up and top-down forces in developing market rules and procedures, see McMillan (2002).

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