4 GROWTH IN THE RURAL NON-FARM ECONOMY

As discussed in the previous chapter, substantial agricultural growth alone is insufficient to achieve rapid reduction in rural poverty. This is so because agricultural earnings accrue mainly to those with access to the key factors of production (land and water) and because growth linkage effects on incomes in the rural non-agricultural sector are small relative to the number of households deriving incomes from this sector. Thus, increasing rural non-farm incomes, in addition to those arising from growth linkages associated with increases in agricultural incomes, is critical for rapid rural poverty reduction.

This chapter examines the structure of the rural non-farm economy and the constraints it faces. We utilize two sources of data for the analysis. In presenting an overview of the rural non-farm economy and the characteristics of households that derive their incomes from it, we use data from national household surveys and focus on households residing in rural areas (using the Federal Bureau of Statistics definition of rural areas based on administrative boundaries and population). The analysis of the economic characteristics and constraints of the non-farm sector, however, is based on data from a separate rural investment climate survey of enterprises (including household-based enterprises). Because many of the enterprises that reap the benefits of agricultural growth linkages and that employ members of rural households are located in small towns, the survey covers both villages (rural areas as defined by the Federal Bureau of Statistics) and small towns with populations of less than 100,000 people.

STRUCTURE OF RURAL NON-FARM ENTERPRISES

Non-farm enterprises' contribution to income and employment

There are no precise figures on the number of rural non-farm enterprises in Pakistan, but extrapolation from recent surveys suggests there are about 3.8 million rural non-farm enterprises.[62] About 70 percent of these are located in Punjab, 15 percent in NWFP and 10 percent in Sindh. Data from the 2004-05 PSLM survey indicates that about 29 percent of rural households in Pakistan operate a non-farm enterprise (Table 4.1). The rate of enterprise ownership varies from about 19 percent in rural Sindh to 34 percent in rural Punjab.

Table 4.1. Percentage of Rural Households in Pakistan that Own Shops and/or other Businesses

Expenditure Quintile	Pakistan	Punjab	Sindh	NWFP
Poorest Quintile	24%	28%	14%	20%
Quintile 2	27%	33%	18%	24%
Quintile 3	29%	35%	16%	30%
Quintile 4	30%	35%	20%	33%
Quintile 5	37%	41%	24%	45%
Total	29%	34%	19%	30%

Source: Authors' calculations based on PSLM 2004-2005.

[62] This estimate is based on PSLM 2004/2005 data and utilizes the Federal Bureau of Statistics definition of rural areas that does not include small towns. Note that these PSLM-based estimates are considerably higher than estimates for rural households those based on HIES 2001/02, which collected information on households with enterprises of fewer than nine workers. HIES data indicate about 2.5 million rural non-farm enterprises.

While wealthier households are more likely to own non-farm enterprises, poorer households are reliant on employment and thus for a significant share of household income in these enterprises. In all three provinces, enterprise ownership tends to increase monotonically with wealth. For instance, in rural NWFP 45 percent of the wealthiest households own and operate a non-farm enterprise, compared to 20 percent of the poorest households (Table 4.1). About 27 percent of the income of the poorest households in rural Pakistan comes from non-agricultural wages (Table 4.3). In absolute terms, the poorest rural households earn three times as much income from non-agricultural wage employment as from agricultural wage employment.

Almost 40 percent of the rural working population in Pakistan is either self-employed (13 percent) or employed as wage or salaried workers in non-farm activities (25 percent) (PSLM 2004-05).[63] Nearly half of all self-employed persons are engaged in wholesale or retail trade (. The construction and social/personal services sectors are major sources of non-agricultural wage employment and account for roughly 25 percent and 40 percent of paid non-agricultural work, respectively. Note that this non-farm employment need not take place within rural areas (as defined by the Federal Bureau of Statistics), but may take place in near-by small towns (or even larger cities).

Table 4.2. Proportion of the Rural Working Population in Pakistan (Over 10 Years of age) that is Self-employed or a Paid Non-Agricultural Employee

	Pakistan		Punjab		Sindh		NWFP	
Industry	Self-employed persons as % of Total Working Population	Non-Agricultural workers as % of Total Working Population	Self-employed persons as % of Total Working Population	Non-Agricultural workers as % of Total Working Population	Self-employed persons as % of Total Working Population	Non-Agricultural workers as % of Total Working Population	Self-employed persons as % of Total Working Population	Non-Agricultural workers as % of Total Working Population
Mining & Quarrying	0.0%	0.2%	0.0%	0.1%	0.0%	0.2%	0.0%	0.4%
Manufacturing	1.4%	3.2%	2.0%	4.4%	0.4%	1.5%	0.7%	1.8%
Electricity	0.1%	0.3%	0.1%	0.3%	0.0%	0.5%	0.1%	0.5%
Construction	0.4%	6.1%	0.3%	5.9%	0.4%	3.9%	0.5%	10.7%
Wholesale & Retail Trade	6.2%	1.7%	6.3%	1.5%	4.6%	1.4%	8.5%	2.6%
Transport & Storage	1.2%	2.1%	1.2%	1.5%	0.4%	1.8%	2.0%	3.9%
Real Estate, Insurance	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%
Social & Personal Services	3.3%	9.6%	4.4%	9.2%	1.4%	9.2%	3.1%	11.7%
Other	0.6%	2.1%	0.7%	1.9%	0.4%	2.1%	0.4%	2.9%
Total	13.2%	25.5%	15.3%	24.9%	7.6%	20.7%	15.4%	34.5%

Source: Authors' calculations based on PSLM 2004-2005..

Income from self-employment and wage employment in non-agricultural activities accounts for 30 percent of income for the average household (Table 4.3). The relative importance of non-farm incomes varies across provinces, with total non-farm income accounting for 67 percent of household income in rural NWFP, 43 percent in rural Punjab and 32 percent in rural Sindh. Both poor and wealthy rural households are highly dependent on non-farm income. The poorest households are relatively more dependent on non-farm self-employment and wage incomes than richer households.

63 These estimates correspond closely to others from the Pakistan Labor Force Survey 2001-02. In 2001-02 nearly 40 percent of the rural labor force was employed in the manufacturing, construction, wholesale and retail trade, transport and communication and social-services sectors (Malik 2005).

Table 4.3. Annual Household Non-farm Income Shares by Expenditure Quintiles in Rural Pakistan (in 2001-02 Rs)

Expenditure Quintile	Poorest Quintile	2	3	4	5	All	Average Income (Rs)
Punjab							
Agricultural Wages	6%	4%	2%	1%	0%	2%	1,489
Total Farm (excl. agric. wages)	38%	47%	53%	55%	64%	55%	40,175
Net Business Income	15%	12%	11%	11%	9%	11%	7,864
Non-agricultural Wages	26%	21%	20%	17%	12%	17%	12,738
Total Non-farm	57%	48%	45%	44%	36%	43%	31,246
Sindh							
Agricultural Wages	24%	17%	8%	4%	2%	7%	5,791
Total Farm (excl. agric. wages)	42%	52%	61%	63%	67%	61%	52,865
Net Business Income	3%	4%	4%	5%	5%	5%	4,139
Non-agricultural Wages	28%	24%	26%	25%	19%	23%	19,809
Total Non-farm	34%	31%	32%	34%	31%	32%	27,587
NWFP							
Agricultural Wages	2%	2%	1%	1%	0%	1%	481
Total Farm (excl. agric. wages)	24%	30%	36%	36%	30%	32%	21,882
Net Business Income	12%	10%	12%	16%	16%	14%	9,761
Non-agricultural Wages	28%	25%	23%	19%	20%	21%	14,444
Total Non-farm	75%	68%	63%	63%	70%	67%	45,676
Pakistan							
Agricultural Wages	9%	7%	4%	2%	1%	3%	2,285
Total Farm (excl. agric. wages)	37%	45%	51%	53%	58%	52%	33,576
Net Business Income	12%	10%	9%	10%	9%	10%	7,451
Non-agricultural Wages	27%	24%	23%	21%	16%	20%	15,247
Total Non-farm	54%	48%	45%	45%	41%	45%	34,005

Source: Authors' calculations based on HIES 2001-2002; PIHS 2001-2002.

A Profile of Pakistan's Rural Non-farm Enterprises

As in other South Asian countries, the non-farm sector in both rural villages and small towns in Pakistan primarily consists of family based micro-enterprises. According to data from the Pakistan Rural Investment Climate (RIC) Survey, the average small town enterprise employed roughly two workers, and village enterprises employed about 1.7 workers), including paid and un-paid family workers and hired workers. Only three percent of non-farm enterprises in small towns and one percent in villages had more than five workers. The vast majority of labor in small town and village enterprises is family workers; only 23 percent of enterprises in small towns and 11 percent in villages report hiring non-family workers.

Trading enterprises dominate in Pakistan's villages and small towns. About 57 percent of small town and village enterprises are engaged in wholesale or retail trade, followed by around 31 percent in services; the remainder are in production/manufacturing (Table 4.4).[64] The very thin

[64] These estimates of the sectoral distribution of enterprises from the RIC survey are very similar to those from PSLM Round 1 2004/05. According to PSLM, about 47 percent of people self-employed in non-agricultural activities were engaged in wholesale or retail trade and about 34 percent were in the

manufacturing base in small towns and villages is noteworthy, particularly by comparison to the rural non-farm sector in other South Asian countries. In Sri Lanka, production-oriented firms account for 40 percent of rural enterprises, while in Bangladesh manufacturing and construction account for about 27 percent of non-farm enterprises (ADB and World Bank 2004; World Bank 2005).[65] Agro-processing enterprises, primarily flour mills, bakeries and sweet shops account for about 32 percent of manufacturing enterprises in small towns and 36 percent in rural villages.[66] Typical service-sector businesses are repair shops for cycles, vehicles and small electronics; hotels and restaurants; tailors; and hairdressers and barbers. While the rural sectoral composition of enterprises is quite similar in all three provinces, small towns in Punjab have significantly more manufacturing and service enterprises than do small towns in Sindh and NWFP.

The average enterprise is fairly young, and 50 percent have been in operation for less than 5 years, reflecting high startup and closure rates. Manufacturing/production enterprises tend to be older than service and trading enterprises. The average age of a production enterprise in the sample is around 16 years for small-town firms and 11 years for firms in villages; the average age of both village and small town trading and services enterprises is about eight years. About 43 percent of production enterprises have been in operation for more than 10 years, compared to 29 percent of trading enterprises and 25 percent of service enterprises.

The vast majority of owners had established their own businesses; about nine percent had inherited businesses and another five percent reported purchasing their business. On average enterprise owners had about three years of industry experience prior to establishing or buying an enterprise. Owners acquired relevant management and technical skills in a number of different ways. Just under half of business owners (42 percent) acquired skills from relatives and friends; 20 percent were self-taught; and about the same proportion had gained experience from prior employment. Most enterprises were established/purchased using funds borrowed from family and friends, or income from non-farm activities (Table 4.6).

The predominant form of ownership is sole proprietorship, and 80 percent of businesses are owner-managed. Most of these enterprises can be considered informal businesses as they have fewer than 10 workers, and very few are registered or pay taxes. Although rates of registration are generally low, non-farm enterprises in Punjab are more likely to be registered than those in Sindh or NWFP. Only 9 percent of small-town enterprises and 10 percent of village enterprises in Sindh are registered, as compared to 32 percent of small town enterprises and 21 percent of village enterprises in Punjab (Table 4.4). On average it takes about nine days (if necessary) for a village enterprise to get a permit to operate and about 12 days in small towns (Annex Table 4.2). Between one and two government agencies are involved in the issuing of permits and costs range from around Rs 500 in villages to Rs 1,000 in small-towns. In comparisons with corresponding data from Sri Lanka, it is clear that in Pakistan the registration process for non-farm enterprises is longer and costs are higher. While few non-farm enterprises in villages and small towns are registered in Pakistan, more than half of comparable businesses in Sri Lanka are registered.

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service sector (defined as including social and personal services, real estate and insurance and transport and storage).

65 The sectoral distribution of enterprises in Pakistan is similar to that of Nicaragua, where manufacturing accounted for about 6 percent of rural non-farm enterprises, 42 percent were in the service sector and the remainder were in trade.

66 The main agricultural commodities grown in the surveyed villages were wheat, rice and sugarcane in Punjab; wheat, sugarcane and cotton in Sindh; and wheat, maize and jawar (sorghum) in NWFP.

Table 4.4. Profile of Non-farm Enterprises

	Punjab		Sindh		NWFP		All	
	Urban	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**
Employment								
Average number of workers	1.81	1.65	2.25	2.15	1.87	1.55	1.99	1.71
Size distribution								
2 or fewer workers	84%	92%	76%	72%	87%	89%	81%	88%
2-5 workers	14%	6%	21%	28%	10%	11%	16%	11%
More than 5 workers	2%	1%	4%	1%	3%	0%	3%	1%
Firms hiring workers	19%	9%	25%	30%	31%	3%	23%	11%
Age								
Average age of firm	9.89	8.29	7.41	8.76	6.81	6.01	8.42	7.91
Age Distribution								
2 years or less	14%	26%	15%	8%	15%	27%	15%	23%
2-5 years	26%	29%	39%	34%	29%	30%	31%	30%
5-10 years	24%	19%	19%	20%	30%	17%	23%	19%
More than 10 years	36%	26%	27%	38%	27%	26%	31%	28%
Manager profile								
Manager is male	98%	99%	100%	100%	93%	100%	98%	99%
Years of experience	3.09	1.87	2.92	3.35	5.11	4.13	3.35	2.56
Level of Education								
None	13%	35%	8%	10%	24%	23%	13%	29%
Completed Secondary	27%	13%	30%	29%	33%	26%	29%	18%
F.A./FSc	11%	7%	18%	18%	13%	18%	14%	11%
Professional Degree	1%	1%	1%	3%	0%	1%	1%	1%
University Degree	5%	3%	13%	3%	6%	9%	8%	4%
Sectoral Distribution								
Production	12%	11%	4%	19%	3%	8%	8%	12%
Services	41%	32%	27%	28%	25%	32%	33%	31%
Trade	46%	57%	68%	53%	73%	60%	59%	57%
Registration & Taxes								
Registered firms	32%	21%	9%	10%	12%	9%	19%	17%
Pay income taxes *	17%	5%	12%	16%	4%	0%	13%	6%
Sole-proprietorships	91%	94%	92%	96%	93%	91%	92%	94%

Source: Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005. .

* There were a large number of missing observations for the question on income taxes. The numbers reported in this table assume that firms did not pay income taxes if this question was unanswered.

Owners and managers of enterprises tend to be relatively inexperienced, with an average of three years experience. Managers of small-town enterprises are slightly better educated than village entrepreneurs. Small town entrepreneurs were less likely to report having no education than rural entrepreneurs (13 percent versus 29 percent) and slightly more likely to have a university degree (8 percent versus 4 percent) (Table 4.5). Virtually all non-farm enterprises are owned and operated by men. This is not surprising as female participation in Pakistan's labor force, for activities outside the home was 11 percent in 1999-00, the lowest in South Asia among countries with employment data by gender (World Bank 2004).

Median annual sales revenue for small town enterprises, (Rs 180 thousand) are about 1.8 times larger than median annual sales revenues for village enterprises (Rs 102,000) (Table

4.5).[67] Revenue from both village and small-town enterprises in Sindh are almost twice as large as revenue for Punjab and NWFP enterprises. Even the smallest enterprises in Sindh have median revenues 2.3 times those of the smallest NWFP enterprises and 1.7 times those of the smallest Punjab enterprises (Annex Table 4.3). Across provinces and regions, median revenues are consistently highest for traders and lowest for service-sector enterprises.

Table 4.5. Enterprise Sales and Assets ('000 Rs)

	Punjab		Sindh		NWFP		All	
	Small Town	Rural	Small Town	Rural	Small Town	Rural	Small Town	Rural
Sales revenues (mean)	328	206	453	265	192	138	355	202
Sales revenues (median)	151	98	295	180	160	96	180	102
Value of fixed assets (mean)	102	46	121	51	39	31	99	44
Value of fixed assets (median)	10	14	25	14	10	7	15	12
Fixed assets per worker (mean)	72	35	69	27	31	21	64	30
Fixed assets per workers (Median)	7	11	13	7	6	6	8	10
Value added (mean)	59	30	87	53	(38)	24	55	32
Value added (median)	48	25	46	31	14	11	43	24
Value added per worker (mean)	41	24	53	29	(3)	21	39	24
Value added per worker (median)	28	20	28	18	7	7	27	18

Source: Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005.

The median value added per worker was Rs 18,000 (about $300) for village enterprises and around Rs 27,000 ($450) for small-town enterprises. These estimates are very close to those of rural non-farm enterprises in Bangladesh ($480) and Vietnam ($420). The median value added per worker in NWFP is considerably lower than that in Sindh and Punjab. In both of these provinces the median value added per worker in small-town enterprises is about 50 percent higher than it is for village enterprises; however in NWFP the median value added per worker is virtually the same in both small towns and villages.

The median value of fixed assets was around $200 for village enterprises and $250 for small-town enterprises; the mean however was considerably higher, about $2,830 for small-town enterprises and $682 for village enterprises. Once again, these figures are quite similar to those observed for similar types of enterprises in other countries. Recent survey data from Vietnam indicate median fixed assets in rural enterprises of around $168. Although Pakistan's enterprise sector does not appear to be particularly dynamic, data indicate some employment growth in this sector. The average annual compound employment growth has been about one percent for village enterprises and three percent for small-town enterprises.[68]

THE RURAL INVESTMENT CLIMATE

It is widely recognized that a good investment climate provides opportunities and incentives for firms to invest productively, create jobs and expand (World Bank 2004). To gauge the effects of the investment climate on the performance of non-farm enterprises in Pakistan's small

67 This is based on an exchange rate of US$1= 60 Pakistan rupees.
68 Employment growth rates are calculated for the subset of firms that reported data for both 2001 and 2004.

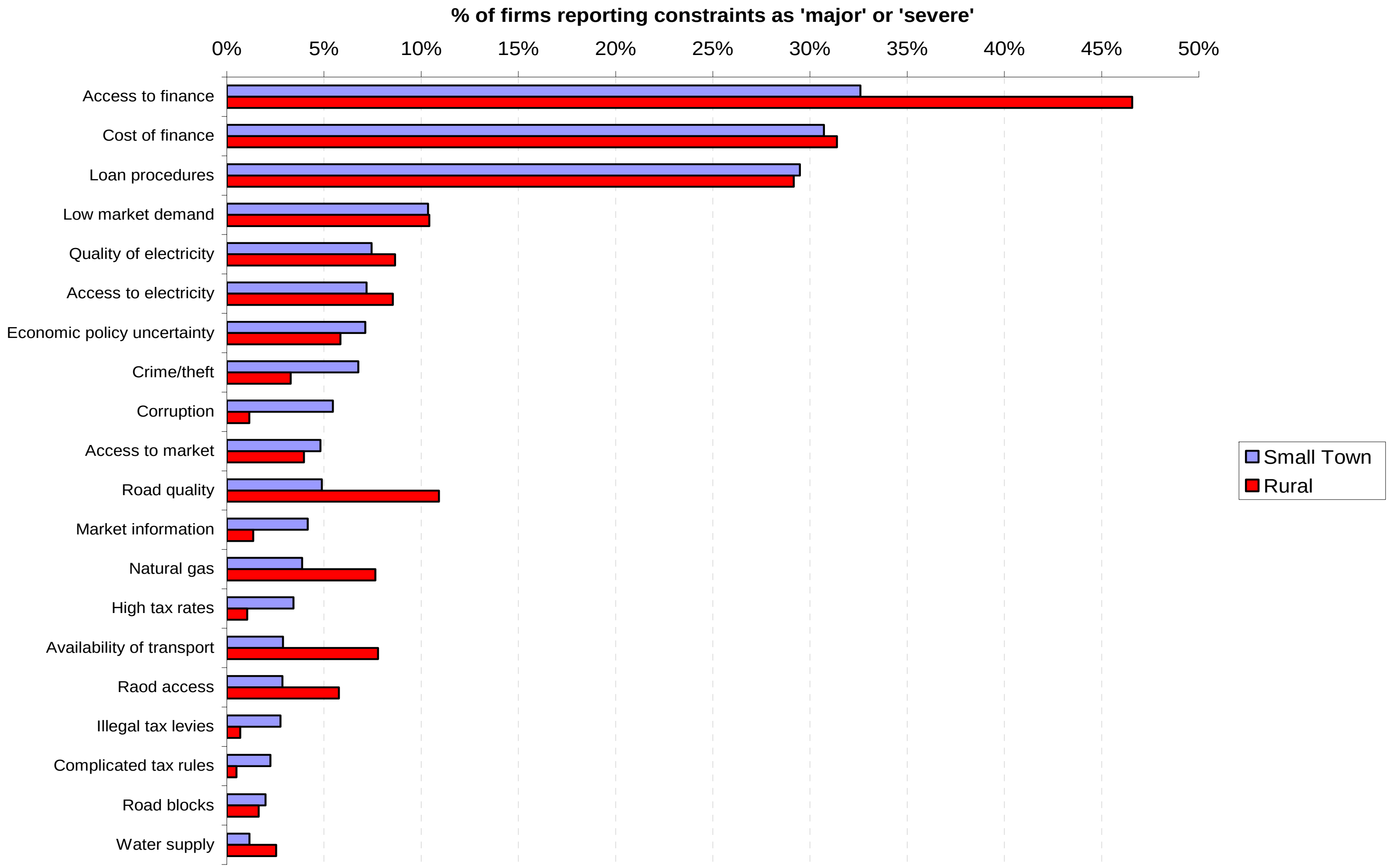
towns and villages, the RIC Survey asked entrepreneurs to subjectively appraise the various political, administrative, economic and infrastructural conditions affecting their enterprise's operation and growth. In addition to these subjective indicators, data were also collected on various objective measures of the investment climate.

The most significant obstacles identified in the survey by small-town and village entrepreneurs in the provinces of Sindh, Punjab and NWFP were access to formal finance, the cost of finance and cumbersome loan procedures (Figure 4.1). With the exception of small towns in Sindh, more than a third of entrepreneurs cited access to finance as a serious obstacle to business operation (Annex Table A4.5). Access to finance was rated the single most important overall constraint facing firms in Punjab and NWFP. In Sindh cumbersome loan procedures topped the list of the most important overall constraint.

Poor infrastructure also ranks as a serious constraint for businesses in villages and small towns. Access to electricity, the quality of electricity, road quality, and availability of transport are among the main infrastructure constraints identified. The disparity in perceptions between village entrepreneurs and small-town entrepreneurs with respect to these infrastructure constraints is quite striking. A larger proportion of village entrepreneurs reported infrastructure constraints as a major obstacle to business than did small-town entrepreneurs (11 percent compared to 5 percent). While infrastructure bottlenecks pose more of a challenge to village enterprises, enterprises in small towns perceive economic policy uncertainty, crime and corruption as relatively more serious than their village counterparts. Low market demand also ranks fairly high among the various constraints faced by firms in both rural and small-town Punjab, indicating that entrepreneurs there perceive that they do not have access to a large enough consumer base.

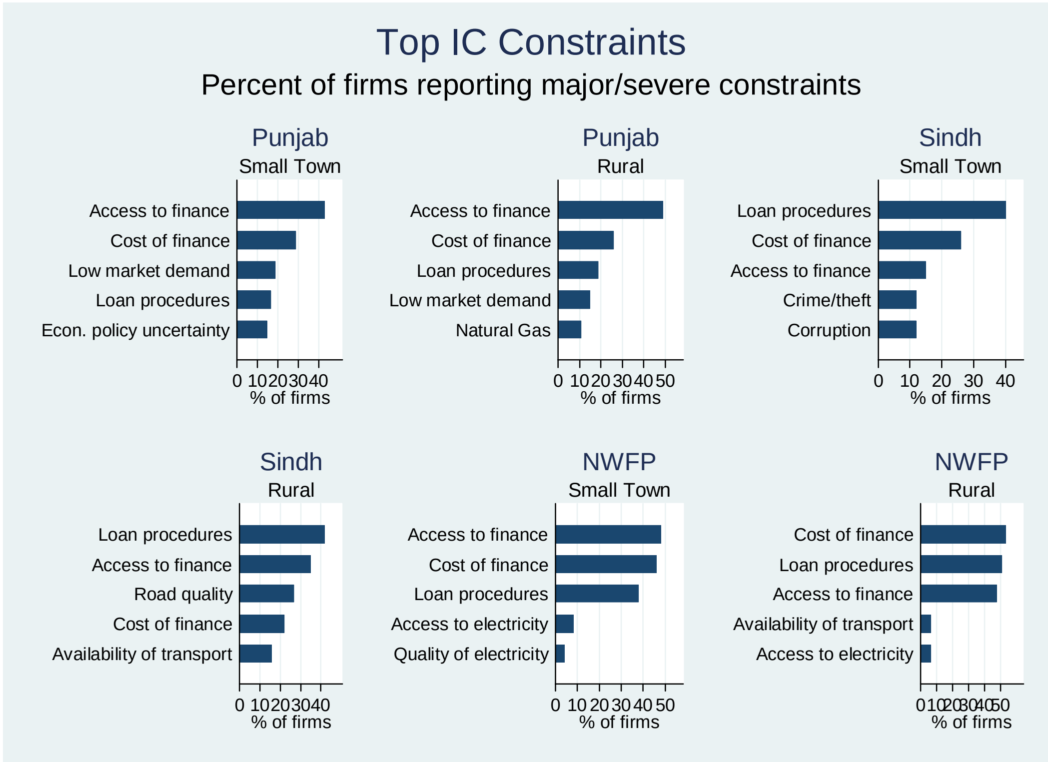
The Pakistan Rural Investment Climate data indicate considerable differences in the way rural and small town entrepreneurs perceive investment climate constraints as compared to entrepreneurs in larger cities, but there are also some similarities. The most significant constraints identified by urban (large city) firms in the Pakistan Investment Climate Assessment 2003 related to tax administration and tax rates; more than 45 percent of surveyed urban firms reported tax-related issues as major or severe obstacles (World Bank, 2005g). By contrast, a mere three percent of rural firms considered taxation a major obstacle.. This is hardly surprising given that many small-town and village enterprises are informal firms and few pay taxes. On the other hand, issues related to the cost of finance and access to finance appear to pose a challenge for rural, small town and urban firms alike. Electricity and corruption are also common constraints, although the proportion of rural and small town firms that rate these problems as major constraints is considerably smaller. This may reflect differences in the types of businesses found in cities as opposed to small towns and villages.

Figure 4.1. Climate Constraints for Small-town and Rural Enterprises, 2005



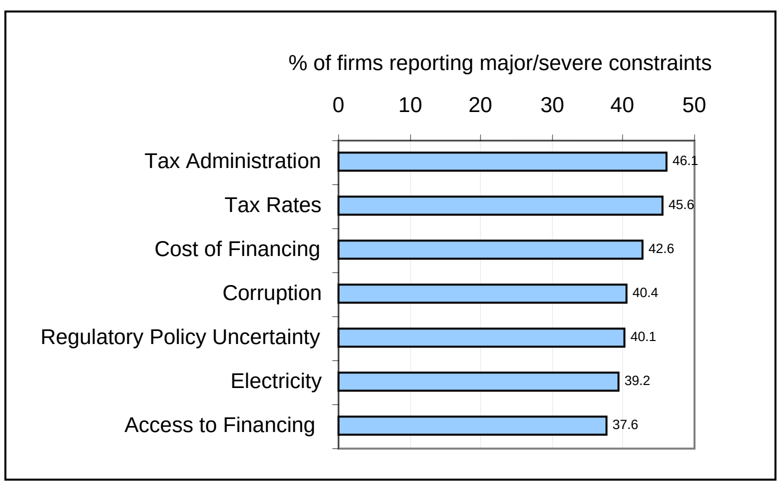
***Source*: Pakistan Rural Investment Climate Survey, 2005.**

Figure 4.2: Pakistan: Major Rural and Small Town Investment Climate Constraints



Source: Pakistan Rural Investment Climate Survey, 2005.

Figure 4.3: Investment Climate Constraints Identified by Urban Firms in Pakistan, 2003



Source: World Bank and SMEDA 2003

Though the business challenges faced by non-farm enterprises in villages and small towns are appreciably different to those for businesses operating in large cities, the former are not dissimilar to those reported by rural non-farm enterprises in other countries. When the subjective assessments of Pakistan's small town and village entrepreneurs are compared to those made by their counterparts in Sri Lanka, Nicaragua and Tanzania, countries for which comparable data are available, numerous similarities are evident (World Bank 2006c). In Nicaragua and Tanzania access to finance ranks as a major problem for 27 percent and 47 percent of rural entrepreneurs, respectively. While access to finance is of less concern in Sri Lanka, (where only nine percent of businesses identified it as a major or severe constraint), 29 percent of Sri Lanka's rural entrepreneurs reported that the cost of finance was a major challenge. Infrastructure problems rank high among the constraints identified by non-farm enterprises in Pakistan, but fewer firms there complain about infrastructure than in other countries. This does not necessarily mean that infrastructure conditions in rural Pakistan are superior to those of other countries; perceptions of what benefits and what hampers investments depend on business size, activities, capabilities, and the degree of formality. Data on objective measures would need to be carefully compared in order to accurately assess differences in the availability and quality of infrastructure across comparator countries.

Relatively few rural entrepreneurs in Pakistan identify governance issues and policy uncertainty as a major problem. In Nicaragua and Tanzania about 12 percent and 17 percent of firms, respectively, identified crime as a major constraint compared to 3 percent of village enterprises and 7 percent of small-town enterprises in Pakistan. Thirty-seven percent and 17 percent of Nicaraguan and Tanzanian enterprises cited economic policy uncertainty as a major concern. The corresponding figures for Pakistan are two percent for village enterprises and seven percent for small-town enterprises. However, economic policy uncertainty is a more important concern in small towns in Punjab where 15 percent of firms reported this as a major or severe problem. The proportion of entrepreneurs that identify governance as a major problem in Sri Lanka and Pakistan are comparable; however slightly more firms in Pakistan complained about corruption and crime than in Sri Lanka.

Access to Finance

Access to formal credit rates as the top business constraint among village and small-town non-farm enterprises in Pakistan. Roughly similar proportions of enterprises also rated the cost of finance and cumbersome loan procedures as major obstacles. Of surveyed business owners, 28 percent in rural areas (34 percent in small towns) wanted to apply for a formal loan in the five years preceding the survey. However, only about 14 percent in rural areas (20 percent in small towns) of these enterprises did actually go on to apply for a loan. Of those wanting a loan, but that did not apply for one, 40 percent stated that loan procedures were too complicated, 27 percent felt that the interest rate would be too high, 16 percent felt that they had insufficient collateral and 8 percent stated that the duration of the loan would be too short. Overall, few firms (four percent in villages and seven percent in small towns) applied for a formal loan to finance investment or working capital in the five years preceding the survey. Enterprises in Sindh seem to have relatively better access to finance. There, the proportion of enterprises applying for loans was highest (8 percent of village enterprises and 14 percent of small-town enterprises). By contrast, only one percent of small-town enterprises and three percent of village enterprises in Punjab and NWFP applied for loans. Comparison of these results with those from other countries reveals that the proportion of small-town and village enterprises that receive loans from formal lenders in Pakistan is relatively low. In Sri Lanka, 25 percent of enterprises received formal loans in 2002-03. Nicaraguan businesses also received formal loans at a similar rate in 2004 (28 percent). In the same year in Tanzania, however, only six percent of firms received formal loans, which is comparable to Pakistan (World Bank 2006d).

Table 4.6: Pakistan: Rural and Small Town Firms' Access to Finance, 2005

	Punjab		Sindh		NWFP		All	
	Small Town	Rural	Small Town	Rural	Small Town	Rural	Small Town	Rural
Firm wanted to apply for a loan in past 5 years	41%	36%	38%	24%	7%	7%	34%	28%
Firms that applied for loans (of those wanting a loan)	3%	8%	38%	34%	17%	39%	20%	14%
Firms that applied for a loan (among all firms)	1%	3%	14%	8%	1%	3%	7%	4%
Firm has a PLS account	10%	12%	12%	18%	5%	9%	10%	12%
Firm has current account	3%	2%	13%	17%	4%	6%	8%	6%
Firm has overdraft facility	1%	2%	10%	4%	4%	2%	6%	2%
Firm has access to supplier credit	53%	43%	59%	48%	45%	51%	54%	46%
Repayment period supplier credit (median days)	10	15	15	15	10	15	15	15
Share of goods/inputs purchased on credit	50%	50%	50%	50%	50%	50%	50%	50%
Prepares a financial statement	2%	1%	22%	13%	6%	10%	11%	5%
Made new fixed investment	39%	31%	80%	87%	57%	44%	58%	43%
Mean value of new fixed investment (Rs.)	26,570	22,554	21,479	13,973	14,561	25,868	21,889	20,452
Median value of new fixed investment (Rs.)	10,000	5,000	10,000	8,000	4,000	10,000	8,500	8,000
Share of investment from own savings	95%	94%	88%	90%	89%	67%	90%	87%
Share of investments from formal loans	0%	0%	2%	0%	0%	0%	1%	0%
Share of investment from relatives/friends	4%	5%	5%	8%	10%	33%	5%	12%
Share of investments from private lenders	0%	1%	5%	1%	1%	0%	3%	1%
Source of start-up capital								
Family or friends	53%	38%	43%	28%	32%	50%	46%	39%
Income from agriculture	6%	17%	3%	20%	7%	14%	5%	17%
Income from non-farm activities	36%	39%	19%	35%	36%	25%	29%	36%
Remittances	0%	3%	2%	0%	8%	3%	2%	2%
Sale of assets	7%	6%	19%	13%	9%	0%	12%	6%
Bank loan	0%	1%	2%	1%	0%	0%	1%	0%
Private money lenders	2%	1%	1%	1%	0%	0%	1%	1%
Other	5%	8%	20%	9%	11%	14%	11%	9%
Share of start-up capital from:								
Family or friends	49%	33%	41%	25%	29%	48%	42%	35%
Income from agriculture	5%	16%	2%	18%	7%	13%	4%	16%
Income from non-farm activities	31%	37%	15%	34%	35%	24%	25%	34%
Remittance	0%	2%	2%	0%	9%	3%	2%	2%
Sale of assets	6%	5%	19%	13%	9%	0%	12%	5%
Bank loan	0%	0%	2%	1%	0%	0%	1%	0%
Private money lenders	2%	1%	1%	1%	0%	0%	1%	1%
Other	5%	6%	18%	8%	11%	11%	11%	7%

Source: Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005.

The major source of formal enterprise finance is commercial banks. Of 1651 enterprises surveyed, 70 enterprises reported applying for at least one formal loan.[69] Firms that applied for loans are evenly split between small towns and villages and around 40 percent of such firms were in Punjab, another 40 percent were in Sindh and the remainder in NWFP. Sixty-two percent of firms applied to commercial banks for loans, 17 percent applied to NGOs, 8 percent applied to institutions that finance Small and Medium Enterprises (SMEs) and the remainder to other

[69] Only five enterprises reported applying for more than one loan

sources.[70] Two-thirds of loan applications were approved by lenders. Among rejected applications, 36 percent were refused because of insufficient collateral, 8 percent of applicants had no co-signer and the remaining were rejected for a variety of other reasons.

Almost all formal enterprise loans require collateral and are fairly short-term in nature. Median loan size was Rs 25,000 (the average was about Rs 72,000) and about 76 percent of approved applicants received the full amount they had applied for.[71] Loan terms are short, ranging from about two months to five years; the median loan term was for one year and the average was about 15 months. The median annual interest rate on loans was 12 percent. For almost 80 percent of approved loans, collateral was required by the lender. This is unsurprising as previous studies on the availability of farm credit also found that collateral to be a requirement for all formal loans (World Bank 2004). The most common forms of collateral were property/buildings (used in 28 percent of loan applications) and land (used in 26 percent of loan applications). On average the value of collateral required was equal to 132 percent of the loan amount (the median value was 100 percent).

The fact that only a small fraction of enterprises that seek loans are actually able to apply for one is consistent with observed trends in Pakistan's formal sector, which is largely urban based and which advances to the rural sector loans worth only a small fraction (3.5 percent) **of those advanced to the urban sector**. Commercial banks appear to face higher costs and risks in lending to small businesses, while the latter often do not know what is needed to qualify for bank financing and lack critical market information. Small businesses are geographically dispersed, and lenders usually face greater costs in identifying potential borrowers, conducting due diligence, and maintaining contact with the borrower after a loan has been made. Small entrepreneurs also often lack formal financial records and have typically more limited track records. Only about 5 percent of village enterprises and 11 percent of small town enterprises in Pakistan prepare financial statements (Table 4.6).

Overall very few firms appear to deal with the formal banking sector. At most 10-12 percent of enterprises keep savings accounts and less than 10 percent maintain checking accounts. A very tiny fraction of village (two percent) and small-town enterprises (six percent) have access to an overdraft facility to finance investment or working capital needs. There is a strong correlation between lack of access to banking services and the degree to which firms cite finance as a major constraint. In small towns in Sindh only 14 percent of enterprises mentioned access to finance as a major or severe constraint. Thirty-eight percent of firms in small towns in Sindh that wanted a loan actually applied for one (Table 4.6); 22 percent of Sindh's small-town enterprises prepared financial statements.

The primary sources of start-up capital for village and small town non-farm enterprises are funds borrowed from family and friends and income from nonfarm activities (Table 4.6). The share of start-up capital from bank loans is negligible (one percent for small town enterprises and less than one percent for village enterprises). These findings are not dissimilar to results from other countries. New business owners have unproven track records and are therefore less likely to secure formal finance.

The major source of investment finance was savings and funds from family and friends. About 43 percent of village enterprises and 58 percent of small-town enterprises made new investments in the year preceding the survey. Among firms making new investments, the median investment was Rs 8,000 ($133) for village enterprises and Rs 8,500 ($142) for small-town enterprises. Close to 90 percent of all new investments were made using savings. The average

[70] NGO finance for enterprises appears to be used only in Sindh.

[71] The average size of the loan received was equal to 92 percent of the amount applied for.

investment, which ranged between Rs 20,400 and Rs 21,900 ($340 and $365), was less than half the size of the average investment made by similar types of enterprises in Sri Lanka.

While access to long-term finance and formal credit for working capital and investment is limited, Pakistan's non-farm enterprises seem to have better access to supplier credit than do firms in other countries.. Approximately 46 percent of village enterprises and about 54 percent of small-town ones purchase inputs/goods on supplier credit. Small-town enterprises in Sindh appear to have the best access to supplier credit of the three provinces. This type of credit is generally only extended on a very short term basis with most enterprises required to make repayment within two weeks. Across the various sectors, traders are significantly more likely to have access to supplier credit than manufacturing or service enterprises. Firms purchase about half their inputs using supplier credit (Table 4.6).

Infrastructure

Village enterprises are more constrained by poor infrastructure than those located in small towns. Road quality, availability of transport and access to electricity rank among the top constraints reported by village entrepreneurs. Quality and access to electricity is also a concern for businesses in small towns. Entrepreneurs in villages in Sindh were more likely to identify road- and transport-related problems as a major constraint those in other provinces. Data on road quality (the type of internal roads in the community), availability of public transport and connectivity reveal that villages in Sindh are indeed disadvantaged compared to enterprises located elsewhere. For instance, 93 percent of enterprises in rural Sindh are located in communities where dirt roads are the most common type of internal road surface (Table 4.7). By contrast only about 54 percent of village business owners in NWFP and 26 percent in Punjab report being located in a community where dirt roads are commonest. Twenty-eight percent of village enterprises in Sindh are located in communities with public transportation to the nearest major city. For Punjab and NWFP the corresponding figures are 85 percent and 47 percent, respectively. Although the distance to the nearest main city from villages in Sindh is comparable to those for villages in Punjab and NWFP, travel times are considerable longer (Table 4.7). This may reflect both the poor quality of roads and the lack of available public transport. Fewer small-town entrepreneurs complain about road quality and availability of public transport than do village entrepreneurs; it is not surprising that small-town enterprises have better roads and access to public transport.

Access to electricity remains a major challenge in many rural villages and small towns, and even for enterprises that have access, supply is unreliable. The last urban investment climate assessment in Pakistan found that the typical business loses 5.6 percent of annual output due to power outages, much higher than in China (1.99 percent) and Bangladesh (2.35 percent) (World Bank and SMEDA 2003). Although electricity connectivity in small towns and villages in Pakistan appears to be quite high (83 percent of village enterprises and 96 percent of small town enterprises reported having access to electricity), almost all enterprises with access to the grid experience power outages.[72] In villages and small towns of Sindh as well as villages in NWFP, entrepreneurs report almost daily outages. The median number of days with power outages in a typical month was reported as being 20 days in villages and 15 days in small towns. Frequent outages increase production costs and generators are usually prohibitively expensive for these small business. Approximately five percent of village enterprises and around seven percent of small-town enterprises reported owning or sharing a generator.

[72] Connectivity to the grid appears relatively high compared to rural Sri Lanka where slightly less than 70 percent of enterprises reported using electricity.

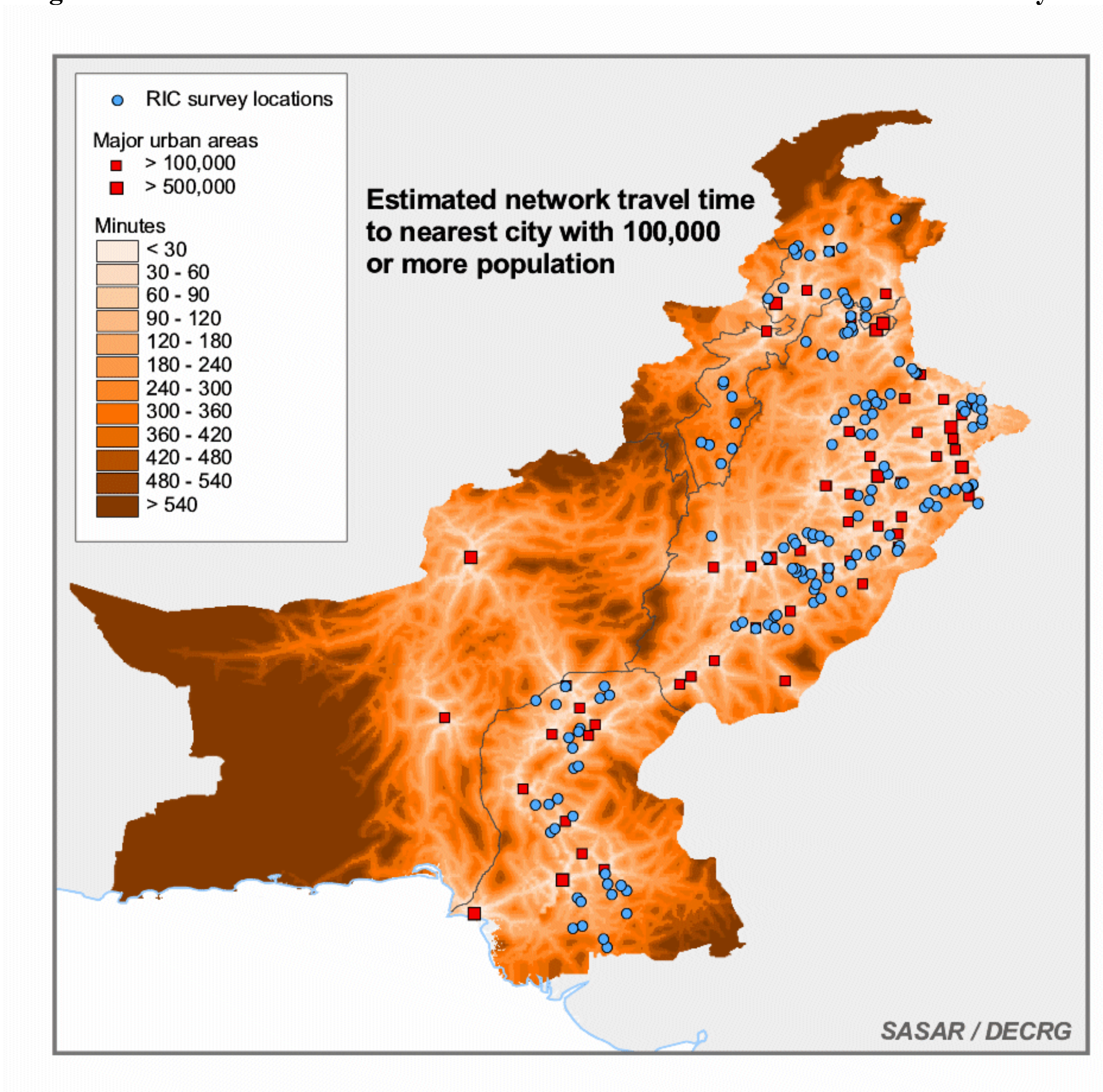
Table 4.7. Quality of, and Access to, Infrastructure

	Punjab		Sindh		NWFP		All	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Roads & Transport								
Proportion of enterprises located in areas where:								
Internal roads are dirt roads	1%	26%	37%	93%	0%	54%	15%	42%
Public transport is available to the nearest main city	98%	85%	85%	28%	92%	47%	92%	68%
A main road connects the community to nearest city	91%	97%	93%	82%	100%	98%	93%	95%
Distance and Travel Time								
Median distance to nearest main city (Km)	40	15	32	14	12	15	32	15
Median travel time to nearest main city by main means of transport (minutes)	60	30	40	60	25	45	45	30
Median travel speed to nearest main city (km/hr)	40	30	48	14	29	19	43	29
Electricity								
Enterprises with access to electricity	97%	79%	94%	81%	98%	96%	96%	83%
Enterprises connected to the grid reporting power outages	98%	99%	100%	100%	100%	100%	99%	100%
Median days/month when outages occur	10	10	30	30	20	30	15	20
Own or share a generator	4%	7%	12%	4%	5%	0%	7%	5%
Median days to get new electricity connection	40	45	20	30	30	20	30	30
Unofficial fees needed for a new connection	81%	90%	100%	100%	97%	100%	91%	94%
Telecommunications								
Owns fixed-line phone	28%	9%	24%	4%	39%	6%	28%	7%
Owns cellular phone	10%	3%	3%	3%	19%	6%	9%	4%
Uses fax	0%	0%	1%	0%	3%	0%	1%	0%
Uses email	1%	0%	0%	0%	2%	0%	1%	0%

Source: Pakistan Rural Investment Climate Survey, 2005

Access to and use of telecommunications among enterprises surveyed is surprisingly limited, particularly considering that close to 60 percent of the enterprises are engaged in trade. About 28 percent of respondent small-town entrepreneurs owned fixed line phones and 9 percent owned cellular phones (Table 4.7). The comparable figures for village entrepreneurs are seven percent for fixed-line phones and four percent for cellular phones. On the whole, small-town entrepreneurs in NWFP appear to have slightly better connectivity than their counterparts in the other two provinces. The most recent urban investment climate assessment found that only 30 percent of urban businesses in Pakistan regularly communicate with customers or suppliers using the Internet—far less than the 71 percent of firms that do so in China or the 45 percent that do so in India. Access to Internet connectivity for rural and small-town firms is extremely limited and only about one percent of the latter reported using email.

Figure 4.4. Estimated Network Travel Time and Rural Investment Climate Survey Sites



Source: Authors' Calculations based on PSLM 2004-05 survey and the Pakistan Rural Investment Climate Survey, 2005.

Marketing

About 18 percent of rural enterprises and 26 percent of small-town enterprises reported that they face obstacles with respect to marketing. Somewhat surprisingly small-town entrepreneurs were more likely to report marketing-related problems despite being located in larger communities (the average small town's population was around 43,000 compared to a population of 7,300 in villages) and having access to more customers and markets (Annex Table 4.6). Low market demand ranked among the top five constraints reported by businesses in both small towns and villages.

There are however, significant differences across provinces. Entrepreneurs in Punjab were more likely to report marketing obstacles (42 percent in small towns and 25 percent in villages) than their counterparts in Sindh and NWFP (13 percent in small towns and 6-7 percent in villages) (Annex Table 4.4**)**. This is despite the fact that Punjab appears to have the best access to markets of the three provinces. The small towns and villages surveyed in Punjab are considerably larger than those surveyed in Sindh and NWFP (Annex Table 4.6). Other measures of market access, including travel times to larger cities and a market accessibility index, also suggest that Punjab has relatively better access to markets. In small towns in Punjab, production-oriented enterprises are almost 30 times as likely to report problems with marketing as service-sector firms, but there is no significant difference between the ratings of production-related enterprises and traders respectively with respect to the constraints imposed by low demand. On the other hand, traders in villages were significantly more likely than production-related enterprises to cite low demand as a problem.

With the exception of production-oriented firms in NWFP, the markets and customer base of village and small-town enterprises are limited to local markets and most sales are made to customers within the same *tehsil* (administrative division). Seventy percent of sales by both village and small-town production enterprises in NWFP are to buyers in other provinces (Annex Table 4.7). The exact reasons for these differences are not readily apparent. In all three provinces most services-sector firms and traders sell locally either within the same village, or to a different village within the same union council. Service-sector firms and traders in small towns make significantly larger sales to wider markets, although most sales still take place within the same *tehsil*. The vast majority of sales are made directly to households or to other small firms.

Technology and Business Services

Lack of innovation and poor product quality also limits the access of rural firms to wider markets. Few rural firms in Pakistan reported making improvements and/or technological innovations over time. Only six percent of small-town and village enterprises reported that they had made new innovations and/or technological improvements (Annex Table 4.8). The propensity of undertaking technological innovation is significantly higher among larger firms, with better educated managers. One possible explanation could be that larger firms have the required resources to develop innovative products, whereas smaller firms do not. Lack of financial resources, technological or management know-how, and the lack of access to networks (such as business associations) are all factors that contribute to low levels of product innovation among rural firms.

Few rural and small-town entrepreneurs tap into formal business networks. Evidence from other countries suggests that participation in business organizations and local chambers of commerce could potentially strengthen marketing channels. This allows businesses to share information on prices, quality standards and obtain technical, financial and organization services for greater value addition. A very small proportion of non-farm enterprises in small towns and villages in Pakistan are able to take advantage of these networking opportunities. Even though there are no significant differences in participation across industry types, participation varies by location; village enterprises are significantly less likely to participate than small-town enterprises in all provinces. Two percent of village enterprises are members of a Chamber of Commerce or other business association compared to 11 percent of small-town enterprises (Annex Table 4.9). Participation in business associations is highest in small towns in Punjab, followed by small towns in Sindh and NWFP. Controlling for industry type and location, enterprises with more educated managers are significantly more likely to belong to a business association.

Very few firms reported that they need or use formal business services, which is unsurprising given the informal nature of many rural and small-town businesses. Annex Table 4.10 provides a summary of the various business services that are accessible within an hour's travel time from the town or village in which the enterprises are located. While about a third of small-town businesses have access to various types of services such as legal services, accounting services and insurance only 5-15 percent of rural enterprises have similar access. Even though various services are available, virtually none of the businesses reported needing or using available services.

Security and Rule of Law

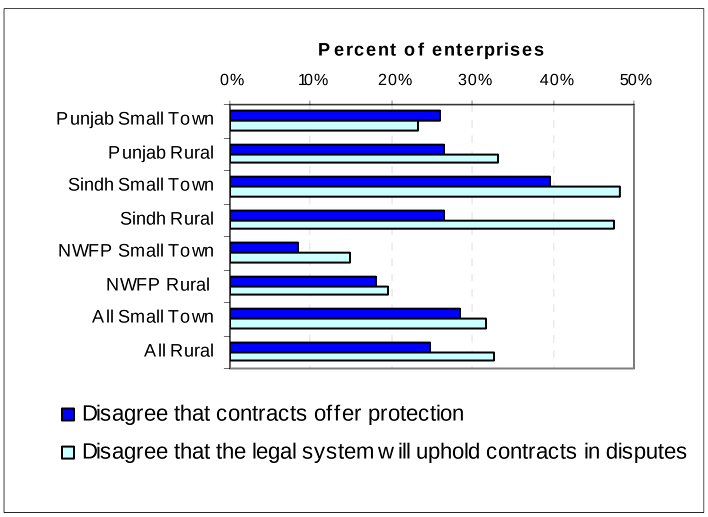
Crime appears to be much less of a concern for enterprises located in small towns and villages than for those operating in large cities. A politically and economically stable environment is necessary to unleash productive investments (World Development Report 2005). The 2003 Investment Climate Assessment (ICA) found a high incidence of urban crime and widespread concern among urban business managers over theft, arson, extortion, intimidation of employees and destruction of business property. NWFP fared particularly poorly; 32 percent of businesses in NWFP reported having been victims of crime, compared to 22 percent in Punjab and 11 percent in Sindh. On average, urban firms in NWFP reported spending 4.5 percent of revenue on security; the comparable figures for firms in Sindh and Punjab were one and two percent. Of all small-town and village enterprises surveyed, crime ranks as one of the top five constraints in only small towns in Sindh, where about 12 percent of entrepreneurs identified crime as a major or severe problem.

Overall about five percent of enterprises in villages and seven percent of those in small towns reported having actually been a victim of robbery or theft (Annex Table 4.11). The proportions of village and small-town enterprises that report having experienced crime are similar across the three provinces. About a third (32 percent) of small-town enterprises reported paying for security, with another 28 percent claiming they pay for protection. The corresponding figures for village enterprises are 16 percent and 11 percent. Large numbers of firms in Sindh reported making protection payments, worth an average of about one percent of sales revenue.

In addition to having experienced more crime, businesses in Sindh are also more likely to claim to be located in neighborhoods affected by tension, conflict and violence. More than a third of small-town and village enterprises in Sindh were located in areas with some degree of conflict, compared to 5 and 10 percent in Punjab respectively, and 14 percent of small-town enterprises in NWFP, albeit none in rural NWFP (Annex Table 4.12). The data also indicate that about 86 percent of village enterprises in Sindh are located in communities divided along social, religious, economic or other lines. A relatively large proportion of small-town enterprises in Sindh (67 percent) and rural businesses in NWFP (66 percent) are also located in areas that are divided along social/religious/economic lines. In small towns and rural Sindh, the primary factor contributing to perceptions of difference pertained to land ownership. This was a leading factor in perceptions about difference in rural areas of NWFP, although differences in political affiliation was most frequently identified as the source of problems. In small towns in NWFP, differences in ethnic/caste/tribal background as well as political affiliations contribute to perceived and real divisions in the community. Very few Punjab enterprises whether in villages (seven percent) or in small towns (five percent) reported being located in communities that experienced conflict or other divisions.

A majority of entrepreneurs (69 percent of those in small towns and 62 percent of those in rural areas) described laws and regulations affecting their businesses as predictable, although a large proportion of business owners in Sindh perceive laws and regulations in their communities that affect their businesses as highly unpredictable. Assurances that contracts will be honored, disputes handled fairly and efficiently by the legal system, and that legal rulings will be enforced are important for attracting investment as well as for doing business with geographically dispersed firms. The majority of enterprises (67 percent of small-town enterprises and 64 percent of village enterprises) asserted that contracts offer them protection from being cheated (Figure 4.5). Confidence in contracts and contract enforcement is highest in NWFP where 90 percent of small-town entrepreneurs and 77 percent of village entrepreneurs felt protected by a contract. Confidence in contracts and the legal system's ability to enforce them and property rights is lowest in small towns in Sindh.

Figure 4.5: Confidence in the Rule of Law in Three Provinces



***Source*:** Authors' calculations based on the Pakistan RIC Survey, 2005.

Rural Enterprise Ownership: Start-Up and Performance

While infrastructure such as electricity and fixed phone lines seem to have a positive effect on enterprise ownership in small towns, in rural areas other factors such as the number of government programs in a community appear to have greater importance. As part of the Pakistan RIC survey, households were asked whether any member was a proprietor of, or partner in, a non-agricultural enterprise within the last 12 months. About 40 percent of the 947 participating households had members that operated a non-farm enterprise. The determinants of owning a non-farming business were analyzed using regression analysis (Annex Table 4.13). In both rural villages and small towns the effects of parents' occupation are powerful. Whether as a result of parental influence or because of the likelihood of actual business inheritance, ownership of a non-farm enterprise increased by fifteen to twenty percentage points the likelihood of one's offspring also owning one. Another important household characteristic is size; larger households are more likely to diversify income by owning a non-farm enterprise. While household size is a factor in the rural sector, it is more influential in small towns. More important in the rural areas is the amount of land cultivated.

Factors affecting start-up of non-farm enterprises include proximity to large cities for small-town enterprises and the number of government programs and access to communications facilities for those in villages. In addition to examining the determinants of enterprise ownership the survey also examined the factors that influence households' decisions to start up a non-farm enterprise. For this regression, households were excluded that own older businesses (those more than three years old), in order to compare two categories: those households that recently decided to start a business and those that decided not to. One finding is that households in small towns farther away from large cities are more likely to start businesses. This is not surprising as proximity to large cities means more competition. Small-town households also gain positive effects from having a male head of household and more valuable assets. In rural areas, government programs continue to play an important role and, as market access and communications are more significant constraints in villages, the effects of cell phone usage are significant. In addition, in rural areas older heads of household are more likely to start up a non-farm enterprise than younger ones. The regression results indicate that there is no significant effect of parents' occupation in start-up decisions in either rural areas or in small towns.

In addition to the overall investment climate, human capital, as measured by a manager's education, is an important determinant of village and small-town enterprise performance. The impact of various investment-climate constraints on enterprise performance is assessed by studying the impact of these factors on firm productivity, as measured by value added per worker (Annex Table 4.14). For enterprises in small towns, availability of public transport and the presence of a chamber of commerce in the *tehsil* have a significant positive impact on performance. On the other hand, more power outages negatively affect firms located in small towns. For village enterprises, access to finance in the form of a commercial bank in the community has a positive and significant impact on productivity; businesses located in communities with dirt roads seem to be negatively affected (although this variable is only significant at the 10% level).

Unsurprisingly the impact of the investment climate on a firm's performance varies by industry. Power outages have a significant negative effect on production-oriented firms although this is far less with service or trade businesses. Access to commercial banks has a positive and significant correlation with firm productivity for service-sector enterprises and production enterprise (although only significant at the 10% level for production enterprises), but is not significant in the trade regression. Access to commercial banks is probably more important for service- and production-related firms, as traders have relatively greater access to supplier credit. It is noteworthy that in virtually all circumstances, human capital as measured by the manager's education is an importance determinant of enterprise performance. Firms with more educated managers consistently perform better and, as mentioned earlier, are also more likely to innovate and access business networks.

POLICY IMPLICATIONS

Although Pakistan's rural non-farm sector is an important source of employment and contributes significantly to improving household welfare, particularly of the rural poor, improving the sector's productivity and dynamism will require targeted policies and public investments. While a number of successful financial-sector reforms have been implemented in recent years, rural non-farm enterprises, which are primarily micro enterprises, seem to have benefited little from these. Access to formal credit for investment purposes or working capital is extremely limited, and evidence of large unmet demand for credit suggests a need for alternative measures to ensure enterprises with bankable business plans access to external sources of finance. Easing some of the high collateral requirements for formal loans and developing alternative forms of collateral acceptable to banks would improve access to credit. There is also evidence to suggest that loan application procedures need to be less onerous. At the same time, practical training for entrepreneurs in accounting and the preparation of business plans would greatly improve the ability of many businesses to signal their credit-worthiness to financial institutions.

Provision and improvement of infrastructure, particularly roads and reliable electricity, can reduce operating and marketing costs, thereby making investments in rural and small-town enterprises more profitable. There is a particular need in Sindh to investment in rural roads, as distances and transport costs there are higher than in Punjab and NWFP. Among vital measures to improve the quality of roads and transport services are: better road maintenance and extension of basic motorable access; improved institutional arrangements for ownership, management and financing of rural transport systems in accordance with the realities of devolution; and promoting greater community involvement in planning and managing transport infrastructure improvements to ensure that infrastructure meets local needs (World Bank 2005). An unreliable electricity supply is also a severe obstacle to the development and growth of non-farm enterprises, particularly in the manufacturing sector. Unlike their urban counterparts, few rural non-farm enterprises are able to afford generators, and unreliable electricity has likely limited the emergence of small manufacturing units, which also tend to generate relatively larger numbers of jobs. Increased investment in power distribution and transmission is needed, but there has been little progress in implementing key reforms in the energy sector that would make these investments forthcoming.

Other important measures to promote the growth of rural non-farm enterprises include: facilitating market linkages; improving the mechanisms that underpin contract enforcement; promoting transparency in the legal system; and allowing non-farm enterprises a greater say in the policy making that pertains to them. Stronger market linkages could be facilitated through the creation and development of more effective local business associations and organizations. These organizations could arrange product fairs, help develop business directories, provide information services and educate entrepreneurs on how to undertake market research. Organizations could also share information on prices, quality standards and how to access technical, financial and organizational services for greater value addition. Facilitating group marketing and formation of business clusters could also help rural enterprises take advantage of economies of scale by allowing the purchase of inputs at lower prices, offering access to larger markets and facilitating shared use of equipment and infrastructure. Improving mechanisms for contract enforcement would also facilitate market linkages because this would enable smaller enterprises to enter into sub-contracting arrangements with larger firms, thereby gaining access to larger markets.

ANNEX TO CHAPTER 4: THE PAKISTAN RURAL INVESTMENT CLIMATE SURVEY, 2005

Despite the the non-farm sector's large contribution to rural incomes in Pakistan, there is limited information on the factors that affect the performance and growth of these enterprises. This knowledge gap is in large part due to inadequate data in general on rural non-farm enterprises. Much existing information on enterprise performance in Pakistan is based on surveys of formal urban manufacturing firms or on household surveys that do not elicit data on the investment climate or measures of enterprise performance. Given the nature and scale of rural enterprises, it seems likely that they face considerably different challenges from their urban counterparts. To better understand the rural non-farm enterprise landscape and identify policies that could potentially spur growth in this sector, the World Bank with support from Department for International Development and the FAO recently conducted a survey of the investment climate for rural non-farm enterprises in Pakistan (Box 4.1). This annex presents additional tables and findings from the survey not included in the main section of chapter 4.

Box 4.1: The Pakistan Rural Investment Climate (RIC) Survey, 2005

The Pakistan Rural Investment Climate Survey was undertaken between May and December, 2005. The survey covered three provinces of Pakistan: Punjab, Sindh and North West Frontier Province (NWFP). The sample comprised 1651 non-farm enterprises: 1069 in Punjab; 300 in Sindh; and 282 in NWFP). For the purposes of the survey, non-farm enterprises were classified as firms engaged in any activity excluding primary agricultural production (crops, livestock and fisheries). In each province roughly half the enterprise sample was drawn from small towns defined as Town Committees and Municipal Committees, with populations under 100,000. The remaining enterprises were selected from rural villages. In total the sample comprised: 50 small towns and 50 villages in Punjab covering 10 districts (Attock, Faisalabad, Bahawalpur, Vehari, Khanewal, Jhelum, Kasur, Pakpattan, Sargodha, and Sialkot); 15 small towns and 15 villages in Sindh (Khairpur, Mirpur Khas, Jacobabad, Nawabshah, and Badin districts); and 12 small towns and 16 villages in NWFP (covering D I Khan, Laki Marwat, Swat, Lower Dir, Haripur, Swabi, and Peshawar districts). The Pakistan RIC survey was conducted by Innovative Development Strategies, Pakistan and the World Bank, with support from the Department for International Development and the Food and Agriculture Organization of the United Nations.

Annex Table 4.1: Distribution of Farm and Non-farm Households in Rural Pakistan

	All Rural HHs	Punjab Rural HHs	Sindh Rural HHs	NWFP Rural HHs	Baluchistan Rural HHs
Farm Total	48.14%	45.19%	58.60%	44.81%	48.21%
Farmer	43.21%	39.99%	52.09%	42.28%	44.83%
Agricultural Labor	4.93%	5.19%	6.50%	2.54%	3.37%
Non-Farm Total	51.86%	54.81%	41.40%	55.19%	51.79%
Self-employed	17.99%	20.85%	12.00%	18.06%	11.12%
Other	33.88%	33.96%	29.40%	37.13%	40.68%

Source: PSLM 2004-05.

Annex Table 4.2: Business Registration

	Punjab		Sindh		NWFP		All	
	Small Town	Rural	Small Town	Rural	Small Town	Rural	Small Town	Rural
Registering an enterprise								
Business requires a permit or license	6%	2%	100%	91%	100%	46%	54%	19%
Days to complete registration process	21	14	33	11	8	7	24	9
Days to get a permit to operate	13		14	11	9	7	12	9
Number of government agencies that need to approve a permit to operate	1		2	1	2	1	2	1
Cost of a permit to operate (Rs)	500	5,000	2,000	500	1,000	500	1,000	500
Enterprises punished if not registered in communities where registration is required	100%	100%	74%	100%	84%	8%	79%	53%

***Source*:** Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Annex Table 4.3: Sales Revenues

		Punjab		Sindh		NWFP		All	
Quintiles of Sales		**Small Town**	**Rural**	**Small Town**	**Rural**	**Small Town**	**Rural**	**Small Town**	**Rural**
1	Mean	28,929	25,211	41,373	42,466	35,863	18,932	26,432	25,543
	Median	27,000	27,000	36,000	45,000	36,000	19,800	25,000	26,250
2	Mean	85,729	54,009	126,187	92,967	81,814	55,397	72,482	65,689
	Median	90,000	52,540	132,000	100,000	80,000	56,000	74,000	62,000
3	Mean	157,794	100,190	254,090	171,486	121,587	89,462	140,020	130,633
	Median	151,000	98,400	246,000	180,000	100,000	98,000	144,000	124,000
4	Mean	352,840	214,389	439,334	306,808	241,406	151,604	289,021	276,717
	Median	320,000	200,000	428,000	280,000	240,000	144,000	295,000	280,000
5	Mean	1,170,954	632,310	1,307,414	973,406	588,096	441,581	984,940	818,557
	Median	840,000	480,000	1,260,000	714,000	432,000	310,000	726,000	660,000
Total	Mean	327,551	206,147	453,129	265,012	192,287	138,073	354,822	202,245
	Median	151,000	98,400	295,000	180,000	160,000	96,000	180,000	102,000

***Source*:** Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Annex Table 4.4: Percentage of Firms Identifying Various Investment Climate Factors as a Constraint

	Punjab		Sindh		NWFP		All	
	Small Town	Rural	Small Town	Rural	Small Town	Rural	Small Town	Rural
Public Utilities	45%	43%	29%	34%	21%	21%	35%	37%
Transport	20%	33%	26%	46%	12%	25%	21%	33%
Financing	68%	63%	59%	63%	80%	81%	66%	67%
Marketing	42%	25%	13%	7%	13%	6%	26%	18%
Registration, License and Permits	1%	0%	3%	2%		0%	1%	1%
Taxation	5%	4%	15%	6%	3%	2%	9%	4%
Labor	2%	1%	0%	0%	1%	0%	1%	1%
Land	0%	1%		1%	8%	6%	1%	2%
Agricultural Policy	1%	2%	0%	2%	0%	5%	0%	2%
Trade Policy	0%	0%	1%				0%	0%
Environmental Policy	1%	0%	0%				1%	0%
Governance	35%	23%	20%	14%	3%	0%	24%	17%

***Source*:** Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Annex Table 4.5: Major & Severe Investment Climate Constraints Identified by Enterprises

	Punjab		Sindh		NWFP		All	
	Small Town	Rural	Small Town	Rural	Small Town	Rural	Small Town	Rural
Access to finance	43%	49%	14%	32%	46%	36%	32%	37%
Cost of finance	29%	26%	26%	25%	46%	38%	31%	28%
Loan procedures	17%	19%	40%	37%	40%	37%	30%	33%
Low market demand	19%	14%	5%	6%	1%	1%	10%	6%
Quality of electricity	10%	10%	6%	8%	4%	2%	7%	7%
Access to electricity	6%	8%	8%	14%	8%	9%	7%	12%
Economic policy uncertainty	15%	8%	1%	0%	0%	0%	7%	2%
Crime/ theft	5%	5%	12%	4%	0%	0%	7%	3%
Corruption	1%	1%	12%	3%	0%	0%	6%	2%
Access to markets	9%	6%	3%	1%	0%	1%	5%	2%
Road quality	5%	9%	6%	24%	0%	3%	5%	16%
Market information	5%	1%	4%	6%	0%	0%	4%	3%
Natural gas	8%	12%	0%	3%	1%	1%	4%	5%
High tax rates	1%	0%	7%	5%	0%	0%	3%	3%
Availability of transport	2%	6%	5%	21%	0%	6%	3%	14%
Road Access	5%	7%	1%	8%	0%	2%	3%	6%
Illegal tax levies	3%	1%	3%	0%	2%	0%	3%	0%
Complicated tax rules	0%	0%	5%	3%	0%	0%	2%	2%
Road Blocks	2%	1%	2%	6%	0%	1%	2%	4%
Water Supply	1%	1%	2%	2%	0%	9%	1%	4%
Telecommunications	1%	2%	0%	3%	2%	1%	1%	2%
Postal Service	1%	1%	0%	3%	0%	0%	0%	2%

***Source*:** Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Annex Table 4.6: Access to Markets

	Punjab		Sindh		NWFP		All	
	Small Town	Rural	Small Town	Rural	Small Town	Rural	Small Town	Rural
Population of village/small town	50,841	9,080	38,999	4,379	31,393	4,078	43,026	7,337
Main Markets Households Use to Buy/Sell Goods								
Grocery in the town/village	81%	27%	45%	0%	6%	22%	55%	22%
Grocery in nearby town/village	0%	0%	13%	2%	0%	1%	5%	0%
Commercial center	0%	11%	0%	17%	76%	3%	12%	10%
Nearest city	19%	62%	38%	81%	18%	63%	26%	65%
Median distance to the nearest commercial center (Km)	1	15	19	16	1	14.5	1	15
Median time to the nearest commercial center (minutes)	5	45	30	60	5	25	10	45
Public transport available to commercial center	98%	85%	91%	100%	100%	100%	96%	90%
Median cost of public transport to commercial center (Rs)	10	14	15	20	3	10	15	14
Transport hire cost from the nearest commercial center								
Bus (Rs)	1,500	2,400	2,000	3,000	300	500	2,000	2,000
Three wheeler (Rs)	100	100	200	150	50	100	100	100
Tractor (Rs)	1000	800	600	740	300	500	600	700
Bus fare from commercial center (Rs)	20	15	20	15	3	10	20	15
Bus travel time from commercial center (minutes)	75	45	45	60	5	25	45	45
Three wheeler fare from commercial center (Rs)	16	12	20	15	3	5	15	14
Three wheeler travel time from commercial center (minutes)	60	30	20	35	5	5	17	30

***Source*:** Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Annex Table 4.7: Market Linkages; Geographic Location of Sales and Trading Partners

	Production			Services			Trade		
Village Enterprises	**Punjab**	**Sindh**	**NWFP**	**Punjab**	**Sindh**	**NWFP**	**Punjab**	**Sindh**	**NWFP**
Sales to Buyers in:									
Same village	29	94	25	74	71	56	81	80	87
Same UC, different village	34	2	2	24	25	38	17	16	9
Same *Thesil*, different Union Council (UC)	12	0	0	1	2	0	1	2	1
Same district, different *Thesil*	16	0	0	1	0	5	0	2	1
Same Province, different district	8	4	2	0	2	0	0	0	0
Other Provinces	0	0	71	0	0	0	0	0	1
Other countries	0	0	0	0	0	0	0	0	0
Small town Enterprises									
Sales to Buyers in:									
Same town	41	74	21	55	74	60	44	76	39
Same UC, different town	12	20	11	25	17	33	28	19	16
Same *Thesil*, different UC	42	0	0	16	6	4	26	3	38
Same district, different *Thesil*	3	1	0	4	4	1	1	2	7
Same Province, different district	2	4	0	1	0	0	0	0	0
Other Provinces	0	0	68	0	0	1	0	0	0
Other countries	0	0	0	0	0	0	0	0	0
Village Enterprises									
Types of Buyers:									
Government	3	0	0	0	0	5	0	0	0
Traders	15	1	0						
Multinationals located in your country	0	0	0	2	0	0	0	0	0
Your parent company or affiliated subsidiaries	2	0	0	1	10	0	0	0	0
Large domestic firms	3	0	0	0	0	0	0	1	0
Agricultural producers and cooperatives	4	17	71	2	0	0	3	0	9
Households	60	75	27	85	79	92	92	77	88
Other (sales to small firms, etc)	13	7	2	10	12	3	5	22	3
Small-town Enterprises									
Government	0	0	0	0	0	1	0	0	0
Traders	6	0	0						
Multinationals located in your country	0	0	0	0	0	2	0	2	0
Your parent company or affiliated subsidiaries	0	0	0	0	0	0	0	0	0
Large domestic firms	0	0	0	0	1	0	1	0	0
Agricultural producers and cooperatives	2	1	0	4	0	0	1	1	1
Households	76	76	29	77	75	84	84	83	82
Other (sales to small firms, etc)	16	23	71	19	24	14	14	14	17

***Source*:** Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Annex Table 4.8: Technological Improvements/Innovations

	Punjab		Sindh		NWFP		All	
	Small Town	Rural	Small Town	Rural	Small Town	Rural	Small Town	Rural
Proportion of enterprises that made improvements/technology innovations	10%	6%	2%	10%	5%	1%	6%	6%
Type of improvements made								
Innovation in product	40%	48%	0%	1%	4%	50%	29%	32%
Improvement/innovation in equipment/machinery	37%	9%	38%	96%	47%	24%	39%	38%
Improvement in workers through hiring	0%	0%	62%	0%	14%	0%	11%	0%
Improvement in management	18%	19%	0%	3%	6%	27%	14%	14%
Other	5%	23%	0%	0%	30%	0%	7%	15%

Source: Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Annex Table 4.9: Participation in Business Associations

	Punjab		Sindh		NWFP		All	
	Small Town	Rural	Small Town	Rural	Small Town	Rural	Small Town	Rural
Proportion of enterprises located in a *tehsil* with								
Chamber of Commerce	0%	0%	32%	10%	25%	2%	17%	2%
Business association for all types of businesses	43%	2%	79%	51%	100%	100%	66%	29%
Industry specific business association	10%	0%	76%	47%	86%	36%	48%	14%
Proportion of enterprises belonging to								
Any business association	15%	2%	9%	3%	5%	0%	11%	2%
Chamber of Commerce	1%	1%	2%	3%	4%	0%	2%	1%
Business association for all types of businesses	14%	2%	7%	3%	5%	0%	10%	2%
Industry specific business assocation	1%	0%	0%	0%	0%	0%	0%	0%

***Source*:** Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Annex Table 4.10: Availability and Use of Business Services

	Punjab		Sindh		NWFP		All	
	Small Town	Rural	Small Town	Rural	Small Town	Rural	Small Town	Rural
Proportion of enterprises located in Tehsils where the following services are available:								
Engineering services	12%	0%	46%	14%	38%	60%	26%	15%
Management services	0%	0%	56%	16%	33%	28%	21%	9%
Marketing services	14%	1%	56%	14%	38%	35%	30%	11%
Accounting services	8%	0%	56%	12%	33%	21%	25%	7%
Legal services	22%	7%	59%	16%	39%	61%	35%	19%
Insurance services	17%	1%	58%	14%	100%	100%	32%	15%
Information technology services	7%	2%	61%	17%	39%	61%	27%	16%
Proportion of enterprises with business services available within a hour's travel time from town/village:								
Engineering services	59%	4%	13%	6%	9%	7%	33%	5%
Management services	42%	4%	32%	16%	23%	17%	35%	8%
Marketing services	23%	7%	32%	19%	9%	17%	24%	11%
Accounting services	37%	7%	19%	13%	23%	17%	28%	10%
Legal services	41%	16%	39%	20%	9%	7%	35%	15%
Insurance services	65%	9%	32%	13%	8%	7%	43%	9%
Information technology services	55%	8%	37%	19%	8%	7%	40%	9%
Proportion of enterprises reporting that they needed:								
Engineering services	0%	0%	1%	0%	1%	0%	1%	1%
Management services	0%	1%	0%	0%	0%	0%	0%	0%
Marketing services	0%	0%	0%	0%	0%	0%	0%	0%
Accounting services	0%	0%	0%	0%	0%	0%	0%	0%
Legal services	1%	0%	1%	0%	0%	0%	1%	0%
Insurance services	0%	0%	0%	0%	0%	0%	0%	0%
Information technology services	1%	0%	0%	0%	0%	0%	0%	0%
Technical support from buyers/suppliers	0%	0%	5%	6%	0%	0%	2%	1%

Source: Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Note: There are quite a few missing observations for the sections on business services in both the community and enterprise questionnaires. The numbers in the table should be interpreted in the following way: 12 percent of enterprises in Punjab are located in *tehsils* where engineering services are available. The other 88 percent are located in *tehsils* where theses services are either not available or respondents in the survey where unaware as to whether these services were available. Similarly 1 percent of enterprises in small towns reported that they needed engineering services, the remaining either reported that they did not need these services or that they did not know if they needed these services.

Annex Table 4.11: Laws and Regulations

	Punjab		Sindh		NWFP		All	
	Small Town	Rural	Small Town	Rural	Small Town	Rural	Small Town	Rural
Proportion of enterprises reporting that laws and regulation affecting their businesses are:								
Highly predictable	4%	7%	4%	7%	44%	46%	11%	15%
Somewhat predictable	62%	50%	67%	67%	26%	24%	58%	47%
Unpredictable	25%	25%	8%	8%	23%	19%	18%	21%
Highly unpredictable	3%	3%	16%	18%	5%	6%	9%	6%
Proportion of enterprises reporting that laws, rules and regulation being implemented in their community are:								
Highly predictable	3%	7%	6%	6%	36%	39%	10%	13%
Somewhat predictable	61%	48%	52%	55%	28%	24%	52%	44%
Unpredictable	26%	26%	22%	24%	28%	25%	24%	26%
Highly unpredictable	3%	3%	16%	13%	5%	5%	8%	5%
A contract offers protection from being cheated---proportion of enterprises that:								
Strongly agree	4%	4%	5%	6%	52%	21%	12%	8%
Agree	63%	53%	52%	67%	38%	56%	55%	56%
Disagree	26%	26%	40%	25%	8%	18%	28%	24%
Strongly disagree	0%	0%	0%	1%			0%	0%
Legal system will uphold contracts and property rights in disputes---proportion of enterprises that:								
Strongly agree	7%	5%	1%	0%	37%	19%	9%	7%
Agree	63%	45%	46%	49%	47%	56%	54%	48%
Disagree	23%	33%	45%	39%	15%	19%	30%	31%
Strongly disagree	0%	0%	3%	9%	0%	0%	2%	1%
Proportion of enterprises that incurred expenses for:								
Providing security	30%	15%	22%	23%	57%	15%	32%	16%
Providing protection payments	15%	7%	50%	34%	9%	5%	28%	11%
Due to theft, robbery, vandalism	0%	0%	1%	1%	0%	0%	0%	0%
Enterprises reporting being a victim of theft or robbery	8%	5%	8%	5%	9%	4%	7%	5%
Proportion of enterprises that resolved dispute using								
Neighbors and friends	4%	2%	1%	10%	1%	0%	2%	3%
Community leaders	0%	0%	3%	7%	0%	0%	1%	1%
Police station	2%	2%	1%	9%	1%	1%	2%	3%
Magistrate court	0%	0%	0%	0%	0%	0%	0%	0%

Source: Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Annex Table 4.12: Social Cohesion

	Punjab		Sindh		NWFP		All	
	Small Town	Rural	Small Town	Rural	Small Town	Rural	Small Town	Rural
Proportion of enterprises located in communities/neighborhoods that are								
Very united	17%	54%	12%	21%	5%	44%	18%	45%
Somewhat united	76%	41%	29%	50%	81%	56%	58%	46%
Affected by some quarrels and conflicts	6%	0%	36%	7%	14%	0%	19%	1%
Affected by great tension and conflict	2%	5%	9%	29%	0%	0%	4%	8%
Affected by conflict and violence	0%	0%	0%	2%	0%	0%	0%	0%
Homogenous	44%	42%	0%	30%	66%	49%	30%	41%
Have problems due to religious/ethnic/social and other differences	5%	7%	67%	85%	24%	66%	33%	31%
Differences that cause problems								
Difference in education	43%	0%	0%	0%	0%	0%	3%	0%
Difference in landholding	18%	20%	42%	37%	7%	37%	36%	35%
Difference in wealth/material possessions	7%	27%	0%	23%	1%	0%	1%	14%
Difference in social status	16%	0%	12%	16%	0%	0%	11%	7%
Difference between men and women	0%	0%	6%	0%	0%	0%	5%	0%
Difference between young and old	0%	0%	0%	6%	0%	0%	0%	3%
Difference in political affiliation	9%	0%	21%	15%	36%	60%	22%	32%
Difference in religious beliefs	0%	0%	19%	0%	0%	0%	15%	0%
Difference in ethnic background/race/caste/tribe	7%	53%	0%	3%	56%	3%	7%	10%

Source: Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Annex Table 4.13: Enterprise Ownership and Start-up Probit Regressions

	Determinants of owning a Non-Farm Business		Determinants of *Starting* a Non-Farm Business in past 3 years.	
	Rural	Small Town	Rural	Small Town
1+ parent(s) ran a non-farm enterprise	0.387	0.503	0.07	-0.035
	[2.41]**	[2.81]***	[0.30]	[0.13]
Age of household head	0.006	0.008	0.023	0.006
	[0.99]	[1.46]	[2.35]**	[0.50]
Log (years of education of household head)	0.043	0.075	-0.019	-0.192
	[0.52]	[1.18]	[0.15]	[1.69]*
Log (household size)	0.377	0.524	-0.137	0.425
	[1.84]*	[3.05]***	[0.44]	[1.44]
Female household head	0.36	-0.536	0.717	-0.784
	[0.79]	[1.55]	[1.09]	[1.81]*
Log (household assets)	0.049	0.081	0.025	0.149
	[0.97]	[1.75]*	[0.43]	[2.16]**
Acres of land cultivated	-0.055	-0.002	-0.01	-0.078
	[3.22]***	[0.44]	[0.80]	[1.41]
Log (distance to nearest town of 100,000 population)	-0.074	0.111	0.002	0.261
	[0.87]	[1.21]	[0.01]	[2.03]**
Share of households with electricity	-0.072	1.345	-0.74	0.947
	[0.17]	[2.52]**	[1.15]	[1.36]
Share of households with fixed phone	-0.05	0.999	0.603	0.659
	[0.12]	[2.35]**	[1.12]	[1.19]
Share of households with cell phone	0.547	-0.3	2.523	0.017
	[1.09]	[0.86]	[3.49]***	[0.02]
Community has system of sewage channels	0.001	-0.438	-0.39	-0.4
	[0.01]	[2.53]**	[1.88]*	[1.49]
Commercial bank is present	-0.111	-1.178	-0.326	-1.479
	[0.59]	[3.35]***	[1.65]	[2.83]***
Number of government. programs in community	0.255	0.01	0.623	0.154
	[2.02]**	[0.12]	[3.14]***	[1.29]
Improvements to overall business envir (# in 5 yrs)	0.033	-0.009	0.032	-0.016
	[1.12]	[0.58]	[0.77]	[0.47]
Chamber of commerce in *tehsil*	-0.843	-0.253	-0.418	-0.372
	[2.59]**	[1.09]	[1.11]	[1.18]
General business association in *tehsil*	0.134	0.006	0.352	-0.035
	[0.44]	[0.03]	[0.86]	[0.10]
Number of business services avail in *tehsil*	-0.029	0.036	-0.056	-0.008
	[0.65]	[0.56]	[0.62]	[0.10]
Strata==Faisalabad	0.393	0.566	-0.048	0.641
	[0.69]	[1.30]	[0.05]	[1.09]
Strata==Attock	0.697	0.918		0.449
	[1.26]	[2.45]**		[0.78]
Strata==Cotton	0.784	1.181	0.944	1.023
	[1.47]	[3.14]***	[1.29]	[2.18]**
Strata==PunjOther	0.62	0.899	0.597	0.525
	[1.29]	[2.12]**	[0.87]	[1.08]
Strata==Sindh	0.903	0.887	1.348	1.17

	Determinants of owning a Non-Farm Business		Determinants of *Starting* a Non-Farm Business in past 3 years.	
	Rural	Small Town	Rural	Small Town
	[2.11]**	[3.24]***	[2.42]**	[3.43]***
Constant	-2.36	-4.3	-3.261	-4.715
	[2.19]**	[3.65]***	[2.22]**	[3.01]***
Observations	452	452	322	295
t statistics in brackets				
* significant at 10%; ** significant at 5%; *** significant at 1%				

Source: Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005

Annex Table 4.14: Labor Productivity Regressions (OLS)

	(1) Small town	(2) Rural	(3) Production	(4) Services	(5) Trade
Ln(Fixed Assets)	0.029	0.042	0.059	0.126	0.000
	(1.25)	(1.44)	(1.55)	(3.70)**	(0.02)
Age of firm	0.018	0.011	0.016	0.013	0.017
	(1.79)	(1.27)	(1.66)	(1.47)	(1.78)
Manager's experience (years)	0.030	-0.015	0.051	-0.005	-0.002
	(1.98)	(0.91)	(2.83)**	(0.32)	(0.06)
Manager's gender	1.413	0.121	1.182	2.254	0.518
	(1.83)	(0.25)	(1.90)	(1.78)	(1.38)
Manager's education (none)	-0.686	-0.650	-0.919	-0.451	-0.960
	(2.36)*	(1.65)	(2.47)*	(1.47)	(2.66)**
Manager's education (up to secondary)	-0.423	-0.414	-0.382	-0.420	-0.479
	(2.63)*	(2.41)*	(1.00)	(2.40)*	(2.36)*
Production	-0.527	-0.231			
	(3.56)**	(0.95)			
Services	-0.363	-0.372			
	(2.04)*	(1.88)			
Commercial Bank	0.342	0.391	0.674	0.945	-0.154
	(0.97)	(3.34)**	(1.72)	(4.16)**	(0.85)
Internal road: dirt road	0.392	-0.285	0.136	0.003	-0.109
	(1.63)	(1.92)	(0.41)	(0.01)	(0.56)
Public transport available	0.658	0.009	0.483	0.272	0.085
	(3.70)**	(0.08)	(1.42)	(0.94)	(0.58)
Electricity outages (days/month)	-0.016	0.002	-0.034	-0.001	-0.007
	(2.07)*	(0.44)	(2.97)**	(0.13)	(1.28)
% households with fixed-line phones	0.006	-0.002	-0.006	0.005	-0.002
	(1.63)	(0.64)	(0.68)	(1.17)	(0.62)
% households with cell phones	-0.006	0.002	-0.003	-0.001	-0.006
	(1.79)	(0.59)	(0.52)	(0.24)	(2.03)*
Community conflict	-0.093	0.294	-0.930	-0.286	0.267
	(0.26)	(1.56)	(1.33)	(1.25)	(1.34)
Community Population	0.000	0.000	0.000	0.000	0.000
	(0.64)	(4.24)**	(1.54)	(1.53)	(1.71)
Distance to city 100K	0.001	-0.001	-0.001	0.001	0.000
	(1.12)	(1.17)	(0.71)	(0.54)	(0.48)
Chamber of Commerce	0.548	0.446	-0.100	-0.186	0.295
	(2.60)*	(1.60)	(0.16)	(0.53)	(1.61)
Attock	-0.429	0.545	0.178	0.022	0.529
	(2.36)*	(2.70)**	(0.44)	(0.07)	(2.30)*
Faislabad	0.138	-0.191	-0.486	0.460	0.346
	(1.19)	(1.48)	(1.54)	(3.40)**	(1.75)
Other Punjab	0.532	-0.001	0.376	0.082	0.311
	(3.30)**	(0.01)	(0.74)	(0.31)	(1.70)
Sindh	0.072	0.166	-0.638	0.460	0.124
	(0.36)	(0.57)	(1.76)	(1.86)	(0.60)
% households with electricity		0.001			
		(0.26)			
Rural			0.296	0.375	-0.276
			(0.61)	(1.37)	(1.56)
Constant	7.734	10.473	8.610	5.575	10.908
	(7.31)**	(11.64)**	(4.60)**	(3.46)**	(17.64)**
Observations	623	483	140	401	565
R-squared	0.22	0.19	0.48	0.30	0.17

Robust t-statistics in parentheses
* significant at 5% level; ** significant at 1% level

Source: Authors' calculations based on the Pakistan Rural Investment Climate Survey, 2005