AGRICULTURE AND RURAL DEVELOPMENT DISCUSSION PAPER 51

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IMPROVING THE RURAL INVESTMENT CLIMATE FOR BUSINESSES:

Key to Rural Income Generation

NAOTAKA SAWADA

THE WORLD BANK

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ACRONYMS AND ABBREVIATIONS

ARD	Agriculture and Rural Development
AFTAR	Africa Region: Agriculture and Rural Development
AFTSN	Africa Region: Sustainable Development Front Office
BF	Burkina Faso
BNPP	Bank Netherlands Partnership Program
CFED	Corporation for Enterprise Development
CMC	Core Management Committee
DECPI	Development Research Group: Poverty and Inequality
EASPR	East Asia and Pacific Region: Poverty Reduction and Economic Management
GDPs	gross domestic products
HH	household
HNB	Hatton National Bank
IT	information technology
LCSAR	Latin America and the Caribbean Region: Agriculture and Rural Development
MNSAR	Middle East and North Africa Region: Agriculture and Rural Development
MZ	Mozambique
NG	Nigeria
NGOs	nongovernmental organizations
NF	nonfarm
OECD	Organization for Economic Cooperation and Development
PHRD	Policy and Human Resource Development
PRS	Political Risk Services
RIC	rural investment climate
RICA	Rural Investment Climate Assessment
RNFEs	rural nonfarm enterprises
RUPRI	Rural Policy Research Institute
UN	United Nations
UNIDO	United Nations Industrial Development Organization
US$	U.S. dollars
WDR	World Development Report
YM	Yemen

EXECUTIVE SUMMARY

An appropriate rural investment climate (RIC) is essential for rural businesses to be successful and generate employment and income in their communities. Improving the investment climate could facilitate income-generation activities in both farm and nonfarm sectors, thus reducing rural poverty. Nonfarm sector–focused growth, combined with agricultural growth, has been shown by Delgado et al. (1998) to have a significant impact on the local economy through the generation of employment and income.

This study is the first to focus on both farm and nonfarm enterprises in its 2010 surveys of RIC in Yemen, Burkina Faso, Nigeria, and Mozambique—unlike six previous RIC assessment (RICA) pilot projects that focused only on nonfarm enterprises. This report assesses the weaknesses and strengths of all RIC components in farm and nonfarm enterprises of the four countries surveyed, and recommends measures to address the weaknesses. The report identifies similar business obstacles for farm and nonfarm enterprises and four critical areas of the RIC to be improved. The results of the RICA are based on analyses of obstacles perceived by rural entrepreneurs and on assessments by RIC indicators, enterprise entry and exit, and enterprise performance. To have maximum synergy effects, farm and nonfarm enterprises should be promoted together.

RIC FRAMEWORK

Based on the recommendations of the six previous projects, a framework was developed to assess the RIC. The framework divides RIC components into the following categories—market development, access to markets, market information, women's policy, access to finance, access to inputs, management services, agriculture extension services, government regulations, infrastructure, and other government-related RIC components (political and economic stability, health, security and safety, education, disaster management, etc.).

SUGGESTIONS OF THE INTERVENTIONS BASED ON RICAs

By consolidating the findings of the RICAs (including perceived obstacles, assessment by RIC indicators, enterprise entry and exit, and enterprise performance), four areas were identified as in need of improvement: (1) market demand, (2) access to markets, (3) access to finance, and (4) business services.

(1) *Market Demand*

KEY FINDINGS	SUGGESTIONS OF THE INTERVENTIONS
1-1. Weak demand caused by limited markets	1-1. Increase market demand by: (a) Upgrading or developing rural marketplaces with required amenities managed by the local people (b) Improving roads and transports to connect customers to markets (c) Exploring new markets by differentiating products/services and by forming a group of entrepreneurs with similar products/services (practice economies of scale) (d) Providing market information to customers

(2) *Access to Markets*

KEY FINDINGS	SUGGESTIONS OF THE INTERVENTIONS
2-1. Poor quality roads, such as dirt roads	2-1. Improve roads to connect entrepreneurs and customers to marketplaces
2-2. High transportation cost	2-2. Develop an affordable public transportation system after a feasibility study
2-3. Limited market knowledge or information	2-3. Develop a mechanism to deliver market and price information for selected products and services, e.g., mobile phones

(3) *Access to Finance*

KEY FINDINGS	SUGGESTIONS OF THE INTERVENTIONS
3-1. Limited availability of financial institutions	3-1. Increase the availability of microfinance institutions to serve rural areas and improve the government regulatory structure of microfinance institutions
3-2. Entrepreneurs' reluctance to apply for loans	3-2. Increase the availability of microfinance and the capacity of entrepreneurs to borrow (their financial literacy)
3-3. Limited capital/funds and lack of working capital	3-3. Establish a perpetual fund for rural entrepreneurs and establish or strengthen a credit guarantee scheme with the support of small business agencies
3-4. Low level of formal banking or not having a checking or savings account	3-4. Promote the habit of saving by requiring entrepreneurs to have some money set aside for business operations, e.g., for working capital and fixed asset investment

(4) *Business Services*

KEY FINDINGS	SUGGESTIONS OF THE INTERVENTIONS
4-1. No or limited business services for rural entrepreneurs	4-1. Establish or expand business management services to rural areas
4-2. Limited availability of information technology (IT) and cell phones	4-2. Improve access to market information by improving access to cell phones
4-3. Limited skills and management training available	4-3. Identify the skills and managerial expertise needed by local businesses and establish vocational and management training programs
4-4. Limited improvement or innovation in productivity/management	4-4. Establish essential business management services, including services to increase quality and productivity and provide appropriate technology
4-5. Limited access to inputs	4-5. Secure inputs locally—review and identify business opportunities that use local inputs
4-6. Low percentage of paid workers, including managers	4-6. Teach entrepreneurs to set aside money equivalent to their wages for running their businesses
4-7. Seasonality of farm and nonfarm economic activities	4-7. Overcome seasonality: (i) promote farm and nonfarm enterprises together, (ii) increase processing of agricultural products for storage, and (iii) diversify economic activities

In addition, two other areas stood out—infrastructure (electricity and water) and government regulations (labor, tax rates, tax administration, licenses, permits, registration, and anticorruption measures). Although RICAs showed that government regulations ranked low as perceived obstacles, they will become more significant as more rural enterprises become active and formalized. For example, government regulations may hinder the expansion and operation of businesses in rural areas. The government needs to streamline government regulations in the near future to pave the way for future growth.

CONCLUSION

Rural businesses, both farm and nonfarm, are becoming an increasingly important source of livelihood in rural areas, but to succeed, they must have a more supportive RIC. Rural entrepreneurs need better access to markets, loans, and management services if they are to successfully expand their income-generation activities. To accommodate that expansion, market demand has to increase; therefore, any effort to improve the RIC must seek to stimulate demand as well.

Chapter 1: INTRODUCTION

An appropriate rural investment climate (RIC) is essential for rural businesses to be successful and to generate employment and income in poverty-stricken areas. Improving the investment climate would facilitate income-generation activities in farm and nonfarm sectors, thereby reducing rural poverty.[1] The urgency of this task is great in the four countries of Yemen, Burkina Faso, Nigeria, and Mozambique, where the rural poverty rate is much higher than the urban rate and has remained stagnant in the last decade, as shown in figure 1.1.

Historically, the primary focus for the rural sector has been on agriculture, particularly commercial agriculture and agribusiness, which were perceived to be the main drivers of rural growth. There was not much interest in other rural enterprises since they were thought to be almost fully dependent on agriculture and unimportant to the dynamics of rural economies. This changed in the 1990s, however, as donors focused more on poverty reduction. Household surveys designed to gather new information on the sources of rural household income were conducted, and as the results came in, more attention was given to the importance of rural nonfarm enterprises (RNFEs) in rural livelihoods.[2] Work by Reardon et al. (2001) initiated a stream of research efforts recently summarized in a major study led by the International Food Policy Research Institute (Haggblade et al. 2007). Within the World Bank, the 2003 rural strategy "Reaching the Rural Poor" realized the importance of RNFEs, and the 2008 World Development Report (WDR) "Agriculture for Development" embraced the view that a sound RIC and a rapidly growing agriculture sector are basic ingredients for a dynamic rural economy.

A recent Ethiopia RIC Assessment (RICA) report identified nonfarm enterprises as being more often complementary to than substitutes for farm enterprises (World Bank 2009b). This finding confirms farm and nonfarm growth linkages identified by Delgado et al. (1998) as contributing positive multiplier effects to the local economy in selected Sub-Saharan African countries. Delgado et al. (1998) showed that nonfarm sector–focused growth, combined with agricultural growth, has a significant impact on the local economy by generating employment and income. Most nonfarm activities produce goods and services that are linked to agriculture through forward, backward, and consumer-demand linkages (Hazell and Haggblade 1993). Often the condition of prevailing low wages obscures the advantages and merits of rural industrialization; therefore, agriculture often remains the single driver of nonfarm sector growth in rural areas (Reardon 1997).

This report focuses on both farm and nonfarm enterprises in the four countries shown in figure 1.1: Yemen, Burkina Faso, Nigeria, and Mozambique. In this, it departs from six previous RIC pilot projects in Nicaragua, Sri Lanka, Tanzania, Indonesia, Benin, and Ethiopia, which focused solely on nonfarm enterprises. The RIC team revised the RIC questionnaires of communities, households, and enterprises. It also revised the methodological guidelines for conducting a survey and the survey training manual (Sawada 2010a; 2010b). The questionnaires and guidelines were developed during the preparation and implementation of the surveys in Yemen and Burkina Faso. The same questionnaires were used for both farm and nonfarm enterprises, with special emphasis on household enterprises.[3]

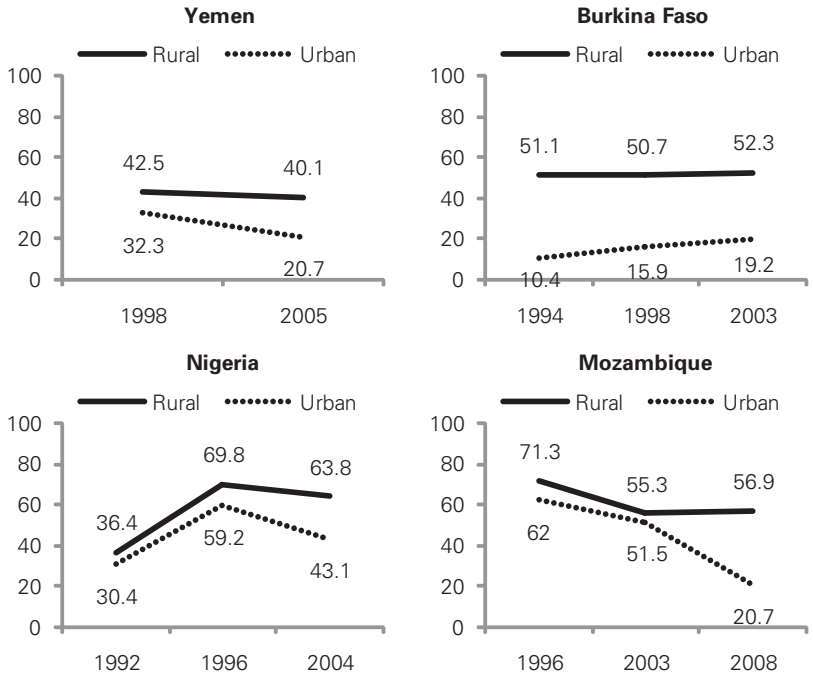
The objectives of this report are to assess the weaknesses and strengths of all RIC components in farm and nonfarm enterprises in four countries and to recommend measures to

1 Refer to N. Sawada (2010a) "Methodological Guidelines: Rural Investment Climate Survey" and N. Sawada (2010b) "Training Manual: Rural Investment Climate Survey" for more in detail on the RIC surveys. The Rural Investment Climate Survey consists of community, households, and enterprises questionnaires.

2 Nonfarm enterprise activities include all farm and nonfarm value addition activities (e.g., postharvest value addition or food processing, manufacturing, services, etc.).

3 The survey data are not representative of each country, but rather representative of each province, state, governorate, and district, respectively, in Burkina Faso, Nigeria, Yemen, and Mozambique due to budget constraints.

FIGURE 1.1: Poverty Below the National Poverty Line



Source: The United Nations MDGs Report. (http://mdgs.un.org/unsd/mdg/Default.aspx?q=poverty).

improve the RIC. The following topics were excluded from the detailed analysis because they are outside the scope of this study:

1. Urban versus rural investment climate
2. Gender analysis (male versus female entrepreneurs)
3. Development of rural "Doing Business" indicators

The RIC survey data of the four countries in this study can be extended for use in researching these additional topics if additional funds are available.

This report identifies similar business obstacles for farm and nonfarm enterprises and proposes improvements in four critical areas of the RIC.[4] Analyses of the obstacles perceived by rural entrepreneurs and assessments by RIC indicators provide the basis for the RICA, which is presented in Chapter 2.[5] Recommendations to provide practical solutions and direction for policy makers and project designers of rural income generation activities are presented in Chapter 3. These recommendations focus on the four RIC areas identified as critical. Appendix A states the summary of policy recommendations in the previous six pilot RIC projects. A comparison of characteristics of communities, households, and enterprises is summarized in Appendix B. Obstacles perceived by rural entrepreneurs are assessed in Appendix C. Appendix D includes a definition of RIC indicators and an assessment by percentile rankings of RIC indicators. An analysis of enterprise dynamics is shown in Appendix E for entry, exit, and performance. Appendix F shows income simulation results of improvement in the RIC. Appendix G shows findings of other RIC components.

4 Refer to Appendix G for other government-related RIC components. Currently, these components (except infrastructure) are irrelevant, but as more business activities are formalized in rural areas, government-related components may become more relevant and, hence, worth improving in the near future.

5 RIC indicators represent major RIC components, along with their respective subcomponents. Refer to Appendix D for more detailed definitions and percentile ranking data for each RIC component and subcomponent. Refer to Appendix B for obstacles perceived by entrepreneurs.

Chapter 2: RURAL INVESTMENT CLIMATE ASSESSMENTS

In conducting its RICAs, this study reviewed the findings and recommendations of six pilot RIC projects conducted in Sri Lanka (World Bank 2004), Tanzania (World Bank 2007a), Nicaragua (World Bank 2007b), Indonesia (World Bank 2006a), Benin (World Bank 2009a), and Ethiopia (World Bank 2009b). Based on those reviews, a framework for a sustainable RIC was formulated (figure 2.1)[6] and essential RIC components for the demand and supply sides were identified: market development, access to markets, market information, access to finance, access to inputs, government regulations, finance policy, and management/agriculture extension services.

Women's policy is included in the framework as well because of the importance of gender equality, even though gender analysis was excluded from the scope of this report. Because most agricultural land is owned by men, rural women seek alternative employment mostly in nonfarm sectors. Studies show that women have the potential to be successful entrepreneurs (Reardon 1997; Barrett et al. 2001). However, women entrepreneurs in rural areas have limited education, resources, and support for their pursuit of nonfarm enterprise activities; consequently, they have little choice but to engage in a limited selection of low-profit nonfarm activities rather than exploit more advantageous market opportunities (World Bank 2009b; Sawada and Harishchandra 2011). Increasingly, RNFEs are run by women.

The framework also includes a second tier of government-related RIC components comprising infrastructure, health, education, security, disaster management, and political and economic stability. All these components are interrelated and interact to support rural farm and nonfarm businesses.

RIC components may be further categorized into demand and supply sides; to promote the supply side of rural entrepreneurs' economic activities, it is important to improve the demand side of the investment climate. The demand side at the community level includes market development and access to markets, both of which are instrumental in stimulating the supply side. The development of rural marketplaces expands the participation of both customers and entrepreneurs. That is, increasing demand provides opportunities for the supply side to grow. Access to markets includes transportation as well as roads to connect customers and entrepreneurs to markets. In addition, having current market information further enhances customers' and entrepreneurs' ability to participate in the markets.

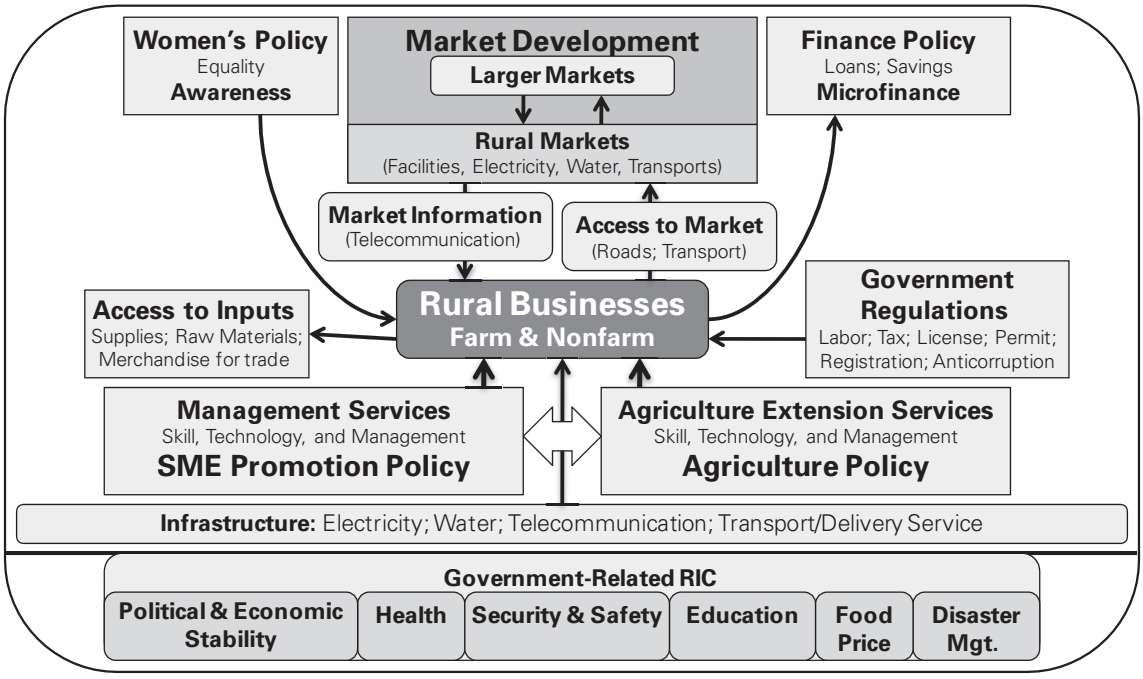
The supply side for rural entrepreneurs includes access to finance, access to inputs, and availability of management and agriculture services. It also includes government regulations (labor, tax, license, permits, registration, and anticorruption) and other government-related RIC components such as infrastructure (electricity, water, and telecommunication), security, health, education, disaster management, political stability, and economic stability. Access to finance is defined as the availability of loans to entrepreneurs for start-up capital and working capital. The availability of a loan may be improved through management services to entrepreneurs to make their business more profitable. Appropriate training in job skills and management further enhances the capability of entrepreneurs to increase their profits. Gaining knowledge of management practices may especially help entrepreneurs to determine the appropriate skills and technology required to conduct their operations successfully. Management knowledge may also help entrepreneurs to improve access to inputs.

For this chapter, the RICs of Yemen, Burkina Faso, Nigeria, and Mozambique were analyzed (Sawada and Adovor 2011a; 2011b; 2011c; and 2011d) to determine which RIC components affect the entry, exit, and performance of rural businesses.[7] Among the key components in the RIC framework, the analysis identified four critical areas: market demand, access to markets (roads and transport), access to finance, and availability of management/agriculture extension services (including technology and job training in the skills required to run a business).

6 Refer to Appendix A for a detailed summary of recommendations from the six pilot projects.

7 For more detailed analyses of the data, refer to Appendix E: Enterprise Dynamics.

FIGURE 2.1: RIC Framework



Source: Diagram developed by author.

The RIC is assessed here based on perceived obstacles and RIC indicators. Perceived obstacles are defined as obstacles that entrepreneurs perceived as major or very severe in RIC survey questions. The objective of this assessment, which compares farm and nonfarm enterprises, is to determine the strengths and weaknesses of the RIC components and identify what needs to be improved.

2.1 OBSTACLES PERCEIVED BY RURAL ENTREPRENEURS

Farm and nonfarm enterprises alike face three similar perceived obstacles in all four countries: limited access to finance, limited access to markets, and poor transportation (figure 2.2). In Mozambique, the obstacles also include poor telecommunication services and limited technology, whereas in Yemen they include scarcity of electricity for nonfarm enterprises and water for farm enterprises. Availability of business services (agriculture for farm enterprises) was not perceived as a major or very severe obstacle by a majority of entrepreneurs.

Government regulations are generally ranked low as obstacles. Courts, labor regulations, tax rates, tax administration, licenses and permits, security, land-use policy, and labor and education levels are not perceived as major or very severe obstacles. This fact reflects the informality of rural enterprises. As those enterprises develop and expand, government regulations may well become as important for them as they are for urban enterprises (see Appendix C).

Male- and female-managed enterprises have similar perceived obstacles, but those obstacles are generally perceived by higher percentages of female entrepreneurs. In Mozambique, telecommunication, transport, electricity, technology, and postal/delivery services are perceived as greater obstacles by male entrepreneurs (see Appendix C).

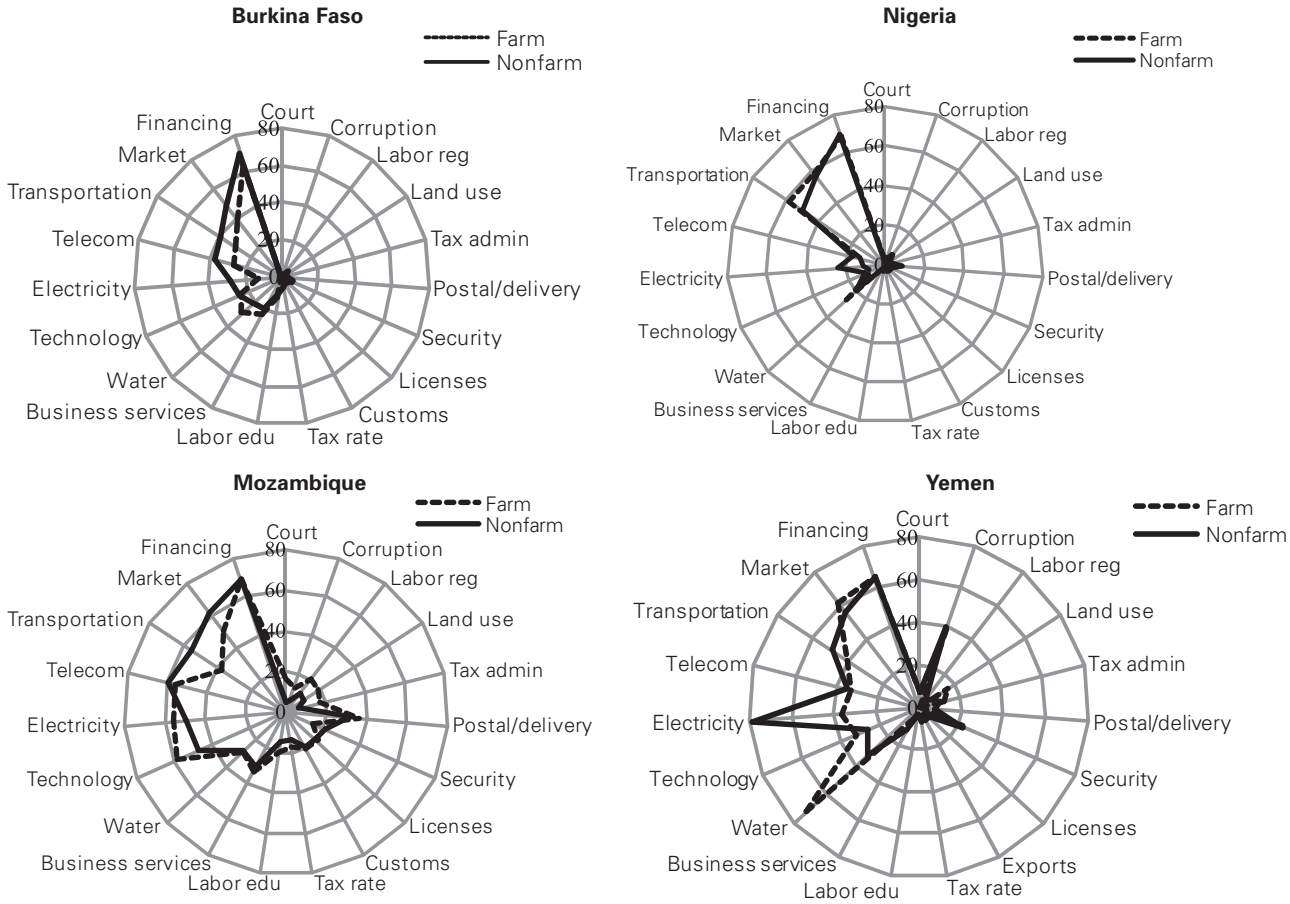
2.2 RIC INDICATORS

RIC indicators were used to assess the RIC in various countries as well as regions within a country.[8] These assessments reveal the strengths and weaknesses of RIC components. The methodology applied in these assessments is the established methodology of "Doing Business," using percentile ranking and the simple averaging method.[9]

8 For each regional comparison within the country of RIC indicators, refer to Sawada and Adovor (2011a, 2011b, 2011c, and 2011d) for Yemen, Burkina Faso, Nigeria, and Mozambique, respectively.

9 To calculate the percentile rankings, the lowest level and the highest level of RIC indicators were selected from the average data for communities in each of the four countries. The country

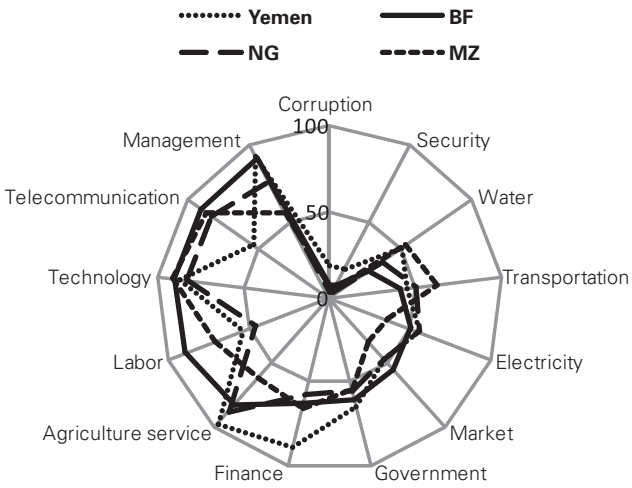
FIGURE 2.2: Farm and Nonfarm Comparison of Perceived Obstacles (% enterprises)



Source: 2010 RIC Surveys.

The findings of the RIC indicators were interesting because they differed from the findings of perceived obstacles. For example, the RIC components commonly identified as needing to be improved were management (including innovation/improvement), technology, and business/agriculture services, none of which was identified as significant in the analysis of perceived obstacles. The perception of business or agriculture services, management innovation/improvement, and technology as low-level obstacles may mean that entrepreneurs did not recognize their importance because they were not familiar with them. Instead, they focused on the immediate problems they encountered in their business operations (figures 2.3 and 2.4).

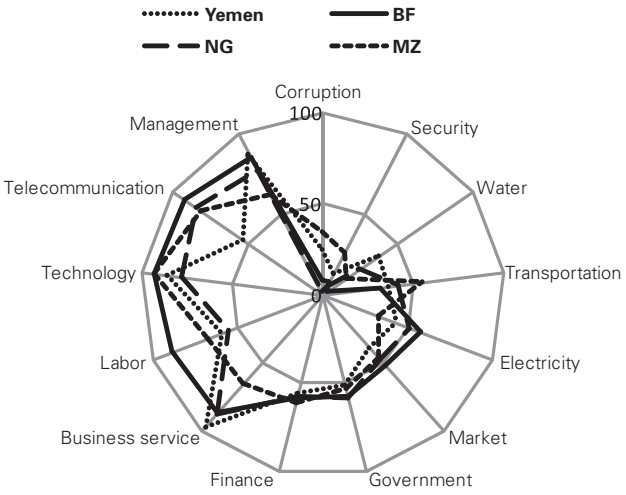
FIGURE 2.3: RICA: Farm Enterprises



Source: 2010 RIC Surveys.
Note: 100 is the worst level; 0 is the best.

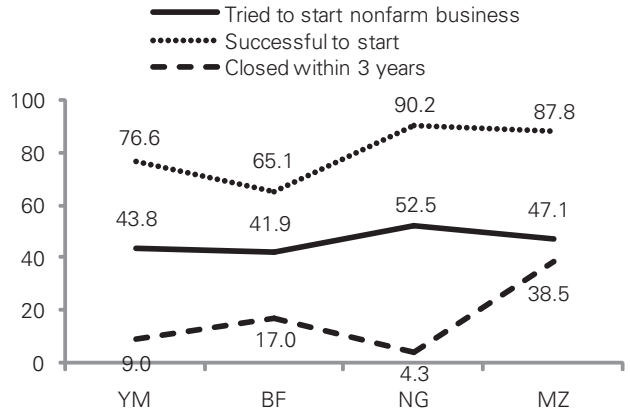
average data were compared with the selected lowest and highest community data to calculate the percentile rankings of each subindicator, and then simple averaging of subindicators was applied to derive percentile rankings of the main RIC indicators. Refer to Appendix D for definitions and percentile rankings of RIC indicators.

FIGURE 2.4: RICA: Nonfarm Enterprises



Source: 2010 RIC Surveys.
Note: 100 is the worst level; 0 is the best.

FIGURE 2.5: Rates of Try-to-Enter; Entry Success; and Exit of Nonfarm Businesses (% of households)



Source: 2010 RIC Surveys.

Telecommunication and labor issues were identified at level 50 or worse for three African countries. Telecommunication includes cell phone and computer use; labor issues include years of managerial experience and skills obtained. Another important finding is that government-related indicators ranked slightly higher than the mid-level obstacles, excluding corruption. The level of these indicators (licenses and permits, tax system, registration, etc.) is enough to warrant attention now, even though many enterprises are informal, so that steps to improve government regulations and procedures are already underway as those rural enterprises become formalized.

2.3 OVERALL ASSESSMENTS AND RECOMMENDATIONS

By combining perceived obstacles and RIC indicator assessments, the following areas were identified as ripe for improvement: market demand, access to markets (transport), access to finance, business/agriculture services, management, and technology. Labor and telecommunication could be added to the list. Improving these areas would lessen the obstacles to starting a business and the reasons for closing it and would improve business performance. It could also boost the population of the rural communities, as described below.

2.3.1 Obstacles to Starting a Business

Limited access to finance (start-up capital and loans for fixed assets), access to inputs, and market knowledge were identified by farm and nonfarm entrepreneurs as the main obstacles to start-ups (Appendix E). Similarly, they identified limited access to finance and inputs as their top two reasons for not having started a nonfarm business. The availability of inputs was cited as a key element for starting a new business.

About half of households tried to start nonfarm businesses, but the success rates may vary from country to country. The percentages of households that tried to start nonfarm businesses are in the range of 41.9 to 52.5 percent. The lowest success rate is 65.1 percent in Burkina Faso, whereas the highest rate is 90.2 percent in Nigeria, as shown in figure 2.5.

2.3.2 Motives for Starting a Business

A desire for social independence was the top motive given in Burkina Faso and Nigeria for starting farm and nonfarm enterprises, whereas it was sixth for nonfarm enterprises and fifth for farm enterprises in Yemen and Mozambique. Market opportunity was the top motive for Yemeni nonfarm enterprises and the second for Nigerian farm enterprises. Obtained skill was the top motive for farm enterprises in Mozambique, the second for farm and nonfarm enterprises in Yemen, and the second for nonfarm enterprises in Nigeria.[10] Individuals having obtained management knowledge are in a good position to exploit market opportunities. Skills may be acquired through vocational training. In general, two main reasons, like perceived market opportunities and lack of options from farming, motivate people to start businesses.

10 See Table E1.1 of Appendix E for detailed percentages of each motive.

2.3.3 Reasons to Close a Business

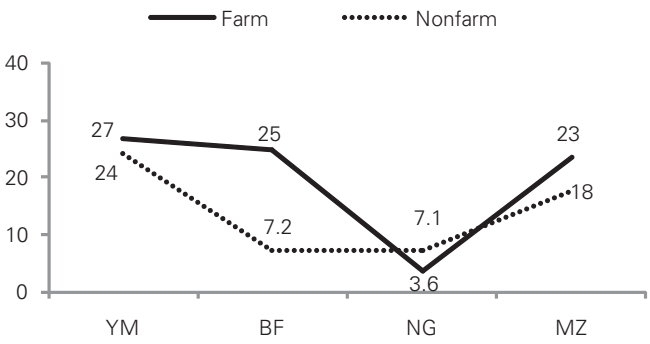
Lack of working capital and unprofitable operations were cited as the two top reasons for nonfarm enterprises to close, as shown in Appendix E. Lack of working capital reflects limited access to finance and lack of management knowledge. Unprofitable operations may be caused by weak demand, the high cost of inputs and transport, and low productivity. The death rates may vary from country to country. The highest death rate after starting nonfarm businesses was 38.5 percent in Mozambique, whereas the lowest was 4.3 percent in Nigeria, as shown in figure 2.5.

2.3.4 Performance

Regressions of enterprise performance show that access to finance, cell phone use, innovations/improvements, business/agriculture extension services, and transportation are more or less positively correlated with performance, sometimes significantly so, as shown in Appendix E. However, some opposite signs were identified for business/agriculture extension services for farm enterprises in Burkina Faso and Nigeria and nonfarm enterprises in Mozambique.

Improving the RIC may significantly increase income generation.[11] A 5-percent improvement in each of 8 RIC variables (having a bank account, having a loan, use of car/bus/truck for transportation, management innovation/improvement, business services, use of a cell phone, use of electricity, and use of water) leads to an income increase of 7.1 to 24 percent for nonfarm enterprises and 3.6 to 27 percent for farm enterprises (figure 2.6). These figures may be underestimated because of the exclusion of opposite signs. Since regression reflects correlation instead of causation, under certain circumstances the signs may signal the opposite of the expected causation directions.

FIGURE 2.6: Income Increase (%) by 5% Improvement Each



Source: Own calculation based on regression results of Appendix E.

11 Refer to Appendix F for more detailed simulation results.

Chapter 3: IMPROVEMENT IN RURAL INVESTMENT CLIMATE

This chapter examines four areas critical to the RIC (market demand, access to markets, access to finance, and business/agriculture extension services) and recommends measures to improve them and better support rural farm and nonfarm entrepreneurs. Increasing market demand is essential for existing rural businesses to expand without a loss of market share. Improving access to markets helps increase market demand by increasing the number of customers. Improving access to finance provides entrepreneurs with more funds to start a business or to use as working capital. Business/agriculture extension services provide farm and nonfarm entrepreneurs with basic business management knowledge, including identifying the technology and skills needed to operate a productive and profitable enterprise. In addition, they provide farm enterprises with agriculture-related services such as agricultural technology, seeds, and fertilizers.

3.1 MARKET DEMAND

It is vital to increase market demand in rural areas if rural businesses are to grow. If market demand stays the same while the number of entrepreneurs increases or existing businesses expand, profitability may decrease due to the limited number of customers.

3.1.1 Market Demand and Competitors

Weak demand correlates with too many competitors. If there are too many competitors relative to the existing demand, then demand may weaken. If there are too few competitors, demand may exceed the supply, giving entrepreneurs a chance to expand their businesses to meet the excess demand. As shown in figure 3.1, too many competitors and too little demand for goods and services are perceived as major or very severe obstacles by 37 to 44 percent of nonfarm entrepreneurs and 27 to 44 percent of farm entrepreneurs.

The number of competitors is less in nonfarm enterprises than farm enterprises, but the perception of competitors as obstacles is similar in both types of enterprises (figures 3.1 and 3.2). For nonfarm enterprises, the number of competitors correlates with entrepreneurs' perception of weak demand and too many competitors as obstacles. For farm enterprises, the perceptions of weak demand and too many competitors are not closely correlated. In Nigeria, the average number of competitors (19) is smaller than that in Burkina Faso and Yemen, but it is perceived as an obstacle by 44 percent of Nigerian entrepreneurs, the highest of the three countries. This is higher even than in Yemen, where the average number of competitors in farm enterprises is 42 and is considered a major or very severe obstacle by 43 percent of farm entrepreneurs.

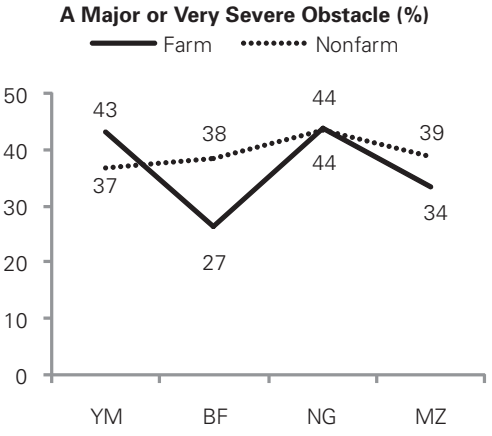
Markets are available at almost all district levels, but the availability at the community level is relatively low, with the exception of Yemen. In Burkina Faso, Nigeria, and Mozambique, 65 to 72 percent of communities have a market, whereas 94 percent have one in Yemen (figure 3.3). The main customers of nonfarm enterprises are located within the community in all four countries (67 to 78 percent), whereas the main customers of farm enterprises are located outside of the community in Yemen and Mozambique and within the community in Burkina Faso and Nigeria (figure 3.4).

Increasing Market Demand

Market demand can be increased (i) by developing or upgrading rural marketplaces; (ii) by improving access to markets, roads, and transport (refer to section 3.2); (iii) by using marketing techniques to identify new customers; and (iv) by providing market information (refer to section 3.4).

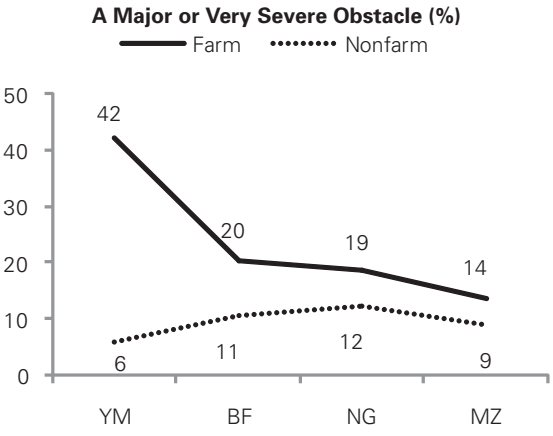
The construction of a new market in the community stimulates local demand for goods and services and provides opportunities for more transactions. The percentage of households benefitting from the new markets is generally quite high (figure 3.5). Whether new or upgraded, rural marketplaces should include such necessary amenities as work premises, electrical connections, and a water supply.

FIGURE 3.1: Weak Demand/Too Many Competitors



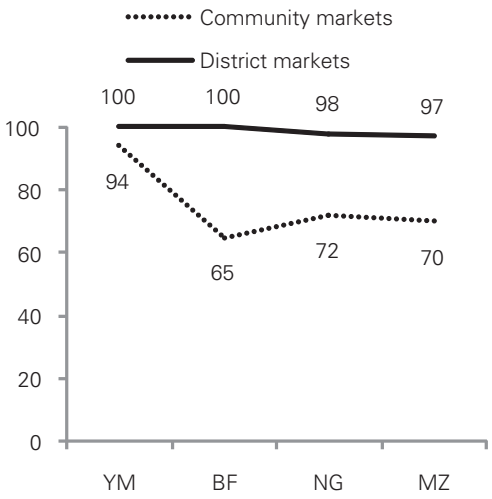
Source: 2010 RIC Surveys.

FIGURE 3.2: Average Number of Competitors



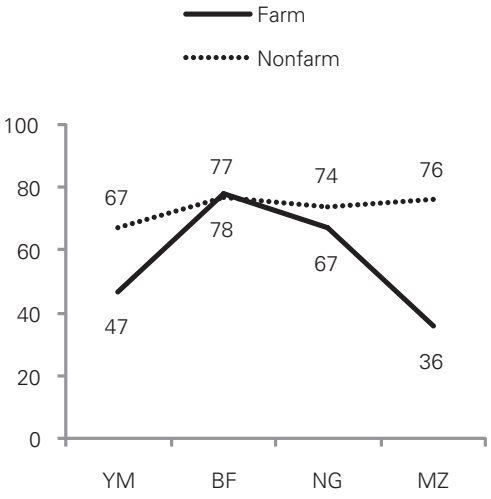
Source: 2010 RIC Surveys.

FIGURE 3.3: Market Availability



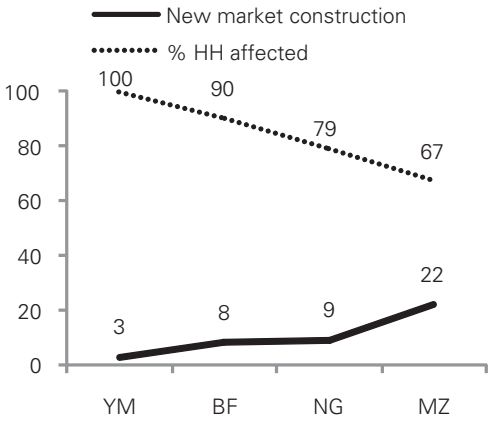
Source: 2010 RIC Surveys.

FIGURE 3.4: Community Customers



Source: 2010 RIC Surveys.

FIGURE 3.5: Community Project



Source: 2010 RIC Surveys.

A community-driven approach may be the most effective and efficient way to develop a new market or upgrade an existing one. This approach should include a study of the existing marketplaces at the outset; the markets would then be upgraded accordingly. The marketplaces should be managed and maintained by the local community. Narayan et al. (2009) stress that it is important to transform markets into ones that poor people can access and participate in fairly because often poor people do not have that privilege. The solution is to expand access to marketplaces in an equitable way.

Other approaches go beyond the community level. One is to increase demand by improving roads to connect more customers to markets and by improving transport to the markets (see section 3.2). Another is to use marketing techniques to

identify new customers. For example, entrepreneurs can differentiate their products/services to meet the needs of a specific segment of the market identified through market research. Or they may use economies of scale to target a larger market by forming a group of entrepreneurs with similar products/services. A related approach is to provide market information to customers as well as entrepreneurs (see section 3.4). These three approaches are discussed in the sections that follow.

3.2 ACCESS TO MARKETS

Access to markets encompasses physical infrastructure, access to products or services, and availability of market information to rural entrepreneurs. Physical infrastructure includes feeder or access roads and transportation connecting to primary and secondary markets. Access to products or services includes availability of and access to input and output markets. Market information may vary depending on the specific products or services available. As previously noted, improving access to markets benefits both customers and entrepreneurs.

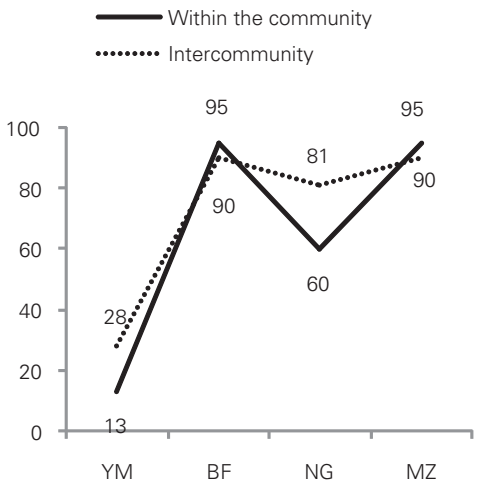
3.2.1 Roads

The condition of existing roads is not ideal for accessing existing markets. Most roads connecting communities and within communities are dirt roads in three of the African countries surveyed; only in Yemen are most road surfaces made of gravel and asphalt (figure 3.6). Farm and nonfarm entrepreneurs had a similar perception of roads as a major or very severe obstacle in all the countries except Mozambique, where nonfarm entrepreneurs' perception was 18 percent higher than farm entrepreneurs' (figure 3.7).

Improving Roads

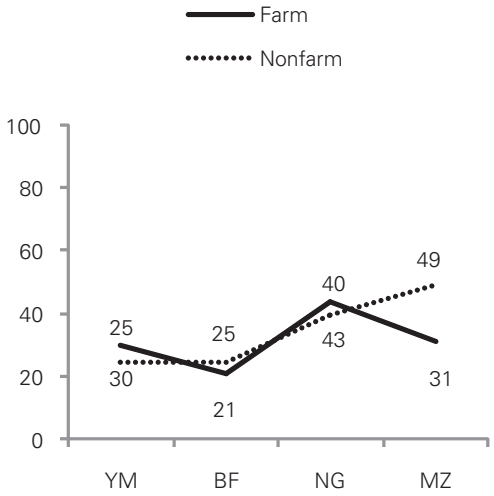
The World Bank (2009c) emphasizes that roads connect people not only to markets, but also to essential services like health services and schools. New road or bridge construction improves market access for both suppliers and customers, thus increasing market demand and enabling entrepreneurs to transport more supplies to meet that increased demand. The number of households benefitting from new road/bridge construction is generally quite high—56 to 84 percent of the community households surveyed (figure 3.8). For example, in rural Bhutan, eight feeder roads were constructed (a total length of 129 kilometers) in five districts where isolated rural communities had to walk one to three days to reach markets or other services. Both travel time and transport costs declined by about 75 percent (World Bank 2009c).

FIGURE 3.6: Dirt Roads



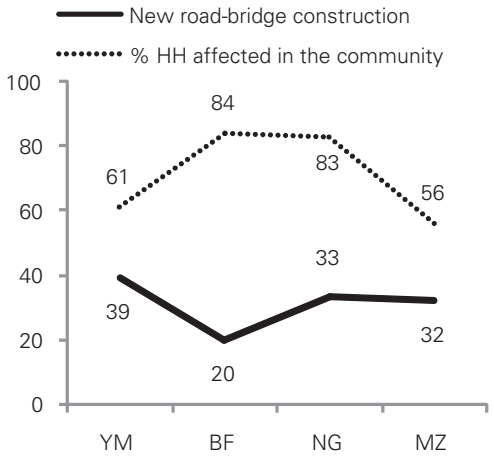
Source: 2010 RIC Surveys.

FIGURE 3.7: Roads as Obstacles



Source: 2010 RIC Surveys.

FIGURE 3.8: New Road/Bridge



Source: 2010 RIC Surveys.

3.2.2 Transportation

The poor quality and high cost of transportation is an extra burden that diminishes the profitability of small rural business operations. Many entrepreneurs perceived transportation as one of the top four obstacles (see Appendix C for other obstacles). Cost may be a related factor, along with the means of transport and quality of roads. In Burkina Faso, entrepreneurs do not perceive the cost of transport as a major obstacle because their businesses rely on foot transport (farm, 28 percent; nonfarm, 34 percent) or bicycle (farm, 33 percent; nonfarm, 33 percent) instead of motorized vehicles. However, in the other three countries, where cars are used for transport more than in Burkina Faso, more entrepreneurs regard transportation as a major obstacle (farm, 29 to 39 percent; nonfarm, 31 to 40 percent) (figure 3.9).

Countries vary greatly in their use of motorized vehicles (cars, trucks, and buses) as a means of transport. In Yemen and Nigeria, 62 to 77 percent of entrepreneurs use motorized vehicles, whereas in Burkina Faso, as we have seen, only a small fraction does so. Similarly, in Mozambique, only 30 percent of farm entrepreneurs and 50 percent of nonfarm entrepreneurs use motorized vehicles (figure 3.10).

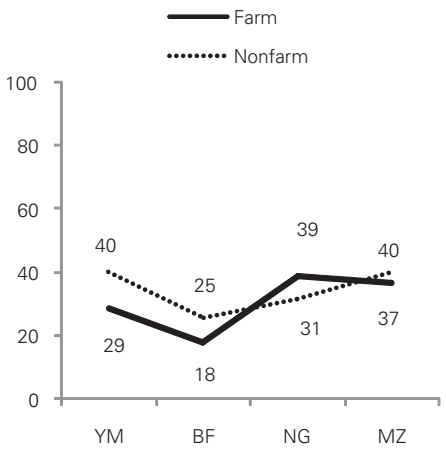
Only a relatively small percentage of entrepreneurs managed to improve their mode of transport. Nigeria is the highest with about 10 percent of entrepreneurs reporting improvement during the last year (figure 3.11). A low level of improvement was reported by farm and nonfarm entrepreneurs in Burkina Faso, farm entrepreneurs in Yemen, and nonfarm entrepreneurs in Mozambique.

If transport costs are too high, that reduces the profits of entrepreneurs. The patterns of transport costs to district and provincial markets are similar for the four countries. For example, the percentage of transport costs appears to be the highest in Mozambique, where that of rice is 4.3 times that in Yemen, 3.1 times that in Nigeria, and 2.7 times that in Burkina Faso (figure 3.12). (The percentages of transport costs were calculated based on the cost of transporting a 50-kg bag to district and provincial markets and the wholesale price of a 50-kg bag of rice and maize (table 3.1).

Improving Transportation

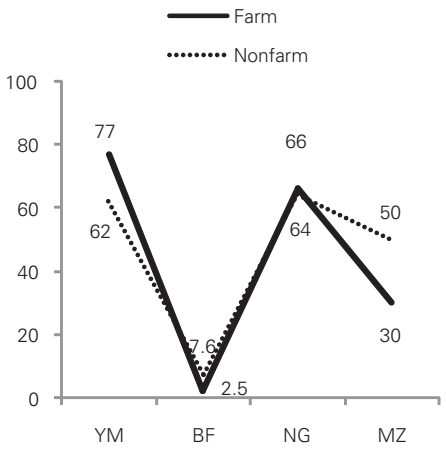
To reduce the cost of transportation, an affordable transportation system must be developed. Constructing new access roads is not sufficient. Ellis and Hine (1998) state that despite large investments in rural road building, the expected increases in traffic and economic activity have not always materialized. For example, this could be a good private sector option to invest in buying a used minibus and operating it after conducting a feasibility study.

FIGURE 3.9: Obstacle: Transport



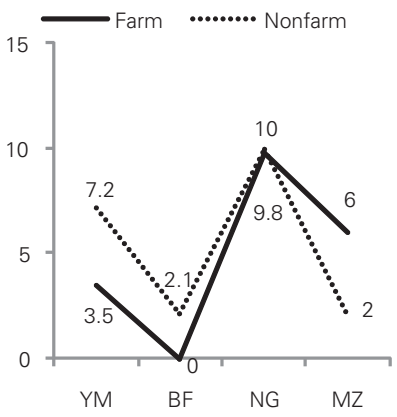
Source: 2010 RIC Surveys.

FIGURE 3.10: Car/Bus/Truck as Means of Transport



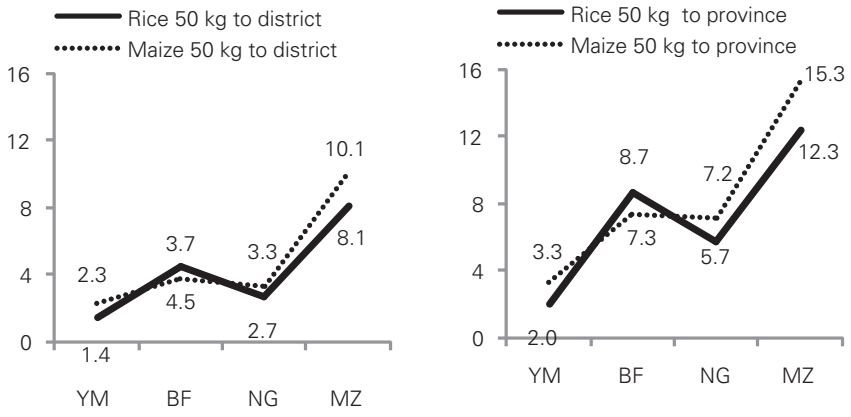
Source: 2010 RIC Surveys.

FIGURE 3.11: Transport Improvement



Source: 2010 RIC Surveys.

FIGURE 3.12: Transport Cost as a Percentage of Wholesale Prices (%)



Source: 2010 RIC Surveys.

Note: BF wholesale price of maize was based on a 100-kg bag, so this was set to one-half for 50 kg.

TABLE 3.1: Average Wholesale Price, Distance, and Transport Cost

	YM	BF	NG	MZ
Wholesale price rice 50 kg (US$)	43	14	39	25
Wholesale price maize 50 kg (US$)	26	17	31	20
Distance (km) to district market	36	58	22	28
Distance (km) to provincial market	89	141	53	35
Transport cost to district market (US$)	0.58	0.62	1.04	2.00
Transport cost to provincial market (US$)	0.86	1.21	2.24	3.04

Source: 2010 RIC Surveys.

3.2.3 Market Information

Having access to market information enables existing or potential entrepreneurs and customers to broaden their knowledge of the market, take advantage of market opportunities, and start new businesses. Market knowledge was cited by entrepreneurs as one of their top motives for starting a business. Excluding income-related motives and social independence, which were the top motives for starting a new business in Burkina Faso and Nigeria, market opportunity and obtained skill were the other top two motives. They were either the second (MZ, NG nonfarm, BF nonfarm) or third (YM, NG farm, BF farm) motive, whereas start-up capital was the top motive in all four countries. Access to inputs was either ranked as second (YM nonfarm, BF farm, and NG farm) or third (BF nonfarm, NG nonfarm, and MZ farm) (figure 3.13). The exception was water, which was ranked the second motive in Yemen farm enterprises, reflecting serious water issues.

The lack of market knowledge was also considered a major obstacle to operating a nonfarm business once it was started, and it was one of the reasons given for not even trying to start a new nonfarm business. The percentages of households that did not even try to start a business were especially high in Nigeria and Mozambique; furthermore, about 16 to 17 percent of households that did start a nonfarm business perceived the lack of market opportunity/knowledge as an obstacle to operating (figure 3.13).

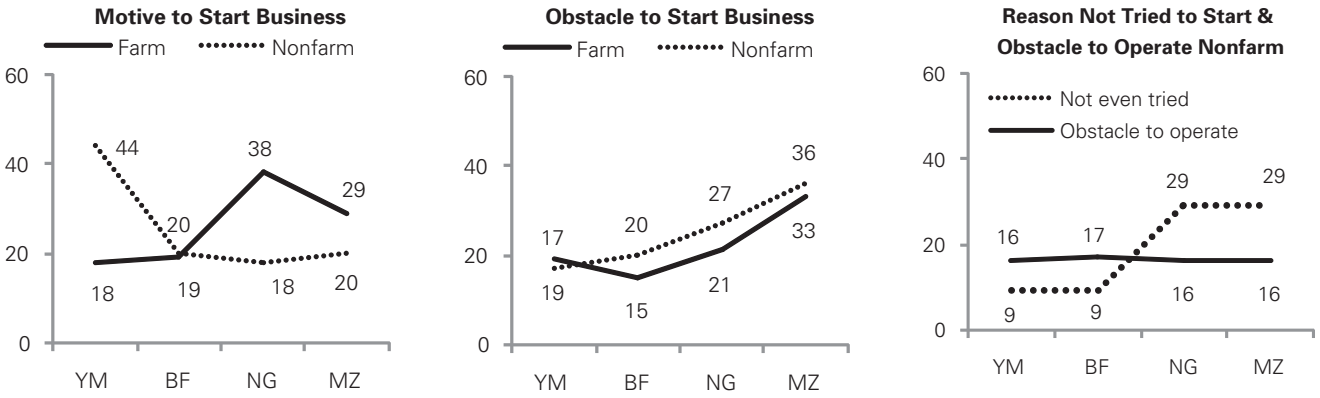
Providing Market Information

The first step in providing market information is to determine how to deliver market and price information for selected products or services in each local area. A small market study should be conducted to identify what information about products and services is important in the area. The proliferation of cell phones in rural areas may be the answer to finding a delivery mechanism. Narayan et al. (2009) conclude that connections to market information and market know-how are vital for rural entrepreneurs to be successful.

3.3 ACCESS TO FINANCE

Access to finance is one of the most important assets for a business to be successful, especially for the rural poor who require collateral. To improve entrepreneurs' access to finance, we recommend increasing the availability of financial institutions, improving the financial literacy of entrepreneurs, increasing available funds with a credit guarantee scheme, and promoting savings. The limited availability of much-needed loans remains a principal constraint among rural entrepreneurs because they need loans to start and expand their businesses (Islam 1997).

FIGURE 3.13: Market Opportunity/Knowledge (% of enterprises or households)



Source: 2010 RIC Surveys.

Note: Refer to table F1.1 in Appendix F.

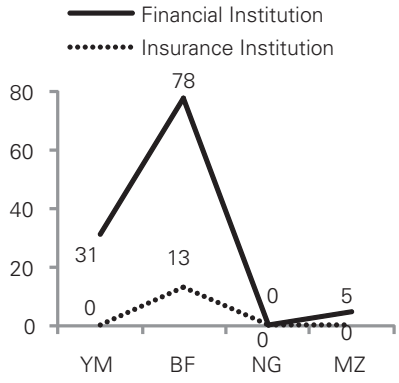
3.3.1 Available Financial Institutions

In rural areas, the availability of formal financial institutions, including microfinance institutions, is limited. Particularly in Nigeria and Mozambique, there are no or few formal financial institutions in rural areas. In Burkina Faso, although the availability of formal financial institutions is as high as 78 percent, access to finance is quite low, as shown in the following section (figure 3.14).

Increasing the Availability of Microfinance

It is important not only to strengthen and increase the number of microfinance institutions in rural areas, but also to increase public awareness of them. Marlar (2010) indicated that 43 percent of Sub-Saharan Africans are not aware that local microfinance options exist. In addition, governments should improve the regulatory structure of microfinance institutions. Currently, in most African countries (except Kenya and South Africa) only banks are allowed to act as money transfer operators, so the microfinance institutions can only partner with a bank.

FIGURE 3.14: Available Institutions in the Community (% of communities)



Source: 2010 RIC Surveys.

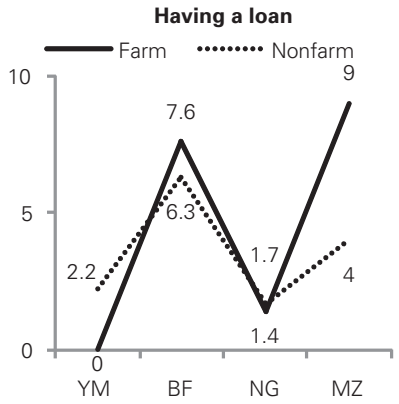
3.3.2 Reluctance to Apply for Loans

Not many entrepreneurs have a loan or a line of credit. The highest percentage (9 percent) is farm entrepreneurs in Mozambique; the second (7.6 percent) is farm entrepreneurs in Burkina Faso. The availability of formal financial institutions in the community is quite high, especially in Burkina Faso, but even there only 6.3 percent of nonfarm entrepreneurs and 7.6 percent of farm entrepreneurs have a loan (figure 3.15).

The reasons entrepreneurs gave for not applying for a loan were complex procedures, unfavorable interest rates, insufficient loan amount and maturity, fear of not being approved, no expectancy of approval, and inability to meet the collateral requirement. In Nigeria, the percentage of entrepreneurs who needed a loan but did not apply for it was slightly below 40 percent, but in other countries, the percentages were much higher (figure 3.16). If we can reach out to those entrepreneurs, the economic impact may be significant for rural income generation activities.

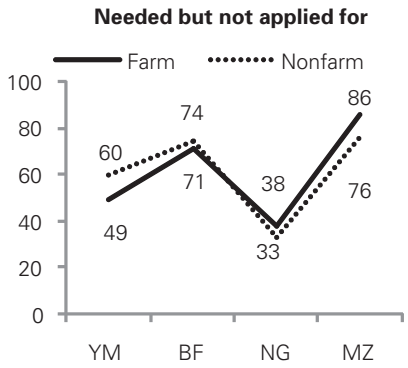
Some variation exists across countries, but the three main reasons given for not applying for a loan were complex procedures, fear of not being able to repay the loan, and not expecting to be approved. In Burkina Faso, about 70 percent of entrepreneurs did not apply for a loan due to these three reasons. Fear of not being able to repay was quite high in Burkina Faso at 41 percent and 42 percent of farm and nonfarm entrepreneurs, respectively. Nigeria may be the exception: Fear of not repaying and not expecting to be approved were given as the

FIGURE 3.15: A Loan or a Line of Credit



Source: 2010 RIC Surveys.

FIGURE 3.16: Didn't Apply for a Loan



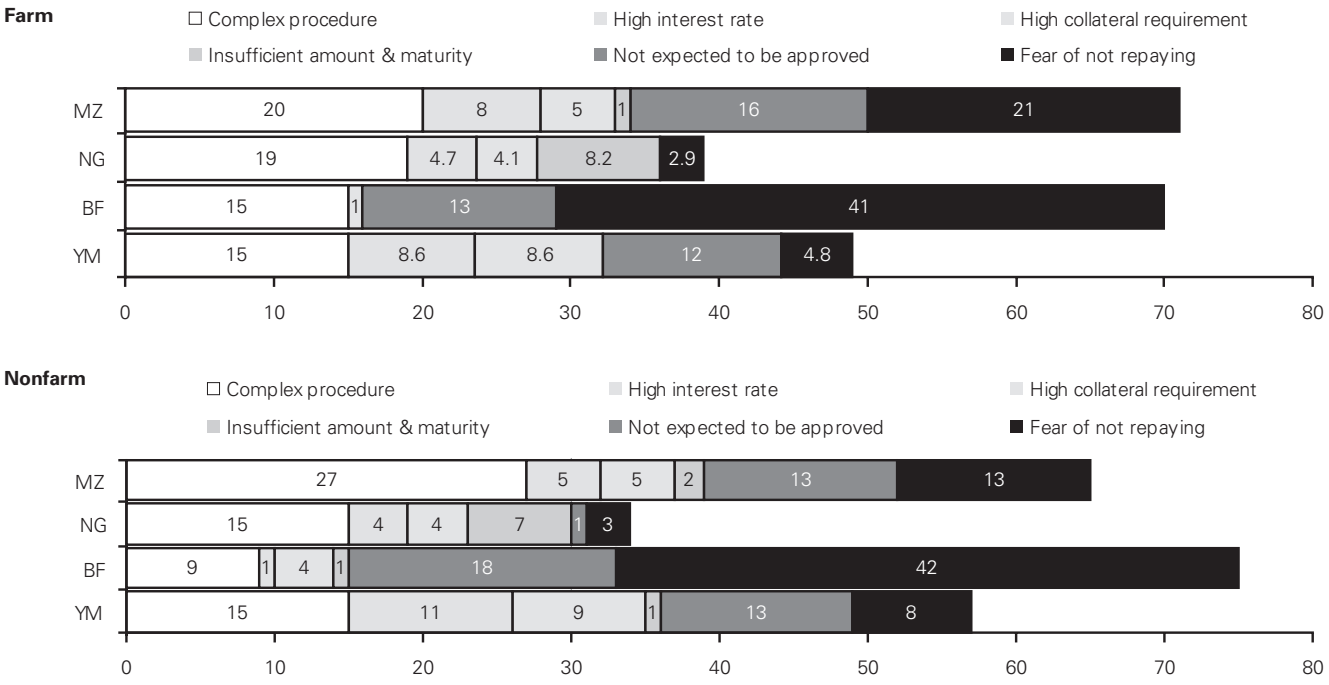
Source: 2010 RIC Surveys.

main reasons by only 2.9 percent and 0 percent, respectively, for farm enterprises and 2.7 percent and 1 percent, respectively, for nonfarm enterprises. Instead, complex procedures was the main reason given, insufficient amount was second, and high interest rates was third (figure 3.17).

Improving the Financial Literacy of Entrepreneurs

Financial literacy is an important ingredient in the success of rural entrepreneurs (Stark and Markley 2008). As noted above, many entrepreneurs who need loans do not even apply for them. One of the reasons given, fear of not being able to repay the loan, can be overcome with appropriate business planning and financing. Entrepreneurs can be trained in those areas through the kinds of business services described in the next section. For example, in Sri Lanka, the Hatton National Bank (HNB) developed a customer awareness program to develop customers' entrepreneurial skills including financial literacy, technology transfer, personal development, and health education. It has successfully reached out to more than 3,000 micro-entrepreneurs since 2009 (HNB 2011).

FIGURE 3.17: Reasons Why Entrepreneurs Did Not Apply for Loans Though Needed



Source: 2010 RIC Surveys.

3.3.3 Limited Capital

Limited capital hinders entrepreneurs from starting, maintaining, and growing their businesses. Insufficient start-up capital seems to be the prime obstacle for new businesses. Start-up capital includes both fixed assets investment and working capital, and an additional capital for business expansion also includes both. Insufficient capital and lack of access to loans are the two major reasons given for not trying to start a nonfarm business. Lack of working capital was the second reason given for business closure. Entrepreneurs need working capital as well as investment capital to acquire fixed assets. Although our survey showed some slight variation across countries, we can conclude that lack of capital is the main deterrent to the development and success of rural businesses (figure 3.18).

Improving the Availability of Funds with a Credit Guarantee Scheme

As entrepreneurs gain a greater understanding of business and financial planning, the funds available to them should be increased, such as by establishing rural perpetual funds for rural entrepreneurs. These funds would provide loans or matching grants for individual entrepreneurs or a group of entrepreneurs who have demonstrated appropriate knowledge or who have been trained in financial management.

In addition to increasing the availability of funds, a small business promotion agency may establish a partial credit guarantee scheme to support entrepreneurs in properly managing the money they borrow. In Ethiopia, for example, the Micro and Small Enterprise Development Agency provides a partial credit guarantee scheme in urban areas. Such a credit guarantee scheme should be a part of the business services offered to rural entrepreneurs by small business promotion agencies (see section 3.4).

3.3.4 Limited Bank Accounts

Few rural entrepreneurs have bank accounts (savings or checking) and other formal financial services. The regressions for performance (Appendix E3) show that when the variable "having a bank account" is used as a proxy for financial services, the results are statistically quite significant. This may reflect that the entrepreneurs do not have a habit of saving part of their earnings for future use as working capital and for expansion. In three of the countries surveyed, 14 to 17 percent of rural entrepreneurs have bank accounts, whereas in Yemen, only 6.7 percent of nonfarm entrepreneurs and 1.0 percent of farm entrepreneurs have them (figure 3.19). Having a bank account does not in itself improve businesses, but rather it implies that having an account represents the use of formal financial services.

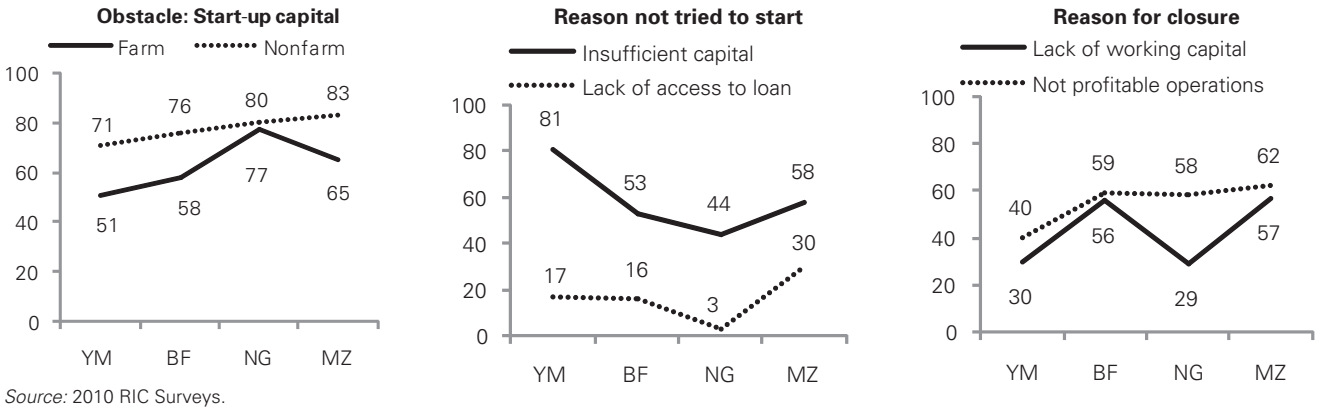
Promoting Saving

When entrepreneurs expand their businesses, they require working capital in addition to capital for fixed assets; therefore, they need to be in the habit of saving. Part of their earnings should be retained within their business operations to meet the need for working capital and future expansion. Entrepreneurs need to learn how much money to keep on hand. Brune et al. (2011) found that a commitment of savings had large positive effects on economic activities of farm enterprises in Malawi. They also state that a low savings account rate reflects financial illiteracy. Therefore, the habit of saving should be promoted among entrepreneurs to prepare for future borrowing.

3.4 BUSINESS/AGRICULTURE EXTENSION SERVICES

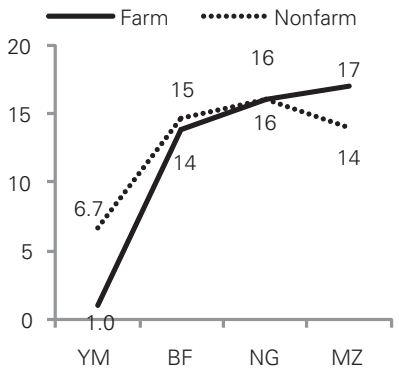
Good business management is vital to rural entrepreneurs who typically have little knowledge of business practices. As

FIGURE 3.18: Access to Finance



Source: 2010 RIC Surveys.

FIGURE 3.19: Having a Bank Account



Source: 2010 RIC Surveys.

Sawada and Harishchandra (2011) identified in rural Ethiopia, rural entrepreneurs can easily improve their productivity and profitability by learning the fundamentals of business management. Markley (2006) states that providing technical assistance, training, and networking is essential to a rural economic development strategy. The management knowledge required for small-scale operations may include preparing a business plan and a marketing plan, conducting quality control, and managing operations. Management knowledge can enable rural entrepreneurs to identify the appropriate levels of technology and skills for a business to be profitable and successful. In other words, business/agriculture extension services, especially business management, are essential for a RIC to support sustainable and successful rural businesses.

3.4.1 Availability of Business Services

Since rural entrepreneurs have limited education and resources, appropriate business services are required for their business activities to be successful. However, only limited business services are available in the countries surveyed, although the availability of such services as marketing and management consulting has increased during the last three years. Except in Mozambique, where business services barely exist, there is a big difference between the availability of the services and the number of people who use them. Access to business services is extremely limited because of their high cost or entrepreneurs' lack of knowledge about them, even though the services are available in the community (figure 3.20).

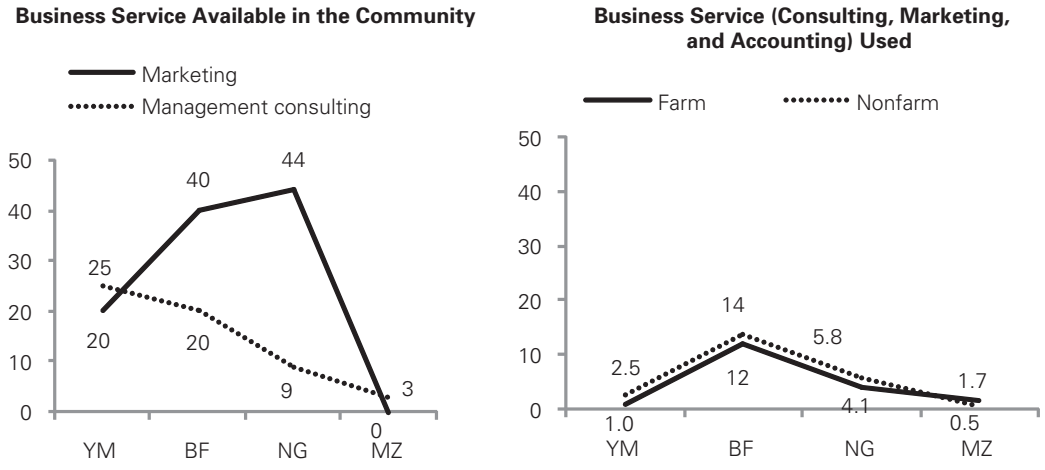
Providing Business Services

Business services that exist in urban areas should be expanded to rural areas or those services should be established in rural areas through small business promotion agencies or local nongovernmental organizations (NGOs). Markley (2006) emphasizes the importance of business support services for rural entrepreneurs.

3.4.2 Information Technology (IT)

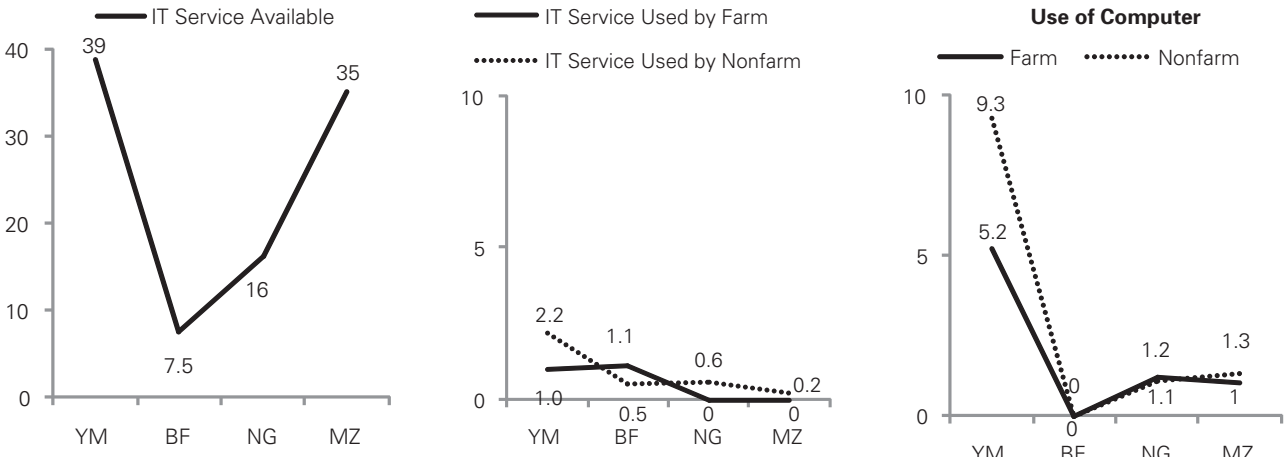
The availability of IT may be increasing, according to the RIC survey data, but the actual services received by entrepreneurs remain extremely limited. Given the limited availability of electricity, the use of IT or computers may not increase much until electricity or other sources of energy become more widely available. However, with the growing use of

FIGURE 3.20: Business Services: Availability and Service Used



Source: 2010 RIC Surveys.

FIGURE 3.21: IT Service Availability and Use; Use of Computer



Source: 2010 RIC Surveys.

cell phones, computers may be replaced by smart phones, which offer almost the same access to information through the internet.

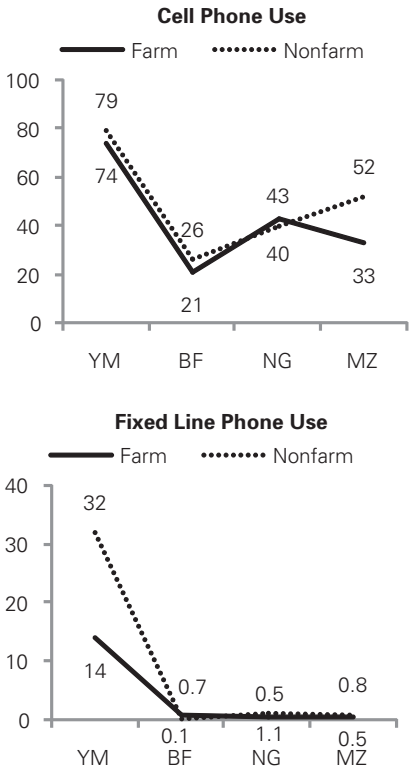
The use of computers is limited in rural areas, especially in those without available public electricity. Computer use is minimal in Burkina Faso, Nigeria, and Mozambique (figure 3.21). In Mozambique, 35 percent of all communities have access to IT services, but only 0.2 percent of nonfarm entrepreneurs and no farm entrepreneurs have used IT services. The use of computers is about 1 percent in Nigeria and Mozambique. Yemen has more use of computers, but less than 10 percent of rural nonfarm entrepreneurs use them, whereas no rural entrepreneurs use computers in Burkina Faso.

Construction of fixed telephone lines is expensive and does not penetrate to rural areas, whereas cell phones have much better penetration there. The trend toward cell phones will further accelerate because it is a private sector initiative, whereas fixed line phones are regulated by the government (figure 3.22).

Improving Access to Market Information by Cell Phone

Access to cell phones is important for entrepreneurs to receive market information. Using cell phones to get information on markets and inputs is more practical and feasible than using computers for processing or quality control. In Uganda, the cell phone has proved to be a very handy tool for accessing commodity prices due to its flexibility of function, yet it does not require special skills to operate (Conversations for a Better World, 2010).

FIGURE 3.22: Use of Phones

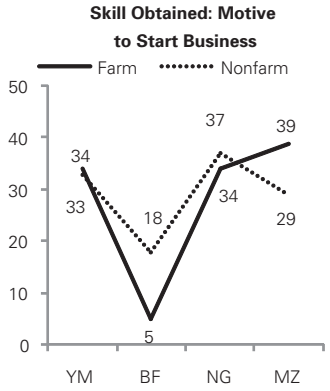


Source: 2010 RIC Surveys.

3.4.3 Skill and Training

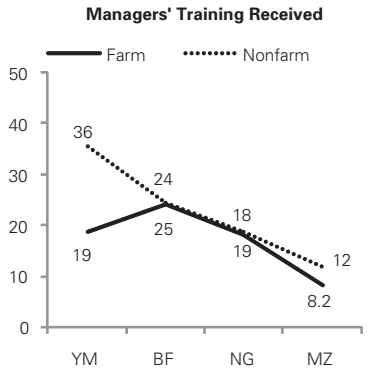
Along with access to financing and market information, entrepreneurs need training to obtain the skills and management knowledge they need to start and successfully operate a business. A skill obtained was identified as an important motive for starting a business (figure 3.23). However, once

FIGURE 3.23: Motive: Skills Obtained



Source: 2010 RIC Surveys.

FIGURE 3.24: Managers Receiving Training



Source: 2010 RIC Surveys.

the business has been started, little training in managerial skills is offered (figure 3.24).

Providing Skills and Management Training

Given the limited availability of skills training, it is essential that the specific skills needed by local farm and nonfarm businesses be accurately identified and vocational training programs be established to teach the requisite skills. For example, if bamboo furniture is identified as a potential business for an area in which bamboo is plentiful, training in handicraft skills may be needed to train entrepreneurs to make and sell quality bamboo furniture.

Management training should also be included among business/agriculture extension services. Most of the knowledge that managers need can be acquired through training; however, for practical application, on-the-spot advice may be required after training. Management training is required for farm as well as nonfarm entrepreneurs. McElwee (2005) surveyed literature on entrepreneurship in agriculture to identify what is needed for a more entrepreneurial culture to take hold in rural areas, and he found the development of farmers' entrepreneurial skills to be a significant issue. The Rural and Women Entrepreneurship Unit of the United Nations Industrial Development Organization (UNIDO) has been focusing on improving the entrepreneurial and technical skills of women entrepreneurs by strengthening the relevant institutions and service providers (UNIDO 2011).

3.4.4 Management Innovation/Improvement

As noted in the previous section, management knowledge and the training needed to acquire it are key factors in the success of rural entrepreneurs. Among the reasons given for closing a nonfarm business, a lack of profitability was identified as the top reason, as shown in figure 3.18. Based on the field observations of rural Ethiopia (Sawada and Harishchandra 2011), the profitability of rural enterprises may be easily improved by applying simple business management knowledge.

Lack of management knowledge affects not only the profitability of a business, but also the level of innovation and improvement shown. Few entrepreneurs have improved an existing product/service or created a new one. For farm and nonfarm enterprises, Nigeria ranked highest of the four countries with 15 percent and 16 percent of entrepreneurs having innovated or improved a product and process, respectively. Burkina Faso ranked the lowest of the four countries in product and process improvement for both farm and nonfarm enterprises (figure 3.25).

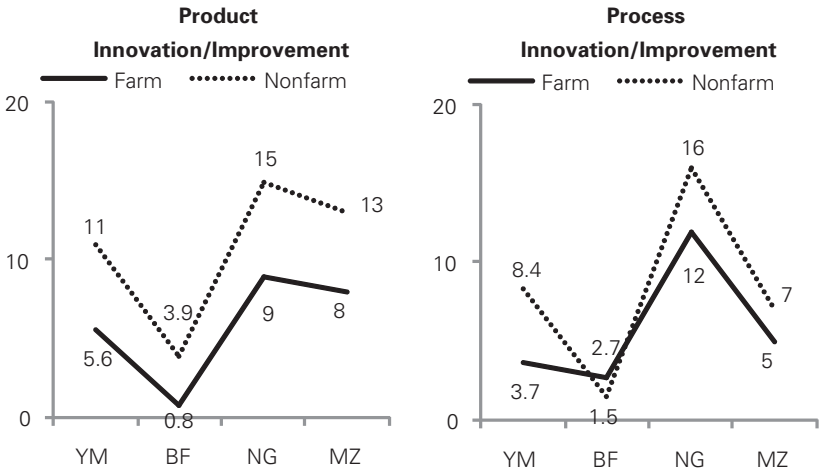
Improving Management Improvement/Innovation

With appropriate management knowledge, unprofitable operations can be turned into profitable ones. Profitability is determined by prices and quantity of sales and also by the productivity of business operations. Productivity can be improved through product innovation/improvement, process innovation/improvement, setting higher sales prices when selling at a new location, changing the mode of transport, and streamlining operations.

3.4.5 Access to Inputs

Business operations require raw materials and supplies or merchandise for traders. Lack of access to these inputs is recognized as the second major obstacle to starting a new business next to start-up capital (see table E2.1 in Appendix E). After a business is started, it is still necessary to keep procuring raw materials and supplies. In other words, access to inputs is critical for any business at any stage. The best way

FIGURE 3.25: Product/Process Innovation/Improvement



Source: 2010 RIC Surveys.

to meet that need is to procure the inputs locally, but our survey found that more than half of all inputs are purchased from outside of the community except in Burkina Faso (figure 3.26). Even in Burkina Faso, though, 32 percent and 44 percent of inputs for farm and nonfarm enterprises, respectively, were procured outside of the community.

Securing Inputs Locally

Inputs should be procured locally whenever available to eliminate paying the additional cost of transportation and intermediation for goods procured outside the area. Keeping the cost of inputs low leaves more room for profits. If inputs are needed to modify or differentiate existing products/services, these too should be procured locally whenever possible.

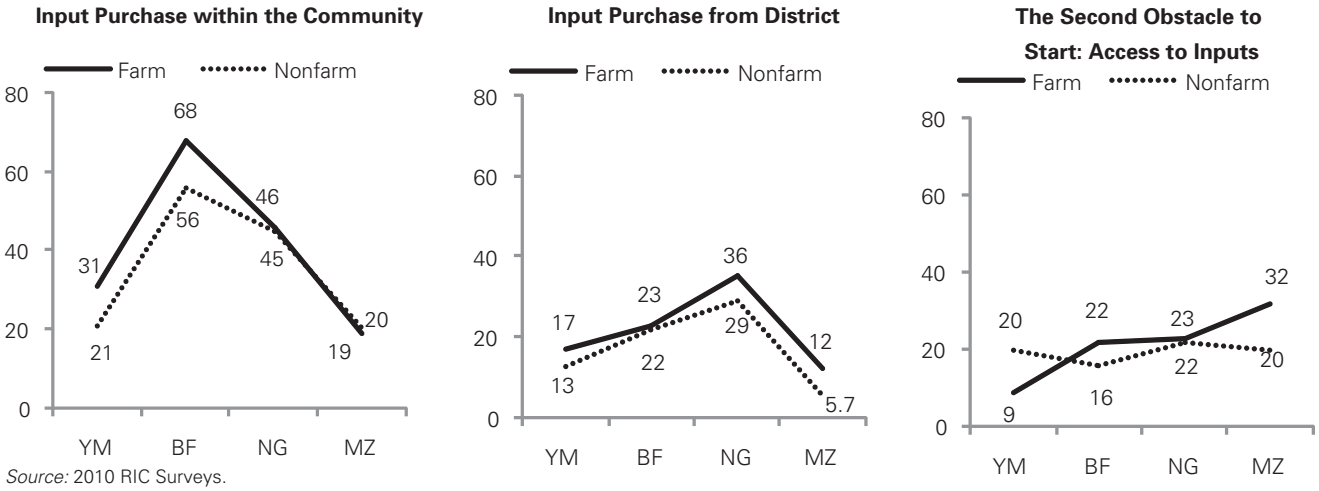
3.4.6 Labor

Rural businesses are generally family-based operations, and most of their workers are not paid wages. The percentage of paid workers, including managers, is still a small fraction of the total (figure 3.27) and reflects the fact that most rural enterprises are small and informal. Business surpluses may be used for household expenses but, nonetheless, should be managed well to make sure the need for working capital is met.

Managing Wage Money

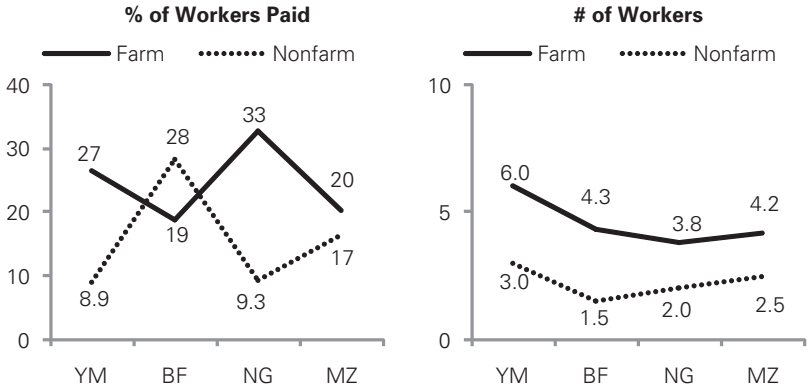
Managing expenses or wages is an important part of running a business. Even if no formal wages are paid, entrepreneurs should make sure to set aside an amount equivalent to wage money to run their businesses. Keeping extra money on hand may avert bankruptcy or closure of business operations

FIGURE 3.26: Location of Input Purchase and Access to Inputs as an Obstacle



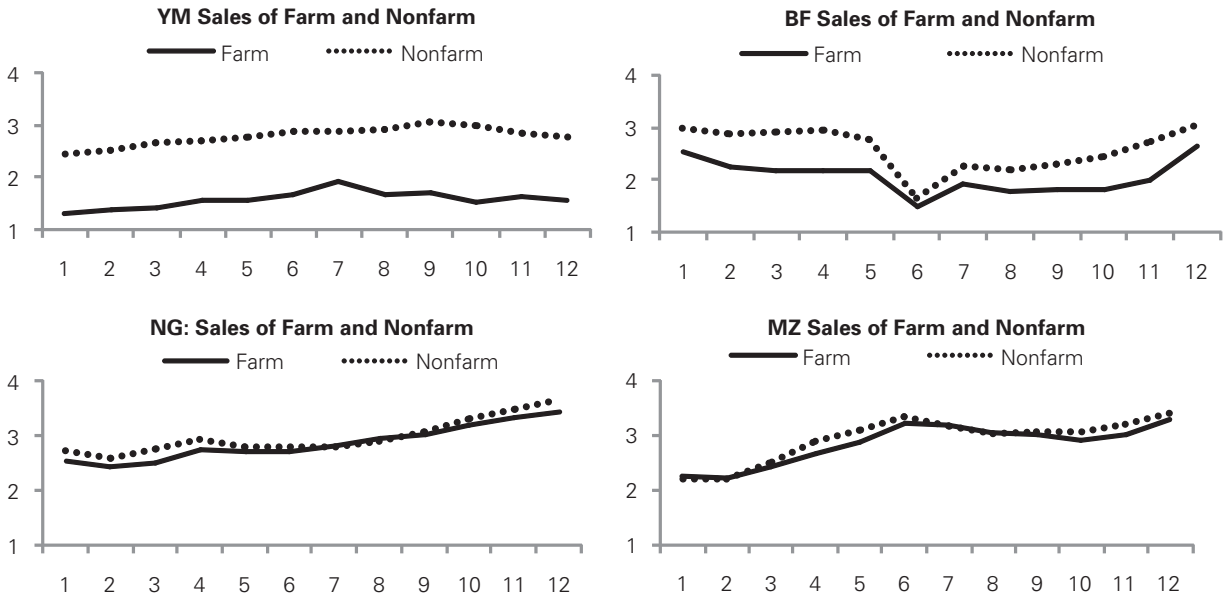
Source: 2010 RIC Surveys.

FIGURE 3.27: Percentages of Paid Workers



Source: 2010 RIC Surveys.

FIGURE 3.28: Seasonal Fluctuation of Sales in Farm and Nonfarm Enterprises



Source: 2010 RIC Surveys.

because of the lack of working capital. In this way, informal enterprises can prepare to grow and become successful, formal enterprises.

3.4.7 Seasonality of Farm and Nonfarm Activities

Seasonality causes fluctuations in income for both farm and nonfarm activities, with similar effects on the business and livelihoods of entrepreneurs when sales are too low. In all four countries, farm and nonfarm activities are complementary—the seasonal fluctuation in sales shows a similar trend for both types of activities (figure 3.28). The Ethiopia RIC Report also identified these activities as complementary (World Bank 2009b). This means that when agriculture production is low, nonfarm activities are also low, and households may not have enough income during that season.

Overcoming Seasonality

It is important to break this cycle of seasonality and/or help rural entrepreneurs to better absorb it. One approach is to start processing farm products, thus adding to their value, and store the processed products as inventory to be sold or further processed during the rest of the year. Not only does processing agriculture products reduce the postharvest loss, but it also improves the productivity and profitability of business operations. Another approach to overcoming seasonality is to diversify rural businesses so that they are better positioned to absorb it.

Chapter 4: CONCLUSION

There is an urgent need to reduce rural poverty through income-generation activities. An appropriate investment climate is important for the success of the rural businesses. Business entrepreneurship provides alternative livelihood options in the rural areas where opportunities are otherwise limited. Therefore, this report identifies critical components and provides direction based on the careful assessment.

Critical components were identified for both farm and non-farm businesses as increasing market demand, improving access to market, increasing access to finance, and providing business services. Assessing the RIC requirement based on the perceived needs of rural entrepreneurs may not be comprehensive; therefore, a more comprehensive approach by using RIC indicators was applied. By overall assessment of RIC components (including analysis of business dynamics), four critical components were prioritized, as mentioned above. Amongst others, the availability of business management knowledge to maximize the profit is the key to rural income-generation activities.

This report will provide directions on how to support rural entrepreneurs by improving the RIC. However, the objective of this report is not to provide ready-made solutions; rather, the purpose is to provide directions to allow a custom-made approach based on a particular country's situation. Proposed recommendations could be used as guidelines for forming a necessary support system to foster rural businesses as key to sustainable income-generation activities.

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Appendix A: POLICY RECOMMENDATIONS OF SIX PILOT RICA PROJECTS

TABLE A1.1: Policy Recommendations of Six Pilot RICA Projects

ISSUE	COUNTRY	POLICY DESCRIPTION
Overall Strategy in Macroeconomics (Capitalize on the complementarities with agriculture)	Sri Lanka	Improving policy certainty and macroeconomic stability
	Tanzania	Policy and investment to meet the government's agricultural targets are fundamental for the nonfarm enterprise sector
	Nicaragua	Focus the nonfarm investment strategy in high-density and high-potential areas
Rural Market Town Development Small enterprises in towns exhibit significant productivity potential with beneficial linkages to the agricultural output and input markets	Ethiopia	Stakeholder consultation and consensus on a regional pilot program to stimulate small market town development, private enterprise growth, and rural urban linkages
	Sri Lanka	Improving access to major markets for rural enterprises
	Tanzania	Assessment of the role of larger enterprises and their economic linkages with small rural market towns
	Benin	1) Adopt a constructive approach to integrate the nonfarm rural private sector in the private sector as a whole 2) Promote an integrated value chain approach 3) Promote the subsector of agro-processing businesses 4) Establish a platform for dialogue and exchange
Access to Rural Finance	Ethiopia	1) Review current efforts to improve access to credit in rural areas focusing on the need to increase coverage and flexible product lines 2) Feasibility analysis for market potential of urban and semi-urban/rural mobile banking taking into consideration infrastructure and regulatory constraints
	Sri Lanka	Reducing the cost of finance and improving access to it
	Indonesia	1) Support procompetition policies and reinforce competitive behavior at the microlevel 2) Make commercial banks more transparent 3) Support for one or more outreach initiatives aimed at connecting new microborrowers to the financial system
	Tanzania	1) Promoting rural savings schemes could be a priority 2) Greater linkage between commercial banks could be made to improve access to credit 3) Private sector guarantee schemes to offset risks could be promoted
	Nicaragua	Strengthen financial markets to improve access to and reduce the cost of finance
	Benin	1) Support a capacity building program to accompany, at their demand, enterprises in formulating their business plans and loan applications; advise them on the appropriate financial structuring of their plans; manage their outstanding loans; etc. 2) Extend the reach and penetration rate of microfinance institutions in the rural areas 3) Promote a durable partnership between microfinance institutions and commercial banks 4) Introduce or improve innovative financial products such as agro-leasing, equipment credit, and inventory credit 5) Facilitate access to titled land and accelerate land reform
Governance and Institutional Support	Ethiopia	1) Review of strengths and weaknesses and measures implemented by the ministries and regional governments 2) Consider extending the scope of extension services to include nonfarm enterprise
	Indonesia	Remove regulations and policies that drive a wedge between the prices and costs of service provision

(*continued*)

TABLE A1.1: Policy Recommendations of Six Pilot RICA Projects (*continued*)

ISSUE	COUNTRY	POLICY DESCRIPTION
	Tanzania	1) Identify entry or mobility barriers to high-return niches within the dynamic part of the nonfarm economy 2) Reduce costs of doing business, continuation of business registration reform, and effective implementation of reduction or abolition of licensing fees or various taxes at the local level
	Nicaragua	1) Improve institutional conditions by reducing bureaucratic red tape and corruption 2) Take steps to increase the rates of formality among rural nonfarm businesses 3) Strengthen land markets and land-related property rights
	Benin	1) Simplify the procedures for registering a business and obtaining licenses and permits 2) Ensure the effective implementation of the anticorruption campaign 3) Adopt a fiscal policy that is less restrictive by increasing the tax base 4) Simplify administrative tax procedures 5) Carry forward the reform of the judiciary and the regulatory environment 6) Revise the ongoing decentralization process in order to give local institutions the effective means to formulate and implement local development and land settlement policies
Labor Market	Indonesia	1) Review and revise national labor laws 2) Remove barriers preventing the free movement of labor throughout Indonesia 3) Improve rural schools to better prepare workers
	Nicaragua	1) Invest in human capital by improving rural education and health care systems 2) Enhance the flexibility of labor markets through training in technology and investing in other important skills
Technology Transfer and Diffusion	Indonesia	1) Promote commercial interaction with providers outside the local economy 2) Promote private sector–driven technological learning 3) Create a culture of innovation in the educational system 4) Improve the capabilities of research and development institutions and universities, making them more demand driven by promoting links between enterprises and institutions
	Nicaragua	Provide better information about nonfarm business opportunities and technical assistance to business owners
Infrastructure	Sri Lanka	Improve access to and the quality of energy and transport
	Indonesia	1) Encourage competitive provision of electricity and telecom services and the supply and maintenance of rural roads 2) The government is moving toward increased competitive provision of electricity and telecommunications services
	Tanzania	1) Reduce transaction costs of maintenance and rehabilitation of the existing road network 2) Cell phone usage can reduce transaction costs and improve information flows
	Nicaragua	Reduce bottlenecks in productive infrastructure
	Benin	1) Develop an action plan to effectively implement the national rural roads strategy 2) Promote a rural infrastructure policy that could stimulate rural economies 3) Accelerate reforms in the energy sector 4) Develop and implement an action plan to support the short-term objectives of the government to improve rural electrification in areas with high growth potential
Capacity Building	Ethiopia	1) Review of experiences by NGOs and public service delivery systems, including cost-benefit analysis of interventions 2) Identification of groups of businesses with market potential and collective constraints 3) Development of a nationally representative database on rural and semirural income diversification patterns with the ability to monitor trends and programs 4) Refinement of rural/urban classification in multiple surveys conducted by the Central Statistical Agency 5) Consultation with stakeholders on knowledge gaps
	Indonesia	Targeting subsidies where they will have the most impact
	Tanzania	1) For cost-effective interventions, analysis of a handful of specific subsectors, and supply chains within them, that hold the potential for growth 2) Supply-side constraints are more important than demand-side constraints 3) Trade policies are of utmost importance in determining enterprise performance

(*continued***)**

TABLE A1.1: Policy Recommendations of Six Pilot RICA Projects (*continued*)

ISSUE	COUNTRY	POLICY DESCRIPTION
	Benin	1) Improve technical and management expertise targeting rural entrepreneurs and put in place support services to develop rural enterprise 2) Establish mechanisms to promote durable business linkages between rural and urban, formal and informal, public and private enterprises in the context of competitive value chain 3) Avoid adopting a policy to promote entrepreneurship ex-nihilo, which would consist of providing selected beneficiaries with turnkey businesses 4) Support a program to correlate the existing offer of business support services with the demand from rural entrepreneurs 5) Revise the institutional base, sources of financing, and governance and management structures
Gender Issue	Ethiopia	Investment climate and enterprise development policies should be mindful of the different needs and constraints experienced by women entrepreneurs, especially in the areas such as access to finance, supply chain reviews, and skills development
Food Insecurity	Ethiopia	1) Consider the potential contribution of the rural nonfarm enterprise sector to food security 2) Study the interaction and contribution of labor-based safety nets and engagement in nonfarm enterprises; even low-return nonfarm activities may be important from a welfare point of view

Appendix B: CHARACTERISTICS: ENTERPRISES, HOUSEHOLDS, AND COMMUNITIES

B.1 ENTERPRISE CHARACTERISTICS

Rural enterprises are classified as farm and nonfarm enterprises. Farm enterprises are defined as enterprises whose primary activity is farming. Some farm enterprises include vegetable and fruit crop farming, tree crop farming, fishing and aquaculture, and livestock farming. Rural nonfarm enterprises are enterprises involved in nonagricultural activities. Examples include food processing, dressmaking and tailoring, pottery, handicrafts, retail shops and trading, repair and maintenance, and restaurants.

Farm and nonfarm enterprises share some similar characteristics in their size, age, ownership structure, and management styles. However, specific country differences exist within the categories specified. Differences are also observed between enterprises managed by males and females. Results from the survey show that a large number of both farm and nonfarm enterprises were established by the enterprise owner. On average, about 90.5 percent of nonfarm enterprises were started by the enterprise owner, whereas 68.5 percent of farm enterprises were established by the owners (table B1.1). The exception is Yemen, where more farm enterprises are inherited rather than established by the owner.

Nonfarm enterprises are younger than farm enterprises. They have been in existence for about 8.5 years, while farm enterprises have been in existence for an average of 15.3 years (table B1.2). Enterprises are operated by the manager, who in many cases is also the owner. Managers of nonfarm enterprises are younger, at an average age of 36.4 years, whereas managers of farm enterprises are older (an average age of 44 years). Prior to starting the business, managers reported 5.1 years of experience for farm enterprises and 3.9 years for nonfarm enterprises. About 17.4 percent of farm managers and 25.3 percent of nonfarm managers had also received training for their businesses.

Rural enterprises serve as a source of employment to other people apart from the owners. The survey finds that farm enterprises employ about 3.8 workers per enterprise, while

TABLE B1.1: Establishment of Farm and Nonfarm Enterprises

	ESTABLISHED BY OWNER		INHERITED	
	FARM	NONFARM	FARM	NONFARM
YM	30	89	64	4.4
BF	79	89	20	9.2
NG	72	90	26	8.8
MZ	93	94	1.9	3.6
Average	**68.5**	**90.5**	**28.0**	**6.5**

Source: 2010 RIC Surveys.

TABLE B1.2: Enterprise Size, Age, and Manager's Characteristics

	ENTERPRISE SIZE (INCLUDING OWNER)		ENTERPRISE AGE (YEARS)		MANAGER'S AGE (YEARS)		MANAGER'S BUSINESS EXPERIENCE (YEARS)		MANAGER'S TRAINING (% YES)	
	FARM	NONFARM	FARM	NONFARM	FARM	NONFARM	FARM	NONFARM	FARM	NONFARM
YM	6.0	2.9	19.4	9.0	43.1	35.4	10.3	5.4	18.8	35.5
BF	4.1	1.8	13.6	8.7	44.1	37.4	3.5	3.0	24.3	24.5
NG	4.6	1.6	16.5	10.2	45.3	38.5	3.5	2.8	18.2	29.1
MZ	4.5	3.1	8.2	5.9	43.5	34.1	3.0	4.5	8.2	12.0
Average	**4.8**	**2.4**	**15.3**	**8.5**	**44.0**	**36.4**	**5.1**	**3.9**	**17.4**	**25.3**

Source: 2010 RIC Surveys.

TABLE B1.3: Workforce Composition

	FARM		NONFARM	
	MALE WORKERS	FEMALE WORKERS	MALE WORKERS	FEMALE WORKERS
YM	5.0	1.0	2.7	0.3
BF	2.5	1.8	**0.6**	**0.9**
NG	3.0	0.8	1.0	1.0
MZ	2.5	1.7	1.9	0.6
Average	**3.25**	**1.33**	**1.55**	**0.70**

Source: 2010 RIC Surveys.

nonfarm enterprises employ on average 1.4 workers. More male workers are employed in all the enterprises surveyed than female workers (table B1.3); however, more female workers were employed in nonfarm enterprises in Burkina Faso (0.9).

B.2 HOUSEHOLD CHARACTERISTICS

The average size of households is about 7.7 persons per household, with the largest size of household reported in Mozambique (10.7). Literacy rates across the four countries are about 56 percent, with Nigeria having the highest literacy rate of 75 percent and Burkina Faso having the lowest at 9 percent (table B2.1).

About 50 percent of household nonfarm enterprises tried to start a business in all four countries surveyed. An average of 70 percent of them succeeded, with the highest nonfarm entry success in Nigeria (90 percent) and Mozambique (88 percent). Success in entry was low in Burkina Faso, with only 27 percent of the enterprises succeeding that tried to enter. Some of the businesses started had to close. An average of 17 percent of businesses in Burkina Faso, Mozambique, Nigeria, and Yemen had to close, with more nonfarm enterprises in Mozambique and Burkina Faso (39 percent and 17 percent, respectively) closing than the other two countries (figure B2.1).

B.3 COMMUNITY CHARACTERISTICS

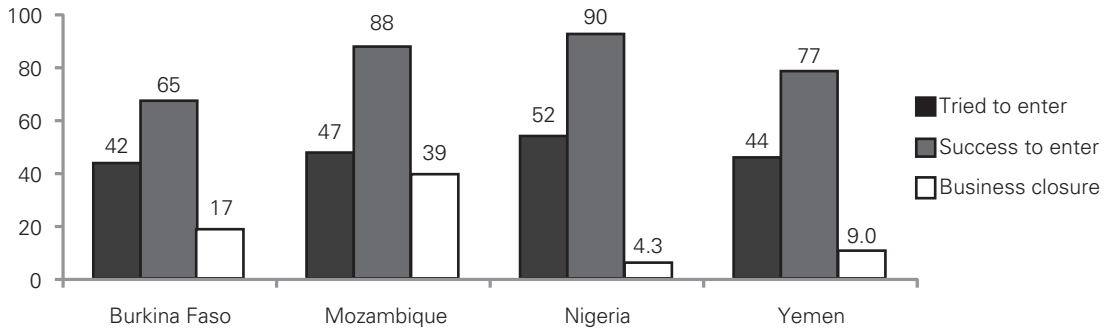
Communities provide the social and economic infrastructure that helps businesses to grow and thrive. Surveys of the communities in Burkina Faso, Mozambique, Nigeria, and Yemen provide insight into the general characteristics, infrastructure projects, and services that the communities provide. A total of 160 communities were surveyed in

TABLE B2.1: Household Characteristics

	AVERAGE HOUSEHOLD SIZE	LITERACY RATE OF HEADS (%)	AVERAGE EDUCATION OF HEADS (YEARS)	INCOME (US$)	EXPENSES (US$)	ASSETS (US$)
YM	9.1	69	5.4	$9.49	$1.17	$127.80
BF	10.7	9	0.8	$1.17	$0.26	$7.18
NG	5.2	75	7.8	$1.13	$0.17	$13.20
MZ	6.1	72	5.2	$0.44	$1.50	$1.35
Average	**7.8**	**56.3**	**4.8**	**$3.06**	**$0.78**	**$37.38**

Source: 2010 RIC Surveys.

FIGURE B2.1: Nonfarm Business Entry and Closure



Source: 2010 RIC Surveys.

Burkina Faso, Mozambique, Nigeria, and Yemen. Most of the communities rely on farming and fishing as the major source of employment. In Burkina Faso, Nigeria, and Mozambique, over 90 percent of the communities listed agriculture as the most important source of employment. Women in almost all of the communities surveyed earned less than men, except in the Enugu State of Nigeria, where women earned more than men in the areas of farming and public works.

Good, strong leadership is important for most communities. Of the communities surveyed, about 79 percent reported having a village council that provides leadership in the community. The number is smaller in Yemen, where 39 percent of the communities have village councils. Over 90 of the communities also have a traditional chief (table B3.1).

Many of the communities also seem to live in relative harmony. Communities in Yemen, Burkina Faso, and Yemen are harmonious (over 90 percent), meaning they experience very little to any problems with other people in the community. Communities in Yemen reported a lower level of harmony, at 69 percent. Despite the level of harmony in the communities, disputes occur. Nigeria and Mozambique had the highest percentage of disputes at 23 percent, while Yemen and Burkina Faso had relatively lower dispute levels of 2 percent and 3 percent, respectively.

Institutions

Educational, health, and other social infrastructure exist within all the communities with varying degrees. Table B3.2 shows the existence of institutions in the four countries.

A fairly large number of communities surveyed reported having primary education facilities. In Burkina Faso, Nigeria, and Yemen, about 90 percent of the communities reported having primary schools and 65 percent have middle schools. Communities in Mozambique and Burkina Faso had the lowest percentage of primary and middle schools—83 percent and 28 percent, respectively.

The quality of health services that exist in communities also varies with the type of health facilities and the country. Communities in Burkina Faso, Mozambique, Nigeria, and Yemen reported having a higher percentage (81 percent) of traditional healers than pharmacies (47 percent), health centers (57 percent), and clinics (34 percent) (table B3.2).

Very few communities reported the existence of financial institutions in their communities. Only 13 percent of communities in Burkina Faso reported having an insurance institution. The existence of other financial facilities is also low. Seventy-eight percent and 31 percent of communities in Burkina Faso and Yemen have financial services, with 5

TABLE B3.1: Community Characteristics

	AGRICULTURE AS A MAJOR EMPLOYMENT	POPULATION DECREASE COMMUNITIES	POPULATION INCREASE COMMUNITIES	VILLAGE COUNCIL	TRADITIONAL CHIEF
YM	72%	39%	28%	39%	100%
BF	93%	58%	20%	100%	90%
NG	95%	2.3%	93%	98%	100%
MZ	95%	2.4%	97.6%	80%	85%
Average	**88.8%**	**25.4%**	**59.7%**	**79.3%**	**93.8%**

Source: 2010 RIC Surveys.

TABLE B3.2: Institutions Available in the Community

	FINANCIAL INSTITUTIONS		HEALTH FACILITIES				SCHOOLS	
	FINANCIAL	INSURANCE	PHARMACY	HEALTH CENTER	CLINIC	TRADITIONAL HEALER	PRIMARY SCHOOL	MIDDLE SCHOOL
YM	31%	0%	61%	69%	56%	39%	97%	92%
BF	78%	13%	60%	50%	18%	88%	95%	28%
NG	0%	0%	47%	47%	58%	100%	93%	67%
MZ	5%	0%	20%	63%	5%	95%	83%	76%

Source: 2010 RIC Surveys.

TABLE B3.3: Infrastructure in the Community

	ELECTRICITY	POTABLE WATER	SEWAGE	GARBAGE COLLECTION	BIOGAS	CYLINDER GAS
YM	78%	27%	0%	6%	0%	78%
BF	31%	44%	10%	18%	5%	6%
NG	91%	43%	2.3%	14%	0%	0.8%
MZ	6.5%	18%	27.5%	2.5%	3%	37%

Source: 2010 RIC Surveys.

percent in Mozambique. Communities in Nigeria reported having no financial or insurance institutions.

Infrastructure and Social Amenities

The most common road surface within communities also varies. In Yemen, 39 percent of the roads within the communities and intercommunities are gravel roads. In Burkina Faso, Nigeria, and Mozambique, 85 percent of the roads within the communities and intercommunities are dirt roads.

Markets are important for enterprises that wish to trade goods and also buy other goods and services from other entrepreneurs. About 70 percent of the communities in Burkina Faso, Mozambique, Nigeria, and Yemen have markets within their communities. Not only are markets important, but the ease with which entrepreneurs can access markets is also a significant factor. The average distance to a district market in the communities surveyed is 12 km, and the average time it takes to reach the district market is 41 minutes.

The means of transportation within communities also varies. In Yemen and Nigeria, respectively, 100 percent and 81 percent of the communities use cars within the community. In Burkina Faso and Mozambique, the use of bicycles is popular, with about 83 percent of the communities within the communities reporting using bicycles.

Most of the communities have access to electricity and running water, but Mozambique and Burkina Faso had the lowest percentage of communities electrified (6.5 percent and 31 percent of communities, respectively). Only 33 percent of communities across all countries have access to potable water (table B3.3).

Community Projects

New infrastructure projects tend to have impacts on the community. Of the countries surveyed, some of the new infrastructure projects being undertaken include the construction of new roads, bridges, and expansion of cell phone networks. New markets appear to have the largest impact on the community in Burkina Faso, Mozambique, Nigeria, and Yemen. In Yemen, the construction of new markets affected 100 percent of the communities; in Burkina Faso, the construction of 8 markets affected 90 percent of the community, 9 new markets affected 79 percent of the community in Nigeria, and 22 new markets affected 69 percent of the community in Mozambique. Cell phones also had a large impact on community households. On average, 54 percent of communities in all four countries surveyed expanded cellular

TABLE B3.4: Business/Agriculture Services Available in the Community

	EXTENSION SERVICES		ENGINEERING		MARKETING		MANAGEMENT CONSULTING		IT		LEGAL	
	AVAILABLE (%)	NEW WITHIN 3 YEARS (%)	AVAILABLE (%)	NEW WITHIN 3 YEARS (%)	AVAILABLE (%)	NEW WITHIN 3 YEARS (%)	AVAILABLE (%)	NEW WITHIN 3 YEARS (%)	AVAILABLE (%)	NEW WITHIN 3 YEARS (%)	AVAILABLE (%)	NEW WITHIN 3 YEARS (%)
YM	n/a	n/a	50	61	20	61	25	75	39	75	33	69
BF	n/a	n/a	12.5	0	40	75	20	14	7.5	0	12.5	40
NG	16	84	65	40	44	58	9	91	26	76	16	81
MZ	97	15	3	98	0	0	3	98	35	71	82	29

Source: 2010 RIC Surveys.

phone networks, with a corresponding 67 percent of communities affected.

Business/Agricultural Services

Agricultural and business services provide technical and management support that could help an enterprise to grow. Agricultural extension services are not available in communities in Yemen and Burkina Faso. Extension services exist in 97 percent of the communities in Mozambique and 16 percent of the communities in Nigeria. Information technology services exist in only 27 percent of the communities, and management consulting services exist in only 14 percent of the communities (table B3.4).

Natural Disasters

Natural disasters such as floods, drought, epidemics, and crop diseases sometimes occur and disrupt farm and nonfarm activities. In the communities surveyed, drought occurred most frequently across all the communities, affecting an average of 52 percent of the communities, with communities in Yemen most highly affected (78 percent). Other disasters were country specific. In Yemen, cold weather affected about 51 percent of the communities, while in Nigeria and Mozambique, famine affected about 78 percent of the communities. Burkina Faso had more floods than other natural disasters, and this affected 18 percent of the communities.

Appendix C: OBSTACLES PERCEIVED BY ENTREPRENEURS

C.1 GENDER COMPARISON OF PERCEIVED OBSTACLES (FIGURE C1.1)

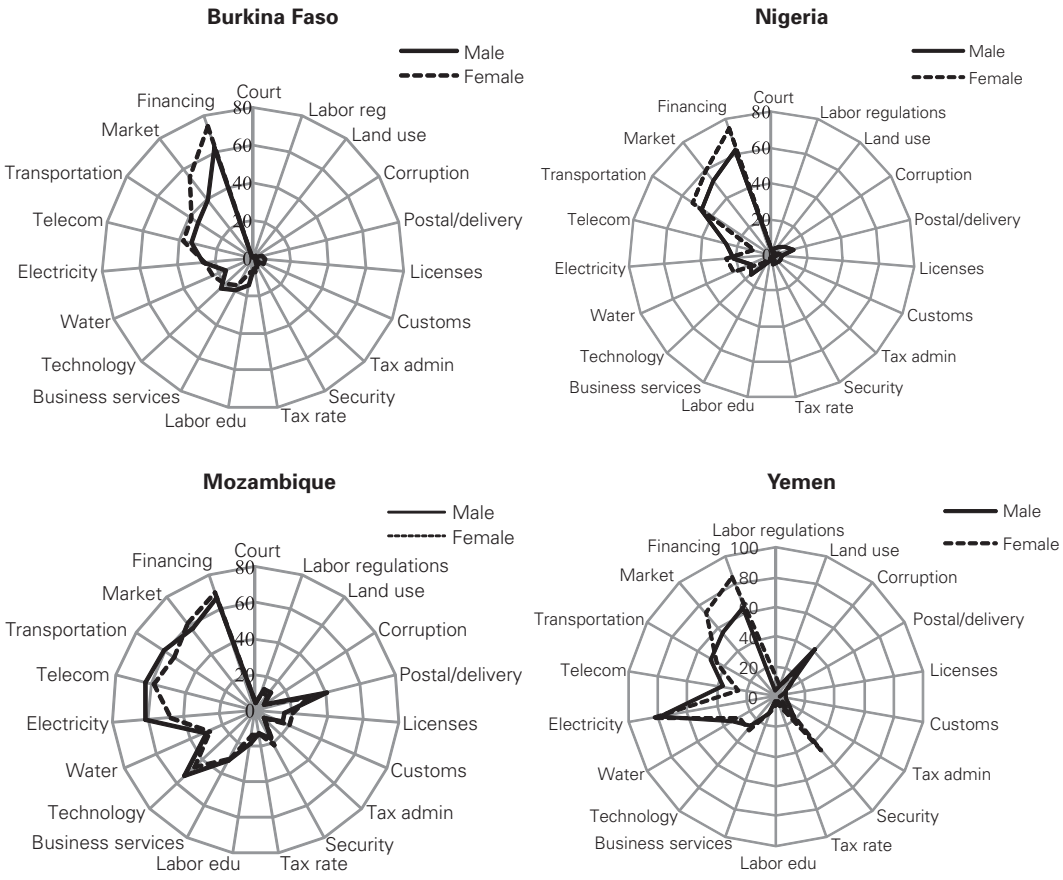
Similar Pattern

Male and female managers have similar perceived obstacles.

Some Trend

Female managers have generally higher levels of perceived business obstacles, except in Mozambique, where male managers have slightly higher perceived obstacles than female managers. Female managers have higher perceived obstacles in access to finance and market for all four countries, whereas transport and electricity are higher in Burkina Faso, Nigeria, and Mozambique. On the contrary, male managers have slightly higher perceived obstacles for technology and information technology for Burkina Faso, Nigeria, and Mozambique, and for telecommunication, transport, and electricity for Mozambique.

FIGURE C1.1: Gender Comparison of Perceived Obstacles



Source: 2010 RIC Surveys.

Security

Female managers perceived higher (40 percent) obstacles in Yemen.

C.2 RURAL AND URBAN COMPARISON OF PERCEIVED OBSTACLES (FIGURE C2.1)

Different Pattern

Government-Related Obstacles: Urban small enterprises seem to have higher perceived obstacles (tax rate, tax administration, corruption) because of more informal enterprises in rural areas. However, land-use policy and licenses and permits obstacles are lower for urban in Mozambique and Yemen than for rural.

Telecommunication: This may represent penetration of cell phones in rural and urban areas.

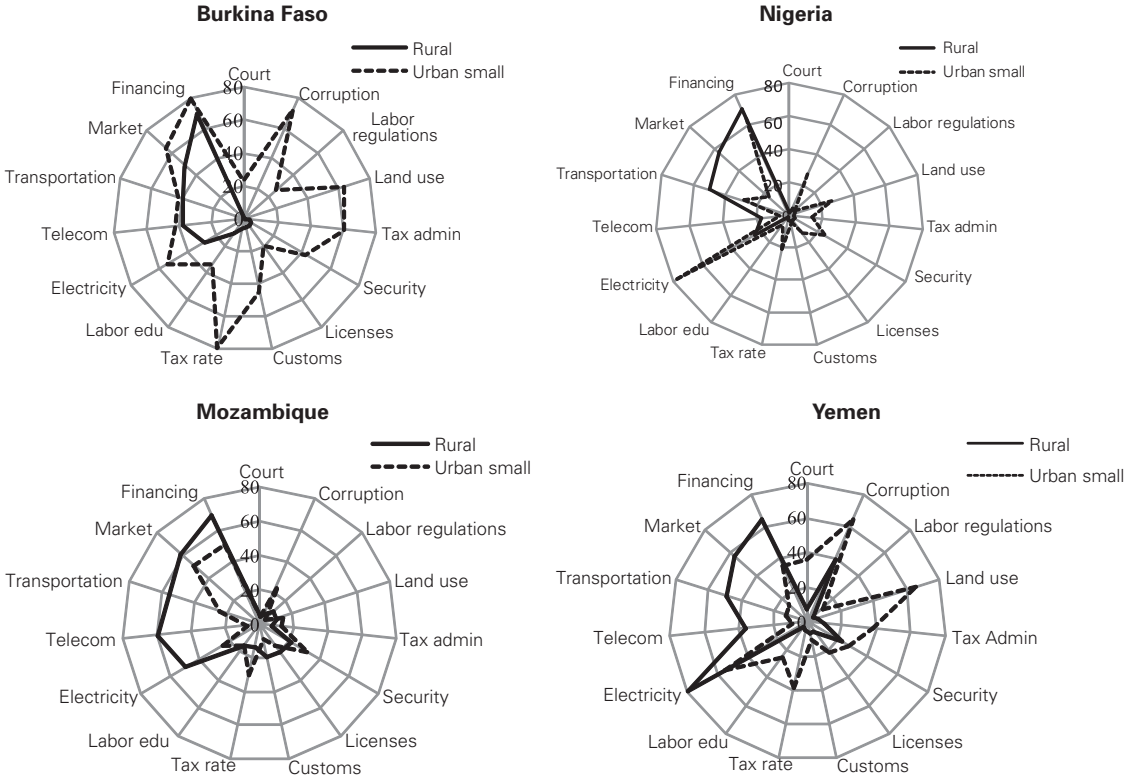
Electricity: Rural access to electricity is lower in Burkina Faso and Nigeria, but higher in Mozambique and Yemen.

Some Common Obstacles

Access to finance, market, transport, telecommunication, and electricity.

Note: Business service was not included in urban, but was included in rural.

FIGURE C2.1: Rural Versus Urban Small Enterprises



Source: ICS 2007 RICS 2010.

Appendix D: RICA BY INDICATORS

D.1 DEFINITIONS

Note: These indicators are taken at the community level on average in order to determine the minimum and maximum levels to calculate percentile ranking using the "Doing Business" methodology.

Main RIC Component 1: Access to Finance

Bank accounts:	% of enterprises having a bank account
Money transfer:	% of enterprises using money transfer service
Informal financing:	% of enterprises using informal financing
Loan:	% of enterprises having loans or line of credit
Interest rate:	Annual interest rate of recent loans (%)
Collateral required:	Collateral required/loan amount (%)

Main RIC Component 2: Security and Safety

Security expenses:	Security expense/total expense (%)
Payment dispute:	% of enterprises with payment dispute
Theft loss:	Theft loss/total revenue (%)

Main RIC Component 3: Labor

Primary completed:	% labor completed primary school
Manager's years of education:	Manager's average education (years)
Manager's years of experience:	Manager's experience before started (years)
Obtained skill was motive:	% of enterprises started with obtained skill as a motive
% labor paid:	% of workers paid

Main RIC Component 4: Government

Total wait days:	Total wait days of license, registration, water, fixed phone
License:	% of enterprises having an operating license
Government contract:	% of enterprises had government contract
Registration:	% of enterprises registered

Main RIC Component 5: Corruption

Requested unofficial payment:	% of enterprises requested unofficial payments

Main RIC Component 6: Business/Agriculture Service

Association membership:	% of enterprise being member of any association
Management services received:	% of enterprises received management services
Other service received:	% of enterprises received other services than management

Main RIC Component 7: Management Innovation/Improvement

Improved:	% of enterprises improved in management practice
By own idea:	% of enterprises improved by only own ideas
By own source:	% of enterprises improved by only own sources

Main RIC Component 8: Technology

Improvement:	% of enterprises improved the technology
Improvement by own idea:	% of enterprise improved by own idea
Improvement by own support:	% of enterprises improved by own support

Main RIC Component 9: Electricity

Use:	% of enterprises using electricity for their businesses
Sufficient:	% of enterprises having sufficient electricity
Outage:	Average hours of outage per enterprise
Generator use:	% of enterprises own/share a generator

Main RIC Component 10: Water

Sufficient water:	% of enterprises having sufficient water
Securing drinkable water:	% of enterprises with secure drinkable water

Main RIC Component 11: Telecommunication

Fixed phone:	% of enterprises using a fixed phone
Cell phone:	% of enterprises using a cell phone
Computer:	% of enterprises using a computer

Main RIC Component 12: Transport

Use:	% of enterprises using transportation
Own:	% of enterprises own transportation
Delivery service:	% of enterprises using delivery services
Availability:	% of enterprise having no available transport services

Main RIC Component 13: Market

Market opportunity as motive:	% of enterprises with a starting motive of market opportunity
Community market:	% of enterprises having main market in the community
Community purchase of input:	% of enterprises purchasing main inputs in the community
Competitors:	The number of competitors of each enterprise

D.2 PERCENTILE RANKING OF RIC INDICATORS

TABLE D2.1: Percentile Ranking of RIC Indicators: Farm Enterprises

RIC INDICATORS			PERCENTILE RANKING			
DESCRIPTION			YM	BF	NG	MZ
Finance	% Bank account	+	0	18	20	22
	% Money transfer	+	24	0	4.2	18
	% Informal financing	+	0	9	17	10
	% Loan	+	1.3	10	2.1	17
	% Annual interest rate	–		100	99	73
	% Collateral required/loan	–		90	88	82
	% Firms did not apply but wanted	–	50	31	62	17
Security and Safety	% Security expense/total expense	–	97	88	97	98
	% Firm with payment dispute	–	46	88	91	88
	% Theft loss/revenue	–	99	99	99	97
Labor	% Primary completed labor	+	49	8	73	32
	Manager's years of education	+	55	8	68	47
	Years of manager's experience	+	36	13	58	10
	Motive obtained skill	+	48	5	27	28
	% Labor paid	+	44	20	45	26
Government	Total wait days	–	81	100	99	91
	% Having a license	+	50	50	74	83
	% Had government contract	+	0	5	1	2
	% Firm registered	+	9	1	2	7
Corruption	% Firm requested unofficial payment	–	82	93	97	94
Business Services	% Member of association	+	5	24	27	11
	% Received management services	+	2	17	7	2
	% Received other services	+	1	10	1	100
Improvement	% Firm improved in management	+	17	9	34	100
	% Improved by own idea	–	6	18	6	18
	% Improved by own sources	–	0	0	32	14
Technology	% Firm technology improvement	+	3	3	12	18
	% Firm technology improvement by own idea	–	0	25	7	6
	% Own technical support	–	33	0	31	0
Electricity	% Use electricity	+	24	0	36	14
	% Sufficient electricity	+	55	0	23	82
	Hours of outage	–		100	74	90
	% Use own/shared generator	–	55	100	45	71
Water	% Sufficient water	+	48	99	73	67
	% Secure drinkable water source	+	50	47	53	27
Telecommunication	% Use a fixed phone	+	30	2	2	2
	% Use a cell phone	+	71	25	42	32
	% Use a computer	+	38	0	7	6
Transport	% Use transport	+	88	83	77	59
	% Use own transport	+	41	48	31	34
	% Use postal/delivery services	+	0	5	3	16
	% No delivery service available	–	92	100	88	39
Market	% Motive market opportunity	+	19	18	37	28
	% Main market is in the community	–	52	29	33	64
	% Input purchase in the community	–	67	44	54	82
	Number of competitors	–	71	86	87	91

Source: 2010 RIC Surveys.

TABLE D2.2: Percentile Ranking of RIC Indicators: Nonfarm Enterprises

RIC INDICATORS			PERCENTILE RANKING			
DESCRIPTION			YM	BF	NG	MZ
Finance	% Bank account	+	10	29	30	28
	% Money transfer	+	36	0	6	11
	% Informal financing	+	14	30	34	12
	% Loan	+	13	15	4	12
	% Annual interest rate	–	99	100	85	95
	% Collateral required/loan	–	93	94	74	90
	% Firms did not apply but wanted	–	43	25	66	28
Security and Safety	% Security expense/total expense	–	93	92	93	93
	% Firm with payment dispute	–	68	84	93	82
	% Theft loss/revenue	–	100	99	99	48
Labor	% Primary completed labor	+	62	6	77	45
	Manager's years of education	+	59	5	56	51
	Years of manager's experience	+	32	16	60	27
	Motive obtained skill	+	28	10	24	17
	% Labor paid	+	24	23	10	24
Government	Total wait days	–	91	99.9	99.7	99
	% Having a license	+	75	56	59	57
	% Had government contract	+	11	10	7	0
	% Firm registered	+	19	5	1	31
Corruption	% Firm requested unofficial payment	–	75	92	98	66
Business Services	% Member of association	+	2	10	25	4
	% Received management services	+	5	25	10	1
	% Received other services	+	2	5	2	100
Improvement	% Firm improved in management	+	23	20	38	100
	% Improved by own idea	–	11	14	4	7
	% Improved by own sources	–	4	11	27	6
Technology	% Firm technology improvement	+	7	14	23	15
	% Firm tech improvement by own idea	–	36	6	7	3
	% Own technical support	–	0	0	37	3
Electricity	% Use electricity	+	82	4	35	12
	% Sufficient electricity	+	53	64	18	87
	Hours of outage	–	49	100	100	100
	% Use own/shared generator	–	41	0	42	67
Water	% Sufficient water	+	72	100	68	84
	% Secure drinkable water source	+	53	94	82	84
Telecommunication	% Use fixed phone	+	39	0	1	1
	% Use cell phone	+	77	24	41	52
	% Use computer	+	26	0	3	5
Transport	% Use transport	+	88	86	66	75
	% Use own transport	+	77	87	70	72
	% Use postal/delivery services	+	8	0	10	9
	% No delivery service available	–	82	100	87	23
Market	% Motive market opportunity	+	44	23	37	21
	% Main market is in the community	–	24	27	26	23
	% Input purchase in the community	–	80	48	55	80
	Number of competitors	–	96	93	92	91

Source: 2010 RIC Surveys.

Appendix E: ENTERPRISE DYNAMICS

E.1 ENTERPRISE ENTRY

Reardon et al. (2000) conclude the following: (1) poor people's inability to overcome important entry barriers to many nonfarm activities leads to rural income inequality, (2) the main determinants of unequal access to nonfarm activities are the distribution of capacity to make investments in nonfarm assets and the relative scarcity of low capital entry barrier activities, and (3) the inequality in both farm and nonfarm sectors needs to be analyzed. Therefore, it is important to understand entry barriers and business constraints of both rural small farm and nonfarm enterprises to know causes of rural income inequality.

Motives to Start

In Burkina Faso and Nigeria, the top motive to start farm and nonfarm businesses was social independence. Market opportunity was the top motive for nonfarm business in Yemen, whereas no other income was for farm business. For Mozambique, low agriculture income was the top motive for nonfarm business, and obtained skill was the top motive for farm business.

Market opportunity and skill obtained to start business become controllable factors to start businesses, whereas other income-related motives may not be controllable. Therefore, by improving market opportunities and skills obtained, more entry of businesses can be expected (table E1.1).

Obstacles to Start

Start-up capital is the top obstacle to start both farm and nonfarm enterprises in all four countries. This finding matches the other findings of the studies. Limited availability of much-needed finance remains a principal constraint among the rural entrepreneurs. Lack of sufficient start-up capital limits the scope of the activity and expansion opportunities. Access to credit is one of the most important business assets in both rural and urban areas, especially for the poor who require collaterals. Rural entrepreneurs need an initial infusion as well as working capital to start and stay in business (Islam 1997).

The following obstacles are access to inputs and market knowledge for most of farm and nonfarm enterprises, except farm enterprises in Yemen, where water is the second obstacle to start farm enterprises due to country-specific water problems (table E1.2).

Reasons Not to Start

Insufficient capital is the top reason not to start farm and nonfarm enterprises. Lack of access to loans is the second, except for Nigeria, where market knowledge is the second

TABLE E1.1: Motives to Start Business (% of Enterprises)

	YM		BF		NG		MZ	
MOTIVES TO START	**NF**	**FARM**	**NF**	**FARM**	**NF**	**FARM**	**NF**	**FARM**
Social independence	7	8	**69**	**66**	**53**	**51**	15	35
Low agriculture income	15	4	**51**	**47**	11	9	**44**	14
Market opportunities	**44**	18	20	19	18	**38**	20	29
Obtained skill	**33**	**34**	18	5	**37**	34	29	**39**
Lost income	27	28	2	3	9	34	**37**	**36**
No other income	18	**39**	25	31	37	22	33	29

Source: 2010 RIC Surveys.

Note: NF denotes nonfarm enterprises.

TABLE E1.2: Obstacle to Start Business (% of Enterprises)

	YM		BF		NG		MZ	
OBSTACLES TO START	**NF**	**FARM**	**NF**	**FARM**	**NF**	**FARM**	**NF**	**FARM**
Start-up capital	**71**	**51**	**76**	**58**	**80**	**77**	**83**	**65**
Access to inputs	**20**	9	**16**	**22**	**22**	**23**	**20**	**32**
Market knowledge	**17**	**19**	**20**	**15**	**27**	**21**	**36**	**33**
Availability of loans	2	3	14	9	12	15	**27**	14
Availability of water	2	**29**	2	7	4	7	0	0
Roads and transport	11	10	5	2	9	11	2	2
Availability of skilled labor	8	10	5	5	8	13	3	7
Availability of electricity	12	1	5	1	5	2	3	1
Social reasons (gender, etc.)	3	4	3	3	9	9	6	13
Availability of cell phone	1	1	4	5	0	0	2	1

Source: 2010 RIC Surveys.

Note: NF denotes nonfarm enterprises.

TABLE E1.3: Reasons Not Tried to Start Nonfarm Business (% of Households)

REASONS NOT TRIED	YM	BF	NG	MZ
Insufficient capital	**81**	**53**	**44**	**58**
Lack of access to loans	**17**	**16**	3	**30**
Lack of access to inputs	**15**	**11**	**13**	**23**
Social reasons (gender, etc.)	**12**	1.4	6	**13**
Market knowledge	9	9	**29**	**29**
No cell phone	0	9	1	0
Lack of access to electricity	8	1	3	3.4
Unavailable skills	8	5	11	9
Corruption	5	0	1	3
Crime	4	0	1	0
Lack of access to water	3	6	1	0
Lack of roads and transport	3	3	6	0
License and permit	0	0	2	3

Source: 2010 RIC Surveys.

reason. Lack of access to inputs is relatively high in all four countries. As far as market knowledge is concerned, Mozambique and Nigeria are high, whereas Yemen and Burkina Faso are relatively low (table E1.3).

E.2 ENTERPRISE EXIT

Not profitable operations and lack of working capital are the top reasons for a nonfarm enterprise to close once it has started (table E2.1). Not profitable operations can be caused by weak demand, high cost of input and transport, and low productivity. It can be overcome by developing market, improving roads and transport for access to inputs, and providing appropriate management services to improve productivity. Therefore, we can conclude that management services are one of the most critical RIC components for successful rural nonfarm businesses. Table E2.2 shows Probit regression results for entry and exit of the enterprises.

TABLE E2.1: Reasons to Close Nonfarm Business (% of Households Started Business)

REASONS NOT TRIED	YM	BF	NG	MZ
Not profitable	**40**	**59**	**58**	**62**
Lack of working capital	**30**	**56**	**29**	**57**
Ill or death	5	21	26	24
Moved out	5	3	23	14
Found a wage job	0	0	3	8

Source: 2010 RIC Surveys.

TABLE E2.2: Determinants of Enterprise Dynamics: Entry and Closure

	YM ENTRY	YM EXIT	BF ENTRY	BF EXIT	NG ENTRY	NG EXIT	MZ ENTRY	MZ EXIT
PROBIT MODEL VARIABLES								
ln (# HH members)	**0.407*** **	**1.534*** **	–0.103	0.188	**–0.384** **	**–0.467*** **	0.136	–0.093
	[0.157]	**[0.581]**	[0.235]	[0.348]	**[0.183]**	**[0.176]**	[0.128]	[0.212]
ln (total agriculture income)	0.007	**–0.072** **	0.007	–0.124	–0.004	0.015	0.008	–0.007
	[0.010]	**[0.031]**	[0.030]	[0.132]	[0.013]	[0.017]	[0.012]	[0.020]
ln (other income)	**–0.036*** **	–0.035	0.018	0.006	0.008	**–0.036** **	**0.054*** **	–0.007
	[0.011]	[0.028]	[0.018]	[0.025]	[0.013]	**[0.018]**	**[0.013]**	[0.020]
COMMUNITY VARIABLES								
ln (km to district market)	0.111	0.377	0.609	**1.007** **	–0.060	–0.069	0.122	0.225
	[0.132]	[0.259]	[0.381]	**[0.488]**	[0.132]	[0.167]	[0.142]	[0.297]
ln (% HH electrified)	0.048	**–0.358** **	–0.121	**–1.613*** **	0.384	–0.643	**0.165*** **	0.101
	[0.045]	**[0.145]**	[0.150]	**[0.615]**	[0.349]	[0.491]	**[0.061]**	[0.117]
ln (% HH secured water)	0.046	0.096	0.035	**1.296*** **	–0.048	–0.007	**0.238*** **	**–0.289*** **
	[0.051]	[0.122]	[0.071]	**[0.408]**	[0.112]	[0.161]	**[0.038]**	**[0.068]**
ln (% high school completed)	–0.171	**0.933***	0.142	1.411	0.009	**1.198*** **	**0.299*** **	**0.370***
	[0.134]	**[0.522]**	[0.322]	[1.136]	[0.207]	**[0.347]**	[0.092]	**[0.208]**
Physician available	–0.180	0.387	–0.056	**–2.548*** **	**0.328***	0.168	**1.0**	**1.0**
	[0.169]	[0.480]	[0.235]	**[0.690]**	**[0.175]**	[0.229]		
Business services available	**–0.767***	**–3.964*** **	0.035	**1.222** **	**0.368***	0.432	**1.0**	**1.0**
	[0.437]	**[0.542]**	[0.185]	**[0.485]**	**[0.207]**	[0.385]		
Engineer service available	0.465	3.376	–0.135	**1.114** **	**0.364***	–0.116	**1.0**	**1.0**
	[0.457]	[0.000]	[0.221]	**[0.518]**	**[0.211]**	[0.295]		
Formal financial institution	–0.193	**1.809*** **	–0.268	**–4.919*** **	0.227	0.269	**1.0**	**1.0**
	[0.189]	**[0.582]**	[0.298]	**[1.178]**	[0.201]	[0.267]		
No theft	–0.158	–0.317	**–0.267***	0.692	–0.017	**1.191** **	–0.213	**1.554*** **
	[0.197]	[0.580]	**[0.156]**	[0.471]	[0.322]	**[0.473]**	[0.236]	**[0.545]**
Disaster	**–0.570***	**2.119** **	0.231	**–2.464*** **	0.092	**–0.362** **	**0.645** **	–0.982
	[0.292]	**[0.943]**	[0.209]	**[0.905]**	[0.103]	**[0.155]**	**[0.277]**	[0.607]
ln (hours to district market)	–0.156	–1.442	0.609	**–3.418*** **	0.333	–0.322	–0.071	–0.381
	[0.460]	[1.137]	[0.381]	**[1.295]**	[0.363]	[0.370]	[0.092]	[0.238]
ln (years of financial services)			0.064	–0.075				
			[0.094]	[0.352]				
Observations	536	197	629	164	790	710	884	371

Source: 2010 RIC Surveys.

Note: Colinearity is shown by 1.0; Sampling weights are applied; Standard errors in brackets; *** p < 0.01, ** p < 0.05, * p < 0.1.

TABLE E3.1: Obstacles to Maintain or Grow (% of Households Started Business)

	YM	BF	NG	MZ
Insufficient capital	**75**	**82**	**75**	**60**
Lack of access to inputs	**21**	**15**	**22**	**22**
Lack of access to electricity	**16**	2	**16**	1
Market knowledge	**16**	**17**	**16**	**16**
Lack of roads and transportation	**16**	4	**16**	2
Lack of access to loans	**14**	**13**	**14**	**19**
Social reasons (gender, etc.)	**10**	2	**11**	4
Unavailable skill	5	4	5	8
Lack of access to water	5	1	5	1
License and permit requirements	4	2	4	2
Crime	3	2	3	2
Corruption	3	0	3	0.2
Unavailability of cell phone	2	7	2	0.4
Lack of access to technology	1	0.3	1	0

Source: 2010 RIC Surveys.

E.3 ENTERPRISE PERFORMANCE

Several major obstacles were perceived by the household entrepreneurs, such as insufficient capital, lack of access to inputs, market knowledge, and lack of access to loans. Insufficient capital is the top obstacle for operations of non-farm enterprises once they are started. This may be related to access to loans. Market knowledge and lack of access to inputs are common obstacles, which are similar to obstacles to starting a business (table E3.1). Table E3.2 shows regression results of the four countries, indicating the correlation of performance and RIC variables.

TABLE E3.2: Determinants of Enterprise Performance: Revenues

REVENUES	YEMEN NONFARM	YEMEN FARM	BF NONFARM	BF FARM	NG NONFARM	NG FARM	MZ NONFARM	MZ FARM
VARIABLES	LNREVPERFUL	LNREVPERFUL	LNREVPERFUL	LNREVPERFUL	LNREVPERFUL	LNREVPERFUL	LNREVPERFUL	LNREVPERFUL
ln (firm age)	0.061	–0.852	0.088	0.784	0.066	0.001	–0.097	–0.197
	[0.118]	[0.622]	[0.118]	[0.687]	[0.059]	[0.069]	[0.237]	[0.530]
Female manager	**1.222*** **	0.531	**0.662*** **	0.605	**–0.355*** **	**–0.374*** **	–0.907	**–2.404*** **
	[0.274]	[1.039]	**[0.226]**	[0.591]	**[0.114]**	**[0.127]**	[0.849]	**[0.838]**
Founded by own	–0.007	**1.441** **	0.043	0.053	–0.035	0.037	0.036	–0.713
	[0.305]	**[0.682]**	[0.322]	[0.424]	[0.137]	[0.111]	[0.416]	[0.969]
ln (manager education years)	–0.099	**–0.351**	–0.255	**0.492** **	0.039	–0.029	**0.312** *	0.192
	[0.084]	[0.288]	[0.165]	**[0.234]**	[0.052]	[0.059]	**[0.189]**	[0.390]
Having bank account	**1.737*** **	0.000	0.302	**0.812** **	0.216	**0.379** **	0.267	–1.610
	[0.381]	[0.000]	[0.275]	**[0.389]**	[0.138]	**[0.168]**	[0.441]	[1.291]
Having a loan	0.245	0.000	0.263	0.853	0.224	–0.083	1.305	0.519
	[0.922]	[0.000]	[0.322]	[0.641]	[0.348]	[0.260]	[1.173]	[1.571]
Having payment dispute	**0.376** *	–0.722	–0.043	0.920	0.275	0.038	0.355	0.000
	[0.204]	[0.611]	[0.257]	[1.137]	[0.229]	[0.268]	[0.404]	[0.000]
Having corruption	0.002	0.370	–0.122	1.408	0.145	0.231	0.165	0.123
	[0.002]	[0.506]	[0.397]	[0.906]	[0.246]	[0.210]	[0.359]	[0.804]
Use water	0.185	**3.572** *	–0.158	0.547	**0.198** **	–0.110	0.348	0.843
	[0.185]	**[2.021]**	[0.226]	[0.385]	**[0.100]**	[0.126]	[0.441]	[0.608]
Use electricity	**0.874*** **	**0.753**	**0.014*** **	0.000	–0.138	**0.254** *	0.265	1.166
	[0.247]	[1.260]	**[0.004]**	[0.000]	[0.094]	**[0.152]**	[0.548]	[1.721]
Use cell phone	0.133	–0.106	0.120	0.144	**0.323*** **	–0.088	0.068	–0.252
	[0.246]	[0.578]	[0.252]	[0.403]	**[0.113]**	[0.130]	[0.327]	[0.539]
Innovation/improvement	–0.194	0.379	0.140	1.336	0.037	**0.073** **	0.018	**1.192*** **
	[0.205]	[0.521]	[0.389]	[0.847]	[0.037]	**[0.035]**	[0.156]	**[0.262]**
Business service	0.054	0.000	0.171	–1.166	0.169	–0.079	**–2.313*** **	0.467
	[0.259]	[0.000]	[0.265]	[0.751]	[0.180]	[0.166]	**[0.527]**	[0.821]
Use auto	**1.076*** **	**–1.317** *	0.384	0.718	**0.196** **	–0.167	**0.967** **	0.015
	[0.272]	**[0.726]**	[0.361]	[0.561]	**[0.100]**	[0.118]	**[0.375]**	[0.656]
	–0.068	–0.015	–0.006	**0.186** *	–0.014	0.027	–0.096	–0.245
ln (km to district market)	[0.073]	[0.201]	[0.095]	**[0.107]**	[0.046]	[0.058]	[0.174]	[0.217]
Observations	262	55	230	104	503	469	186	73
R-squared	0.349	0.286	0.307	0.213	0.139	0.091	0.118	0.324

Source: 2010 RIC Surveys.
Note: Sampling weights are applied; Standard errors in brackets; significant level: *** p < 0.01, ** p < 0.05, * p < 0.1.

Appendix F: INCOME SIMULATIONS BY RIC IMPROVEMENT

The impacts on performance, especially income, are remarkable when major RIC components are improved. Simulation results of income increase by 5 percent and 10 percent, respectively, on RIC improvement in access to finance, transport, business services, cell phone, electricity, and water as shown in table F1.1.[12]

12 This simulation has weakness, which is correlation based on coefficients instead of causation. Five percent improvement has an increase of (exp (coefficient*0.05)-1)*100; Bold numbers represent wrong signed coefficients.

TABLE F1.1: Income Increase of Household Enterprises by RIC Improvement

		NONFARM				FARM			
		AVERAGE%	COEFFICIENT	5%	10%	AVERAGE%	COEFFICIENT	5%	10%
YEMEN	Having a bank account	6.7	1.737	9.07	18.97	1.0	dropped	0.00	0.00
	Having a loan	2.2	0.245	1.23	2.48	0	dropped	0.00	0.00
	Use car/bus/truck (transport)	62	1.076	5.53	11.36	77	**–1.317**	**–6.37**	**–12.34**
	Innovation/improvement	24.1	**–0.194**	**–0.97**	**–1.92**	20.6	0.379	1.91	3.86
	Business services (any)	13.5	0.054	0.27	0.54	1.2	dropped	0.00	0.00
	Use cell phone	79	0.133	0.67	1.34	74	-0.106	-0.53	-1.05
	Use electricity	83	0.873	4.46	9.12	12	0.753	3.84	7.82
	Use water	42	0.185	0.93	1.87	93	3.572	19.55	42.93
	All improved except wrong signs			24.00	53.77			26.52	60.06
BURKINA FASO	Having a bank account	15	0.302	1.52	3.07	14	0.812	4.14	8.46
	Having a loan	6.3	0.263	1.32	2.66	7.6	0.853	4.36	8.90
	Use car/bus/truck (transport)	7.6	0.384	1.94	3.91	2.5	0.718	3.66	7.44
	Innovation/improvement	21.8	0.140	0.70	1.41	10.8	1.336	6.91	14.29
	Business services (any)	15.2	0.171	0.86	1.72	21.7	**–1.166**	**–5.66**	**–11.01**
	Use cell phone	21	0.120	0.60	1.21	26	0.144	0.72	1.45
	Use electricity	5.4	0.014	0.07	0.14	1.7	dropped	0.00	0.00
	Use water	73	**–0.158**	**–0.79**	**–1.57**	87	0.547	2.77	5.62
	All improved except wrong signs			7.22	14.96			24.67	55.43
NIGERIA	Having a bank account	16	0.216	1.09	2.18	16	0.379	1.91	3.86
	Having a loan	1.7	0.224	1.13	2.27	1.4	**–0.083**	**–0.41**	**–0.83**
	Use car/bus/truck (transport)	64	0.196	0.98	1.98	66	**–0.167**	–0.83	-1.66
	Innovation/improvement	41.4	0.037	0.19	0.37	35.1	0.073	0.37	0.73
	Business services (any)	9.8	0.169	0.85	1.70	6.98	**–0.079**	**–0.39**	**–0.79**
	Use cell phone	40	0.323	1.63	3.28	43	**–0.088**	**–0.44**	**–0.88**
	Use electricity	35	**–0.138**	**–0.69**	**–1.37**	16	0.254	1.28	2.57
	Use water	53	0.198	0.99	2.00	78	**–0.110**	-0.55	–1.09
	All improved except wrong signs			7.05	14.60			3.59	7.32
MOZAMBIQUE	Having a bank account	14	0.267	1.34	2.71	17	**–1.610**	**–7.73**	**–14.87**
	Having a loan	4.0	1.305	6.74	13.94	9.0	0.519	2.63	5.33
	Use car/bus/truck (transport)	50	0.967	4.95	10.15	30	0.015	0.08	0.15
	Innovation/improvement	22.8	0.018	0.09	0.18	45.4	1.192	6.14	12.66
	Business services (any)	2.8	**–2.313**	**–10.92**	**–20.65**	5.8	0.467	2.36	4.78
	Use cell phone	52	0.068	0.34	0.68	33	**–0.252**	**–1.25**	**–2.49**
	Use electricity	12	0.265	1.33	2.69	7	1.166	6.00	12.37
	Use water	22	0.348	1.76	3.54	66	0.843	4.31	8.80
	All improved except wrong signs			17.57	38.24			23.38	52.23

Source: 2010 RIC Surveys.

Appendix G: GOVERNMENT-RELATED RIC

At this moment, government-related RIC may be expected to become more important as rural enterprises become formalized. They include security, legal system, licenses and permits, tax system, corruption, disaster management, health, education, and economic and political stability.

G.1 SECURITY AND LEGAL SYSTEM

The 2011 WDR (World Bank 2011) indicates that sustainable prosperity cannot be attained if citizens are not adequately protected from corruption, injustice, unemployment, and social unrest. Therefore, it is important to have security and justice where businesses are to grow and thrive.

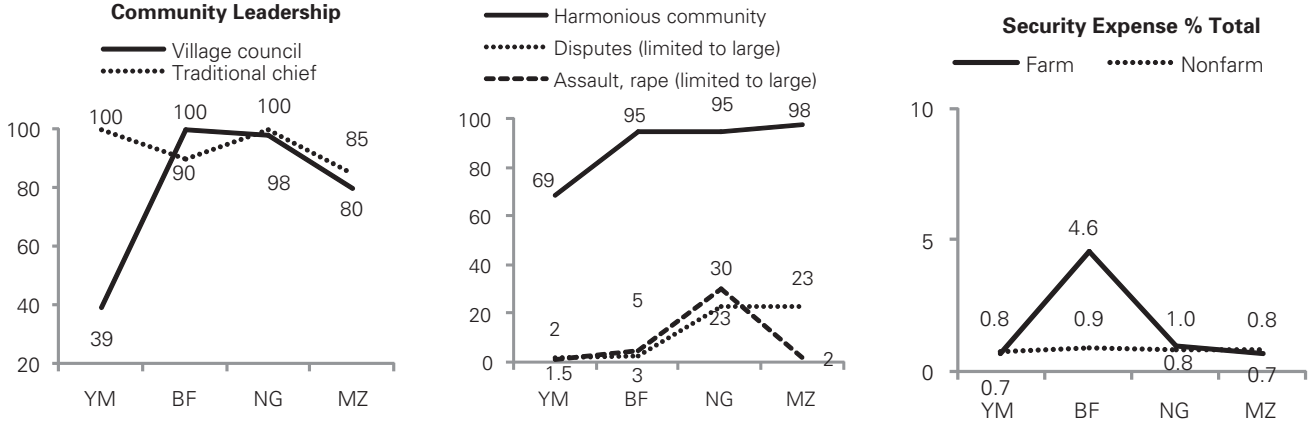
In countries where traditional chiefs exist, their role is important in maintaining peace and stability in their communities through decision making. Traditional chiefs have influence on community decisions, especially in Yemen. Village councils are organized almost 100 percent in Burkina Faso and Nigeria, with 39 percent in Yemen and 80 percent in Mozambique. Rural communities are relatively harmonious, except in Yemen. Nigeria and Mozambique have relatively more disputes within the community than Yemen and Burkina Faso. Crimes like assault and rape rarely occur, except in Nigeria (30 percent) (figure G1.1).

Security expenses include preventive expenses and cost incurred after damage. Security expenses are as low as 1 percent, except in Burkina Faso, where for farm enterprises security expenses are 4.6 percent. This is caused by a few farm enterprises spending a lot of money for security, whereas more than 85 percent of farm enterprises spend no money for security (figure G1.1).

G.2 PAYMENT DISPUTES

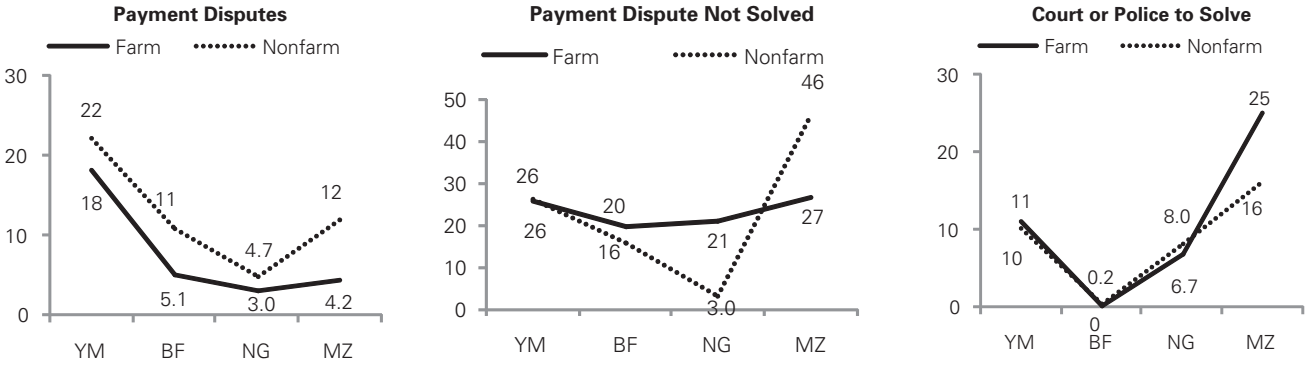
The more transactions occur in the community, the more payment disputes exist, unless proper settlement mechanism is established. More disputes occur for nonfarm enterprises than for farm enterprises. In Yemen, disputes are as high as 22 percent for nonfarm enterprises, with 18 percent for farm enterprises. In Nigeria, payment disputes are the lowest of the four countries. Court or police are less involved in dissolving payment disputes. These numbers reflect the percentage of police or court involvement for solving payment disputes. A high percentage of payment disputes are not solved by means of discussion, friend, community leaders, police, or court (16 to 46 percent), with Nigeria for nonfarm as low as 3 percent (figure G2.1).

FIGURE G1.1: Community Leadership, Crimes, and Security Expenses



Source: 2010 RIC Surveys.

FIGURE G2.1: Payment Disputes, Never Solved, Not Even Tried to Solve (%)



Source: 2010 RIC Surveys.

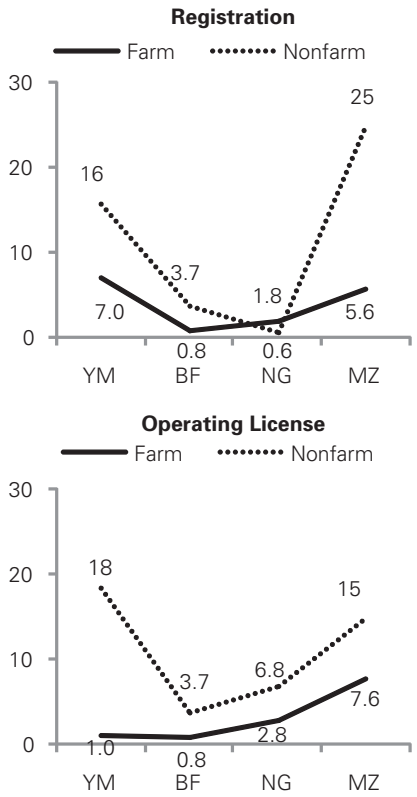
G.3 LICENSES AND PERMITS

Businesses register their companies to operate formally. However, in rural areas, registration of enterprises is quite low, except for nonfarm enterprises of Yemen (16 percent) and Mozambique (25 percent). For operating licenses, generally less than 7.6 percent possess operating licenses, whereas Yemen has 18 percent and Mozambique has 15 percent (figure G3.1).

G.4 TAX SYSTEM

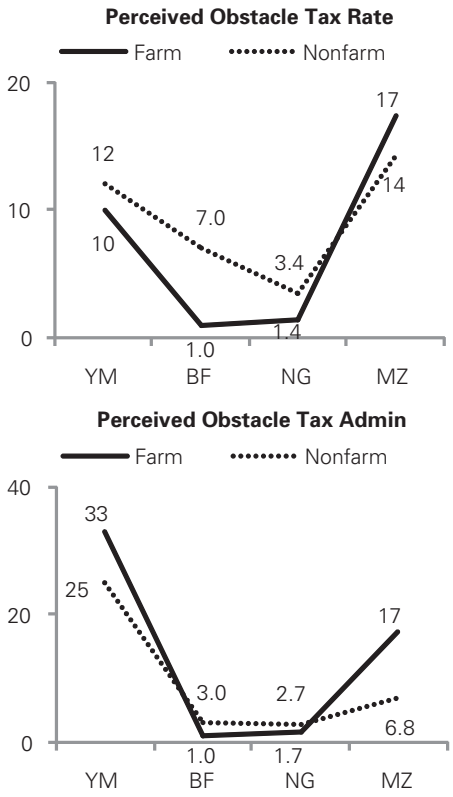
If the enterprises are formally operated, they have to pay tax. However, many rural enterprises are not paying taxes. The shape of graphs for tax systems looks similar to the registrations and operating licenses of figure G4.1. The perception of tax rate or tax administration as a major obstacle is expected to increase as registrations and operating licenses increase.

FIGURE G3.1: Registrations and Licenses



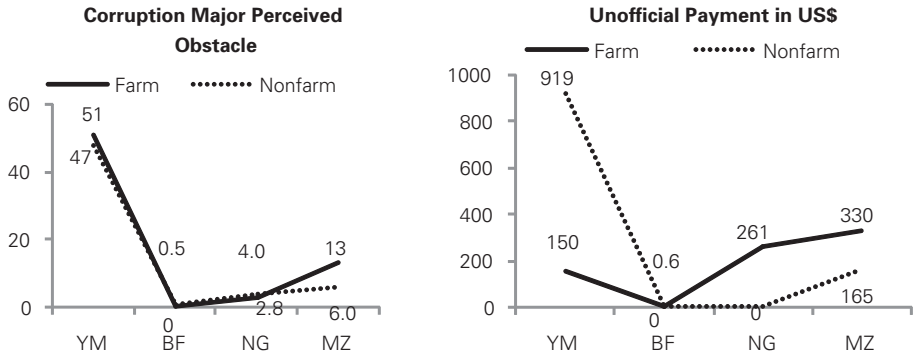
Source: 2010 RIC Surveys.

FIGURE G4.1: Tax System–Perceived Obstacles



Source: 2010 RIC Surveys.

FIGURE G5.1: Corruption



Source: 2010 RIC Surveys.

G.5 CORRUPTION

Corruption represents unofficial payments that are requested from or paid by entrepreneurs. In fact, many enterprises are informal and not registered. Therefore, corruption may not exist for informal enterprises. Figure G5.1 shows corruption perceived as a major or very severe obstacle. The amount of official payment is in US dollars.

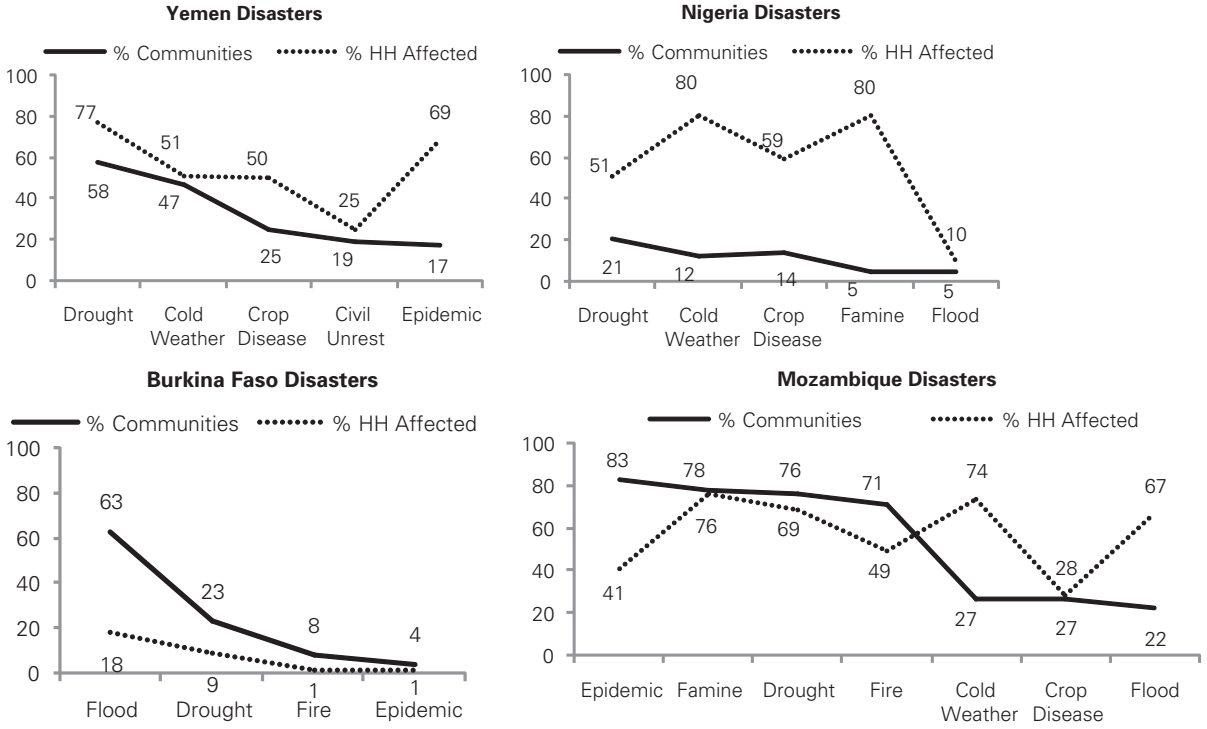
G.6 DISASTER MANAGEMENT

In recent years, the frequency and severity of disasters have increased, and this trend is likely to worsen in the years to come. An effective disaster risk reduction strategy may be required to save lives, protect livelihoods, and reduce the loss of properties (EC 2011). The effects from disasters on communities or businesses will be compelling. Disasters may include those that are manmade, like social unrest and conflicts. Figure G6.1 shows major disasters that have occurred and percentages of households affected by that disaster.

G.7 HEALTH

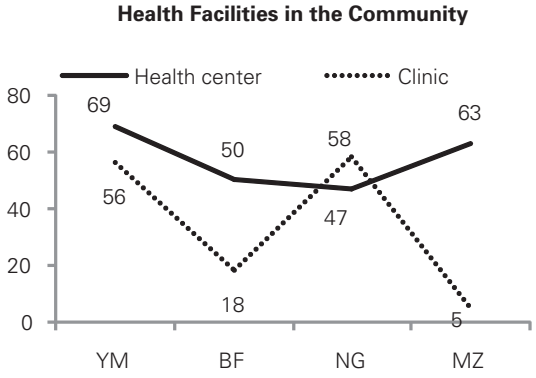
Health is considered a crucial economic asset. The Millennium Development Goals list health as fundamental to eradicating

FIGURE G6.1: Disasters in Each Country



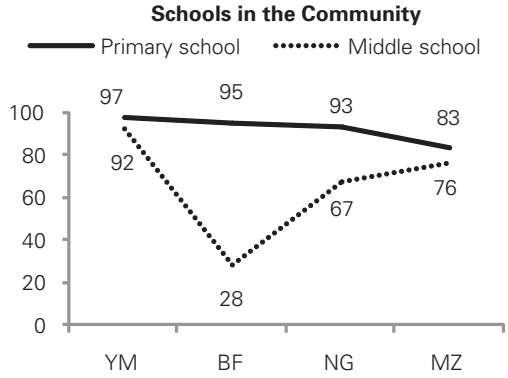
Source: 2010 RIC Surveys.

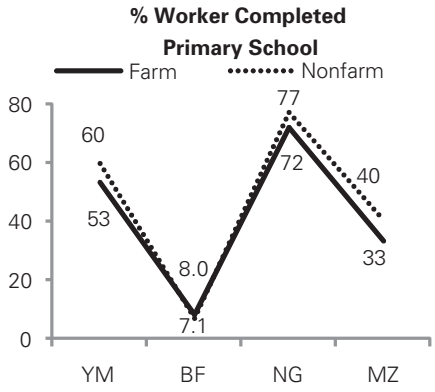
FIGURE G7.1: Health Facilities



Source: 2010 RIC Surveys.

FIGURE G8.1: School and Education





Source: 2010 RIC Surveys.

extreme poverty. The benefits of good health are important for the poor, as they have fewer resources for education and health. Healthy adults are more likely to have more resources to invest in the health and education of their children (OECD 2003).

The availability of health facilities represents the level of available health services in the community. Except for Nigeria, there are more health centers than clinics in the communities. The level of availability of clinics in Burkina Faso and Mozambique are very low at 18 percent and 5 percent, respectively (figure G7.1).

G.8 EDUCATION

Education is important to develop the economy of the country. Schools are necessary to enable students to obtain required education. We need to not only increase the availability of schools for children, but also to encourage students to complete their education. Many children have not enrolled even though it is free, and even if they are enrolled, many have not completed the minimum requirements to become permanently literate, even though progress has been notable in developing countries, including throughout Africa (Chimombo 2005).

A primary school exists in most communities, yet in some communities, no primary school is available. There are fewer middle schools in Burkina Faso than the other three countries. The lowest percentage of workers who completed primary school is in Burkina Faso at 8.0 percent and 7.1 percent for farm and nonfarm enterprises, respectively (figure G8.1).

G.9 ECONOMIC AND POLITICAL STABILITY

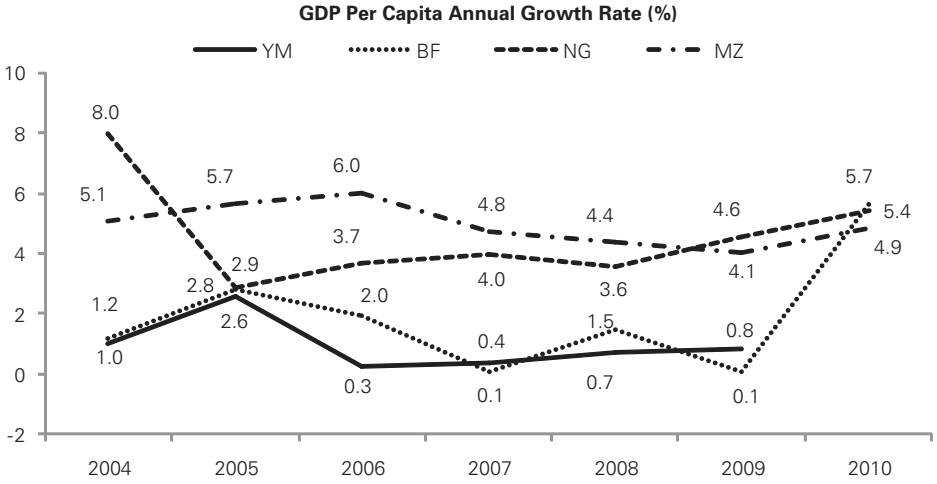
Political instability leads to economic instability (Saeed 1986; Nelson 1998; Alesina et al. 1998). Nelson (1998) states that economic growth is associated with reduced poverty. Therefore, we may be able to conclude that political stability is one of the keys to economic stability, though it is not the only component. Gross domestic products (GDPs) per capita growth rates of the three African countries increased in 2010 (figure G9.1).

The Political Risk Service (PRS) Group is rating political risk as shown below.[13] Nigeria stays at the range of very high political risk at least for the last six years, whereas Yemen and Burkina Faso turned from moderate risk to high or very high risk, and Mozambique stayed almost within moderate risk range, except in 2010 when it improved to the low risk range. Two countries are stable at the higher risk range in Nigeria and the moderate risk range in Mozambique (figure G9.2).

Based on the economic risk rating of the PRS Group, in June 2011, Yemen had a high risk of economic stability,

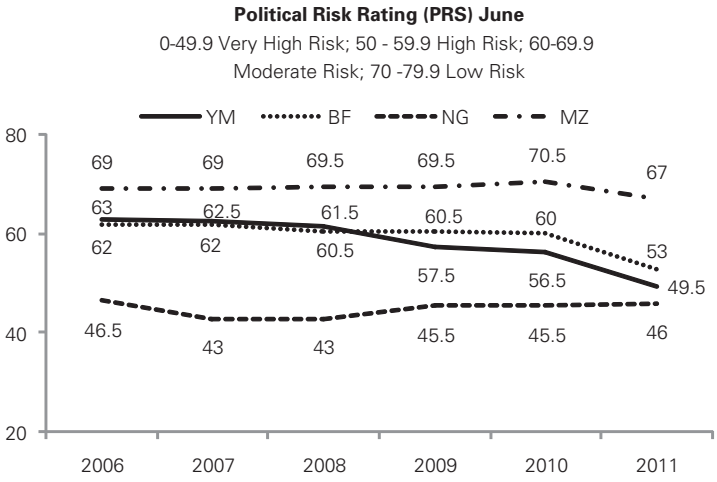
13 The PRS Group calculates political rating based on the following indicators: Government stability (12); Socioeconomic conditions (12); Investment profile (12); Internal conflict (12); External conflict (12); Corruption (6); Military in politics (6); Religious tensions (6); Law and order (6); Ethnic tensions (6); Democratic accountability (6); and Bureaucracy quality (4).

FIGURE G9.1: GDP Per Capita Growth Rate (%)



Source: The World Bank (WDI).

FIGURE G9.2: Political Risk Rating



Source: The PRS Group.

whereas Mozambique and Burkina Faso had moderate risk, and Nigeria had low risk.[14] However, economic risk ratings have been fluctuating, especially for Yemen, Nigeria, and Mozambique (figure G9.3).

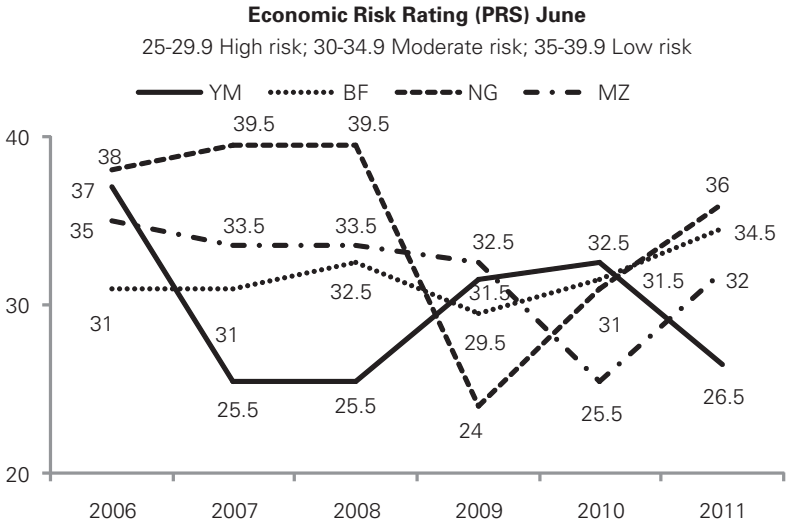
G.10 ELECTRICITY

Electricity is important for both farm and nonfarm activities. The availability of electricity enhances farm production through land preparation, fertilization, irrigation, agro-processing, and conservation, as well as nonfarm economic activities, especially value-addition processing. In many rural areas, energy needs are, at present, predominantly supplied in the form of traditional biomass fuels and human and animal labor. Figure G10.1 shows percentages of households electrified, percentages of enterprises using electricity, and percentages of enterprises using a generator for their businesses.

Although energy is not considered a basic human need, it is required to meet all of the basic needs for food and health. In this context, energy is also required in agriculture, education, information, and other infrastructures. Rehling et al. (2004) show that energy has a clear correlation with the Human Development Index, which represents this basic human need.

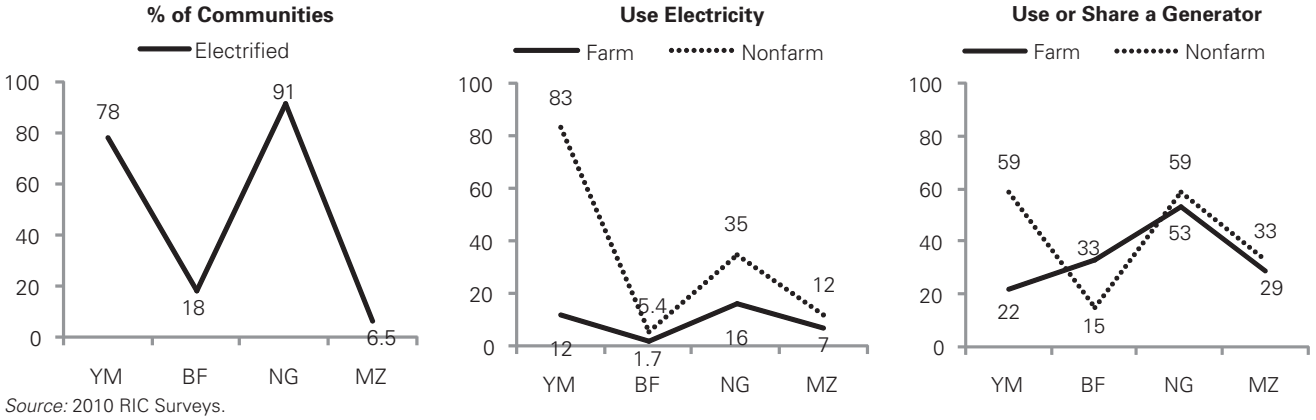
14 The PRS Group provides the ratings monthly, but June in each year was chosen to compare. Economic risk rating is calculated based on the following indicators (points): GDP per head (5); Real GDP growth (10); Annual inflation rate (10); Budget balance as a percentage of GDP; and Current account as a percentage of GDP (15).

FIGURE G9.3: Economic Risk Rating



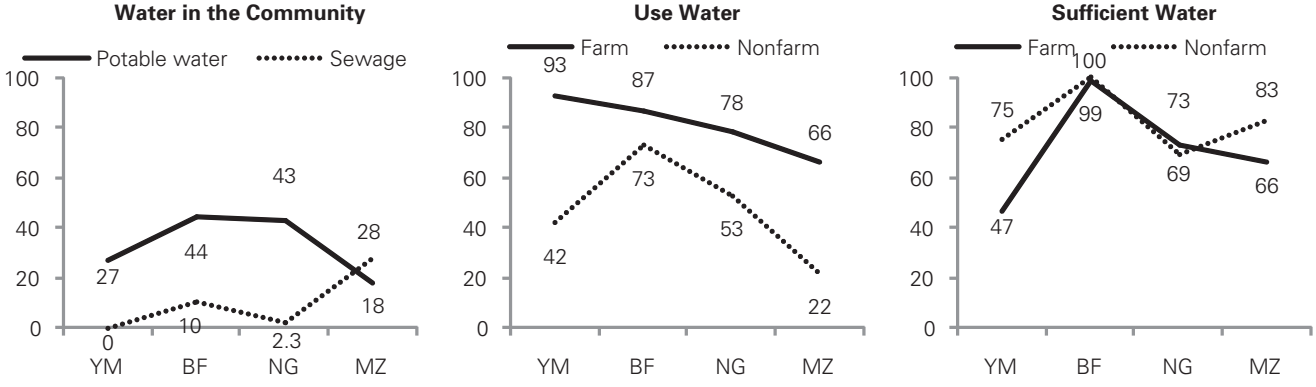
Source: The PRS Group.

FIGURE G10.1: Electrification and Use of Electricity



Source: 2010 RIC Surveys.

FIGURE G11.1: Water: Use and Sufficient Supply



Source: 2010 RIC Surveys.

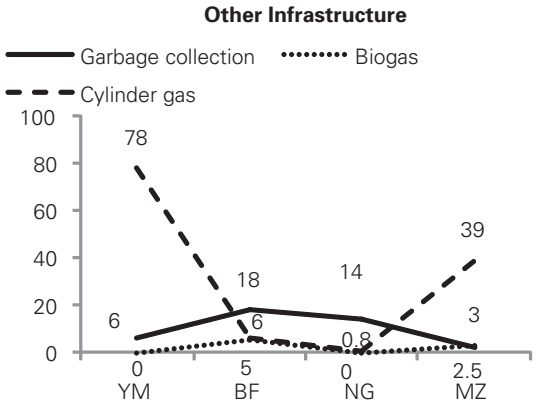
G.11 WATER AND SEWAGE SYSTEMS

Water is vital for farming activities and some nonfarm activities. In the nonfarm sector, some food processing activities require water for their business. Secured water sources are still available in less than half of the communities. Mozambique has an especially low rate of 18 percent available secured water sources. The availability of a sewage system in the community is below the level of secured water, except in Mozambique, where sewage availability is slightly better than the percentage of secured water in the communities (figure G11.1).

G.12 GARBAGE COLLECTION, BIOGAS, AND CYLINDER GAS

In addition to electricity and water, other infrastructure includes garbage collection, the use of biogas, and the use of cylinder gas. The use of biogas is quite limited, as shown in less than 5 percent of households in the communities. Cylinder gas is penetrating well in Yemen, but not in other countries. Mozambique has 39 percent cylinder gas, whereas Nigeria and Burkina Faso are 0.8 percent and 6 percent, respectively. Garbage collection is not well penetrated in the communities; the highest is 18 percent in Burkina Faso, the second is 14 percent in Nigeria, with 6 percent and 3 percent in Yemen and Mozambique, respectively (figure G12.1).

FIGURE G12.1: Garbage Collection, Biogas, and Cylinder Gas



Source: 2010 RIC Surveys.

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