

Small Enterprise Employment Growth in Rural Africa

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The potential contribution of small enterprises (fifty workers or less) in generating employment and income in rural areas of Africa has become increasingly recognized. Earlier empirical studies have indicated that they provide 20% to 45% of full-time employment and 30% to 50% of rural household income (Chuta and Liedholm; Haggblade, Hazell, and Brown). This is also reflected in the agricultural growth linkage literature (e.g., Haggblade and Hazell), where rural enterprise growth is typically a demand-driven spinoff of agricultural growth, as well as in the rural household studies that have reflected the important contribution of rural nonfarm activities to agricultural growth (Reardon, Delgado, and Matlon; Liedholm and Kilby). Yet the empirical foundation has been fragmentary, and most of the available information on small enterprises has been static.

A number of recent studies, however, have begun to shed light on the **dynamic characteristics of small enterprises in Africa**. Similar, country-wide baseline surveys, for example, were conducted between 1991 and 1993 in five countries in eastern and southern Africa: Swaziland, Botswana, Zimbabwe, Malawi, and Kenya (Liedholm and Mead 1993). These national surveys, which generated data on over 30,000 firms from a stratified random sample of enumeration areas, provide information on the magnitude of employment growth since start-up for each firm. Data on "closed" enterprises in these areas were also collected. In two other countries, Niger and Lesotho, somewhat less comprehensive baseline surveys were conducted. The present paper **explores what these surveys reveal about the dynamics of rural small enterprise employment in Africa**

and what these findings may imply about the relationship between such activities and agriculture.

Dynamic Characteristics of Small Rural Enterprises

Two general components of enterprise growth must be examined if the complex changes taking place among rural enterprises in Africa are to be accurately captured. The first is net firm creation, which itself reflects two offsetting elements: firm births and firm closures (deaths). The second is the net expansion of existing firms, which incorporates the expansion and contraction of existing firms. The vast churning arising from birth, death, expansion, and contraction of individual firms is missed if only the aggregate measures of change are examined.

The distinction between net firm creation and expansion is important, not only because it sheds light on the array of change taking place among rural small enterprises, but also because it provides important clues about the nature of the jobs being created by these firms and the forces driving the process. More specifically, employment growth can signal good or bad news. Where agriculture is prospering or where buoyant overall aggregate demand results in increasingly productive rural enterprises, employment growth signals prosperity. Yet when agriculture is languishing or population growth rate is high, an increase in employment may simply reflect the bad news that rural enterprises are acting as a sponge, soaking up excess workers in marginal activities (see Haggblade and Liedholm's model of the rural economy).

In the absence of rural wage or earnings data, the net firm creation/expansion dichotomy may provide a clue to the types of rural jobs being created. Most new start-ups (births) in rural Africa are one-person enterprises (see below), which several earlier studies have indicated are typically the least efficient size category. If

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these firms subsequently expand, adding even one or two workers, however, there is accumulating evidence that the expansion will be associated with significant increases in economic efficiency (see Liedholm and Mead for cross-section and Parker and Torres, and Parker and Steel for time series evidence). To oversimplify a complex set of relationships, jobs arising from net firm expansion are more likely to reflect demand-pull forces, while start-up jobs are more likely, on balance, to reflect supply-push forces as individuals search for activities to sustain themselves.

Following the procedures developed by Mead, net firm expansion and new starts statistics have been calculated for small enterprises in rural Africa. Table 1 reveals that only about one-quarter of the new rural jobs created in the five surveyed countries have come from a net expansion of existing firms; the remainder have come from new starts. This would indicate the relative importance of supply-push rather than demand-pull forces and the marginal nature of many of the new jobs. The variation in country performance, however, is instructive and illuminating. In two countries, Botswana and Kenya, the percentage of new jobs from expansion is relatively high, reflecting the relative importance of demand-pull forces in the two countries. It is also interesting that in both countries, the expansion percentages were higher in rural than in urban areas (Mead). With this overall perspective, it is now important to examine the components of the change in more detail.

Figures on enterprise birth rates, a key element of net firm creation, are sparse for developing countries. A recent pioneering study (Daniels) making use of enterprise panel data, however, has revealed a 16.6% annual rural small enterprise birth rate in Zimbabwe over the 1988–93 period. This rate is substantially above the 10% rate typically reported for enterprises in industrialized countries (Liedholm and Mead 1993) and suggests that the barriers confronting potential new entrepreneurs may not be unduly great. The overwhelming majority of the new firms in Zimbabwe, as elsewhere, were one-person enterprises.

Enterprise closure (death) rates are also high. Preliminary findings from Zimbabwe indicate that closure rates for the 1988–92 period were lower than the birth rates, but may have exceeded 10% per year.

From an examination of the surveys of closed enterprises in the five surveyed countries, a profile of the enterprises has begun to emerge.

Table 1. Growth Patterns of Rural Small Enterprises

| Country | Percentage of Enterprises That Grew | Percentage of Jobs Via Net Firm Expansion ^a | Percentage of Smallest Firms that Graduated ^b |
|-----------|-------------------------------------|--|--|
| Botswana | 19.1 | 28.3 | 2.4 |
| Kenya | 34.6 | 27.5 | 1.5 |
| Malawi | 22.8 | 19.7 | 0.3 |
| Swaziland | 16.8 | 22.2 | 0.4 |
| Zimbabwe | 19.6 | 18.5 | 0.7 |
| Average | 26.8 | 23.3 | 0.9 |

Sources. Data generated from baseline surveys (Liedholm and Mead 1993).

^a The remaining jobs came from new starts (see Mead for details).

^b "Smallest" refers to firms with from one to four workers, graduation occurs when the firm grows to over ten workers.

First, only about one-half of the closures of rural enterprises in these countries were caused by business failures (i.e., the enterprise was not financially or economically viable). Approximately one-quarter of the rural enterprises closed for personal reasons, such as bad health or retirement, while others closed because better options became available or because the government forced them to close.

Second, most of the closures for business failure reasons occur in the initial years of operation. Indeed, over 50% of the rural enterprise closures in Zimbabwe, Swaziland, and Kenya had taken place before the end of the third year.

Third, the findings derived from a "hazard analysis" of the closed enterprises in Swaziland and Zimbabwe provide a picture of the characteristics of enterprises that are most likely to close (McPherson). The results indicate that a rural firm was more likely to close during any given year, holding all other variables constant, if it (i) does not grow; (ii) starts large, not small; (iii) operates in the trading sector; (iv) operates out of the home; or (v) is owned and operated by a female entrepreneur. Clearly, with high rates of entry and exit, the rural enterprise scene in Africa is a rapidly changing one. To this churning must be added the expansion and contraction of the already existing enterprises.

One of the most striking findings to emerge from the baseline surveys is the high overall growth rates exhibited by the existing small enterprises located in the rural areas of Africa. If the absolute job growth figures per existing

firm presented in table 2 are converted into their compound growth rate equivalents, the average annual compound employment growth rate since start-up, in all seven countries, amounts to 6.9% in the rural enumeration areas (usually with fewer than 2,500 inhabitants) and 8.8% in the rural towns (usually with from 2,500 to 20,000 inhabitants).

These rapid growth rates are even more impressive, however, when it is realized that the vast majority of small enterprises in rural areas did not grow at all. In the surveyed countries overall, only slightly more than one-quarter of all new enterprises expanded, while about two-thirds remained the same size (see table 1). For rural small enterprises as a whole, growth is the exception rather than the rule, and expansion growth is being propelled by a minority of the enterprises.

Among the rural enterprises that did grow in the five countries, over 85% started very small (one to four workers) and added less than five workers each. A minority of the rural firms that started very small, however, were in operation at the time of the survey with over ten workers (see table 1). Although overall 0.9% of the very small enterprises that grew did "graduate" (grow to more than ten workers), these firms contributed over 20% of the new expansion jobs. The role of microenterprises as a seedbed for larger firms in the future is an important one that must not be overlooked.

What are the characteristics or determinants of the growth of existing small enterprises in rural Africa? Economic theory in this area is somewhat sparse. Jovanovic's "learning" model, however, posits that both the initial size and age of the firm should be inversely related to the growth of the firm. An intriguing hypothesis about another entrepreneurial characteristic, gender, has been formulated by Downing and Daniels, who posit that female entrepreneurs in Africa are more risk-averse and thus less likely to grow compared to their male counterparts. Moreover, as one moves beyond the "homogeneous product" assumptions of the "learning" and other models, variables that reflect underlying demand and supply conditions, such as sector, location, and even country could be expected to affect enterprise growth rates.

The relationship between the growth of existing rural enterprises and the variables discussed above has been analyzed by estimating an ordinary least squares regression equation from the baseline data collected in five countries: Botswana, Kenya, Lesotho, Swaziland, and Zimbabwe. Following McPherson, a linear

Table 2. Annual Change in Number of Jobs per Enterprise

| Country | Annual Change in Number of Workers Per Enterprise Since Start-up | | |
|-----------|--|------------------|-------|
| | Rural Enumeration Areas | Secondary Towns* | Urban |
| Botswana | 0.102 | 0.141 | 0.262 |
| Kenya | 0.265 | 0.202 | 0.296 |
| Lesotho | 0.042 | 0.174 | 0.384 |
| Malawi | 0.101 | 0.195 | 0.231 |
| Niger | 0.100 | 0.069 | 0.123 |
| Swaziland | 0.043 | 0.096 | 0.177 |
| Zimbabwe | 0.061 | 0.095 | 0.111 |
| Average | 0.102 | 0.139 | 0.226 |

Source: Computed from baseline survey data, see Liedholm and Mead 1993.

Note: Average annual growth in jobs since start up is calculated as: (Current employment - Initial employment) / Firm age)

* Usually includes localities with 2,500 to 20,000 inhabitants

Table 3. Growth Regression Results

| Variable | Coefficient | t-Statistic |
|--|-------------|-------------|
| <i>Firm Age and Size</i> | | |
| Firm Age | - 0.00713 | - 9.984 |
| Initial Size | - 0.05793 | - 18.822 |
| <i>Sector Dummies</i> <i>Base: Trading</i> | | |
| Manufacturing | + 0.02955 | 1.753 |
| Services | + 0.04957 | 4.485 |
| <i>Strata Dummies</i> <i>Base: Rural Towns</i> | | |
| Rural Villages | + 0.00253 | 0.162 |
| <i>Locational Dummies</i> <i>Base: Home</i> | | |
| Traditional Mkt. | - 0.01681 | - 0.767 |
| Commercial Dist. | + 0.10807 | 4.820 |
| Roadside | + 0.15243 | 5.336 |
| Mobile | - 0.00614 | - 0.244 |
| <i>Country Dummies</i> <i>Base: Zimbabwe</i> | | |
| Botswana | + 0.04957 | 1.672 |
| Kenya | + 0.03473 | 1.607 |
| Lesotho | + 0.01939 | 0.640 |
| Malawi | + 0.01271 | 0.639 |
| Swaziland | + 0.03066 | 1.274 |
| <i>Proprietor Gender</i> <i>Base: Female</i> | | |
| Male | + 0.10833 | 7.286 |
| Constant Term | + 0.15582 | 7.313 |

Regression statistics: n = 7762, F = 31.9, R² = 0.176

functional form was used and, except for age and initial size, all independent variables were entered as dummy variables utilizing the base categories specified in table 3. The growth measure used in the analysis was an absolute

one—the annual jobs generated per enterprise since start-up.

Regression results are summarized in table 3. One important finding is that both the initial size and age variables are significant and are inversely related to growth, as posited by Jovanovic's learning theory. It is thus the youngest along with the smallest firms at start-up in rural Africa—all other variables held constant—that generate more expansion jobs per firm, a powerful finding for those concerned with employment creation. Another significant finding is the evidence that, after controlling for the other variables, male-headed enterprises are more likely to grow more rapidly than are those run by females, providing support for Downing and Daniels. The nonagricultural sector in which an enterprise operates also helps explain growth. Specifically, rural enterprises in the service and manufacturing sectors are more likely to experience higher growth rates than are those in the reference category, trading. Location also helps explain growth, with rural enterprises operating in commercial districts or at the roadside likely to grow more rapidly than those operating out of the home; yet, perhaps somewhat surprisingly, enterprises in the rural towns were not more likely to grow than were their counterparts in rural villages. Finally, country proved to be a variable that helps explain growth. Specifically, enterprises in Botswana and Kenya were likely to grow more rapidly than those in the base country, Zimbabwe.

Role of Agriculture and Rural Enterprise Performance

To what degree has agriculture played a role in explaining the performance of rural enterprises in the five countries surveyed? Although a paucity of both time-series and cross-section data preclude rigorous statistical analysis, some indicative insights may be gleaned.

The overall performance of rural enterprises stands out in two countries, Botswana and Kenya. In these two countries, for example, the percentage of job growth coming from firm expansion was significantly higher than in the others. Moreover, a greater percentage of the expanding rural enterprises in these two countries "graduated" into the ten and above worker size category. Finally, in the statistical analysis of the determinants of existing firm growth, after controlling for the effects of the other independent variables, only the country dummies

for Kenya and Botswana differed statistically (positively) from Zimbabwe.

What might account for this differential country performance? The overall macroeconomic conditions, both in terms of level and growth of per-capita income during the decade of the 1980s, might importantly explain the relatively successful rural enterprise performance in Botswana, whose per-capita income (\$2,790 in 1992) and GNP per capita growth (6.1% per year from 1980–92) were exceptional within Africa. Yet they do not explain what happened in Kenya, whose overall macro indicators (1992 GNP per-capita of \$310 and annual GNP per-capita growth of +0.2%) more closely resembled those of Malawi (1992 GNP per capita of \$210 and annual GNP per capita growth of –0.1%).

The overall performance of the agricultural sectors of these economies during the period, however, would be expected to be a crucial macro determinant of rural enterprise performance. An examination of the published figures (World Bank) on the annual growth of food production per capita from 1980 until 1991 reveals that Kenya was the only country among the five to experience positive growth. Food production per capita increased at an annual rate of 0.5% and the demand-driven spin-off from it no doubt served to propel Kenya's rural enterprise sector. During the same period, food production per capita was negative in Malawi (–2.7%), Swaziland (–0.9%), Zimbabwe (–1.0%), and even Botswana (–3.7%). Although agriculture was clearly not central in explaining rural enterprise performance in Botswana, where agriculture was less than 5% of GNP and other sources of demand predominated, its role in the other countries was clearly important. This appears to be particularly true in understanding the desultory performance of rural enterprises in Swaziland; a poor agricultural performance was apparently sufficient to outweigh a buoyant overall economic performance (1992 per capita GNP of \$1,090 and annual GNP per capita growth from 1980–92 of +1.61%).

These more macro agricultural economic indicators, however, still mask how the character and composition of agricultural growth affect the performance of rural enterprises. How does one explain, for example, demand-driven expansion growth, albeit sometimes rather small, that is taking place in all the surveyed countries, even in those with poor overall agricultural performances? One possible explanation is that some agricultural growth is taking place in certain areas or among farms of certain sizes. An illuminating example comes from a recent

study that has analyzed how Malawi's decision in 1990 to permit smallholders to grow the major export crop, burley tobacco, might have affected rural enterprises (McPherson and Henry). The study compared areas that now have large amounts of smallholder tobacco with closely paired control areas that had little or no smallholder production. The results show that existing enterprises in the smallholder burley-growing areas grew at an average annual rate of 8.8% since start-up, a rate that was statistically significantly higher than the 5.9% rate experienced in the control areas. Furthermore, the percentage of rural enterprise employment growth that came from enterprise expansion rather than from new start-ups was higher in the smallholder burley areas. The study also revealed that rural enterprise wage rates in the smallholder burley areas grew at an annual rate of 34%, while those in the control areas grew at only 22%. Finally, there is evidence of a more rapid sectoral shift in the smallholder burley area toward the activities with higher productivity and profits, such as food and beverage retailing. These results are consistent with a demand-driven pattern of enterprise growth emanating from a more level playing field for smallholders (Haggblade and Liedholm).

Conclusions

Small enterprises form a surprisingly dynamic part of rural African economies. New firms are being created every year at a high rate, but a high percentage of them disappear within the first three years. The annual growth rate of surviving rural enterprises is high, but this expansion is propelled by a minority of the enterprises. It is the jobs created through enterprise expansion, however, that are more likely to reflect increasing efficiency and demand-pull forces in the economy. These expanding firms, our analysis indicates, are more likely to be younger, start smaller, and to be operated out of the home, in nontrade sectors, by males. In the African countries we reviewed, however, the majority of new jobs came not from demand-pulled expansion, but from new starts.

Agriculture has a crucial role to play in rural enterprise employment generation in most African countries. In countries where agriculture forms a large percentage of GDP (except Botswana), the pattern of rural enterprise development closely mirrors the overall performance of agriculture. Given the desultory overall performance of the agricultural sector in Af-

rican countries, for example, it is not surprising that the majority of new enterprise jobs in rural areas have come from new starts rather than from demand-pulled expansion. The Malawi tobacco study reminds us, however, that the macro figures can frequently mask how the character and composition of the agricultural growth affect the performance of rural enterprises. More detailed research of this type is needed if the scope and nature of the interrelationships between agriculture and rural enterprises are to be fully illuminated.

What are the implications of these findings for policy makers? At the project level, it is important to recognize that "clients" of this assistance, the rural enterprises, are a heterogeneous group with different opportunities and needs that vary over the life cycle of the enterprise. The constraints and opportunities faced by rural enterprises at start-up, for example, are quite different from those faced by existing enterprises seeking to expand (Liedholm and Mead 1993); project assistance must be tailored to reflect such differences. At the policy level, an important lesson from the findings is that policies aimed at enhancing agriculture also provide the fuel for a demand-pulled expansion of existing enterprises, the type of rural enterprise employment growth that reflects increased prosperity.

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