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Issues of Microenterprise and Agricultural Growth:
Do Opportunities Exist Through Forward and Backward Linkages?

By

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Executive Summary

Micro- and small enterprises (MSEs) are important in urban and rural areas in terms of firm numbers, employment, income, and household consumption Microenterprise employment is growing rapidly An estimated 150,000 people enter the labor force of developing countries daily, most will be employed in microenterprises as owners or employees Since this employment frequently complements other employment activities of the household, it contributes to increased family income Non-farm income frequently accounts for 30 to 50 percent of total income of farm households There appear to be numerous opportunities for microenterprises to become even more important economically, especially in rural areas The opportunities are large in rural areas because agriculture accounts for a very high share of output, employment, and income in developing countries As much as sixty percent of all MSEs are located in rural areas These opportunities for microenterprises in rural areas have been overlooked to a large extent by development assistance agencies because most effort has concentrated on MSEs in urban areas

The objective of USAID support for rural economic growth is to increase the incomes of rural poor people in a manner that is sustainable economically, environmentally, and institutionally A significant part of the challenge is how to design policies and programs that maximize the contribution of MSEs to employment and poverty alleviation in rural areas The purpose of the present paper is to summarize the current research and expert thinking on issues of the linkages between MSEs and agriculture for the G/EG/MD Office

What is the role of microenterprises in agricultural growth and development? Do opportunities exist through forward and backward linkages? The role of MSEs in agricultural development can be defined by the linkages between the firms and farmers Agricultural growth leads the linkage process causing the MSE linkages to arise from agriculture The linkages involve the sale and purchase of goods and services to and from the agricultural sector Some common types of linkages between microenterprises and agriculture are (1) manufacturing (food processing, textiles, chemicals, metals), (2) commerce (product markets, farm input and consumer goods markets), and (3) services (construction, transport, storage, finance, and repair)

Many countries employ two strategies to promote agricultural growth and to strengthen the linkages between microenterprises and agricultural growth The strategies are (1) Green Revolution technology-led agricultural growth, and (2) demand-led agricultural growth Research results of farm and non-farm linkages show that a fast-growing agriculture may generate powerful forward and backward linkages

Comprehension of the scope of the MSE sector begins with an understanding of characteristics common to MSE firms servicing agriculture in developing countries These characteristics are (1) firms are predominately family-owned and operated, (2) the majority of firms are one-person activities, (3) family labor supplies most, if not all, of their labor demand, (4) as much as sixty percent, or more, of all MSEs are located in rural areas, (5) ninety-five percent of all MSEs are

engaged in trade (50%) and light manufacturing (45%) activities, (6) high birth rate and death rate for MSE firms, (7) family welfare is directly linked to microenterprise success, (8) the scale of MSE operations is very small, (9) the level of income of local populations and consequently of the microentrepreneurs is extremely low, and (10) a high percentage of women entrepreneurs and employees

If agriculture leads economic growth, MSEs can be integrated successfully through many forward and backward linkages At the same time there are many constraints to successful agriculture and MSE development The key constraints are grouped into the following six categories (1) macroeconomic policies, (2) legal and administrative policies, (3) financial resources, (4) market characteristics, (5) human resources, and (6) agricultural productivity

Current research identifies the following specific strategies to promote growth of MSEs and agriculture (1) developing countries must achieve the correct macroeconomic policy environment to promote growth of agriculture and MSEs, (2) build adequate infrastructure to speed the growth of agriculture and MSEs, (3) appropriate technology must be developed for agriculture to lead economic growth and strengthen linkages with MSEs, (4) efforts to promote MSE development should focus heavily on businesses in rural areas, (5) programs must promote growth and survival of existing MSEs rather than the start-up of new microenterprises, (6) programs must be flexible enough to work with several levels of microenterprises, without imposing unrealistic restrictions on any individual level, (7) greater involvement of women in MSE production, (8) reform of local labor-market regulations, especially in certain African countries, is necessary to reflect the realities of national market forces, (9) promotion of greater linkages between formal/semi-formal financial institutions and MSEs, especially in rural areas, (10) promote the production and marketing of non-traditional export crops, (11) greater dissemination of technical/practical information and market information discovered through research efforts, (12) promotion of partnering and contracting arrangements among agribusinesses, MSEs and farm firms, and (13) train MSEs in marketing, management, and finance principles using small business associations

Several institutional forms can facilitate implementation of these strategies promoting growth of MSEs related to agriculture Some alternatives are business partnering and contracting, input and output marketing firms, non-government organizations (foreign and host country), small business associations, development banks and/or commercial banks, credit unions and cooperatives, and host country government agencies The literature reviewed indicates that no one institutional form is clearly superior to another in terms of achieving success with MSEs Examples of program success and failure with MSEs can be found for each of the above institutional forms The most important elements of success include institutions that reach a large number of clients, that have a viable technology, that use appropriate pricing of the services rendered, that have motivated and competent entrepreneurs, and that achieve profitability or financial sustainability

Issues of Microenterprise and Agricultural Growth
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By

Donald W Larson and Thomas K Shaw[1 2]

I Introduction

Background and Definition of Microenterprise

Micro- and small enterprises (MSEs) are increasingly recognized as being very important in many developing countries New entrants to the labor force resulting from rapid population growth have surpassed the ability of the formal sector to create new jobs Employment in microenterprises has emerged as an alternative to industrial and government sector employment At a time when government policy is changing to promote increased private sector activity and reduced government intervention and ownership in the economy, microenterprises can be a valuable part of the private sector initiatives

In the present paper the following definitions of firm size will be used (Liedholm, 1990)

a) **Microenterprises** firms which employ 9 or fewer workers but often indicates the majority of firms at the lower end of the size spectrum, i e 1-2 workers,

b) **Small Enterprises** firms which employ 10 to 49 workers,

c) **Medium to Large Enterprises** firms which employ 50 or more workers

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[2] The authors acknowledge the valuable comments received from reviewers and workshop participants on an earlier draft of the present paper

Microenterprise activities are commonly defined to exclude direct farm-firm production activities of small farmers, however, the farm household value added and non-farm activities could be microenterprises In fact, the farm household value added and non-farm activity in rural areas of developing countries are generally performed by MSEs Even farm-firm production activities could be included in a broader definition of microenterprises There does not appear to be any substantive reason for excluding small farm-firm production activities

Microenterprises are important in urban and rural areas in terms of firm numbers, employment, income, and household consumption Microenterprise employment is growing rapidly An estimated 150,000 people enter the labor force of developing countries daily, most will be employed in microenterprises as owners or employees (Brugger and Rajapatirana, 1995) Since this employment frequently complements other employment activities of the household, it contributes to increased family income Non-farm income frequently accounts for 30 to 50 percent of total income of farm households (Riordan and Buckner, 1993) There appear to be numerous opportunities for microenterprises to become even more important economically, especially in rural areas The opportunities are large in rural areas because agriculture accounts for a very high share of output, employment, and income in developing countries As much as sixty percent of all MSEs are located in rural areas (Liedholm, 1990) These opportunities for microenterprises in rural areas have been overlooked to a large extent by development assistance agencies because most effort has concentrated on MSEs in urban areas

The economic difficulties of many countries in the 1980s and 1990s have forced a fundamental change in the strategies, policies and programs adopted by most governments In the past, emphasis has been on policies and programs to support the larger farms, industries, parastatal organizations, and state intervention Today, policy and program emphasis has changed to support competitive markets, private sector initiatives, privatization of parastatals, increased self-reliance and reduced government participation in the economy

The objective of USAID support for rural economic growth is to increase the incomes of rural poor people in a manner that is sustainable economically, environmentally, and institutionally (USAID, 1994b) A significant part of the challenge is how to design policies and programs that maximize the contribution of microenterprises to employment and poverty alleviation in rural areas What is the role of microenterprises in agricultural growth and development? Do opportunities exist through forward and backward linkages?

The purpose of the present paper is to summarize the current research and expert thinking on issues of the linkages between microenterprise and agriculture for the G/EG/MD Office The objectives are threefold (1) to provide an overview of the characteristics and magnitude of the backward and forward linkages between microenterprises and agriculture in developing countries, (2) to facilitate discussion on what USAID might do to promote growth of microenterprises related to agro-enterprises, and (3) to trace out the operational ramifications of the emphases agreed upon, that is, how USAID might go about promoting growth of microenterprises related to agro-enterprises

II Overview of the Backward and Forward Linkages Between MSEs and Agriculture in Developing Countries.

Economic growth that increases per-capita incomes leads to increases in the demand for goods and services As agricultural incomes increase, the demand for goods and services in the form of production inputs and consumer goods grows Farmers buy increasing amounts of modern farm inputs such as seed, fertilizer, chemicals, and equipment The demand for transport, storage and financial services also increases In addition, as rural household incomes increase, the demand for food and consumer goods increases The type and quantity of food changes to include more variety and higher quality foods This usually leads to an increase in the consumption of livestock and meat products and fruits and vegetables Farm households will also increase purchases of basic consumer goods such as household items, clothing and transport The increased purchases of these goods from the non-agriculture sector leads to growth of MSE firms and strengthens the linkages between the farm and non-farm sectors The effects of this growth can lead to significant multiplier effects throughout the local, regional, and national economies As will be shown below, research has found that resource endowments, economic policy, technology, infrastructure, and institutions affect the strength and magnitude of these linkages

The role of microenterprises in agricultural development can be defined by the linkages between the firms and farmers Agricultural growth leads the linkage process causing the MSE linkages to arise from agriculture The linkages involve the sale and purchase of goods and services to and from the agricultural sector If purchase and sale transactions are conducted more efficiently (lower transaction costs), microenterprises can accelerate growth of the agricultural sector If these transactions are conducted inefficiently, microenterprises may retard growth of the agricultural sector Some common types of linkages between microenterprises and agriculture are

- Manufacturing (food processing, textiles, chemicals, metals),
- Commerce (product markets, farm input and consumer goods markets), and
- Services (construction, transport, storage, finance, and repair)

Most of the backward linkages between MSEs and agriculture deal with input supply and the services that affect the supply and servicing of the inputs The main areas of backward linkages are illustrated in Table 1 An important element of these linkages is the source origin of those inputs, i e whether they are manufactured or produced locally, or imported Since the nature of the input sourcing conditions the effect of the MSE sector's development efforts, one must consider both the long-term and short-term implications of import sourcing

TABLE 1 - BACKWARD LINKAGES BETWEEN MSEs AND AGRICULTURE
Production and importation of planting/processing materials and equipment,
Production and importation of agricultural chemicals (fungicide, pesticide, fertilizer),
Production and importation of other inputs, and
Increased demand for services linked to input procurement (timely delivery, cost effective pricing, maintenance, technical assistance for input application or utilization, and financing)

Source USAID, 1994a

TABLE 2 - FORWARD LINKAGES BETWEEN MSEs AND AGRICULTURE
Importation and/or production of packaging materials,
Development of packaging services,
Value-added processing,
Marketing (of intermediate and finished products),
Export operations (regionally and internationally), and
Development of improved transportation services and the infrastructures needed to support them

Source USAID, 1994a

versus local production of raw and intermediate inputs The larger the portion of inputs that can be produced locally, the greater the multiplier effect from an increase in exports If a significant portion of the inputs can be produced cost effectively, given the same level or higher quality than imports, this will have a ripple effect throughout the economy and lead to greater employment and economic growth

A similar evaluation of forward linkages indicates the main areas of concentration illustrated in Table 2 Most forward linkages between agriculture and MSEs deal with supplies and services adding value to farm products for end use by local consumers and for export markets

Many countries employ two strategies to promote agricultural growth and to strengthen the linkages between microenterprises and agricultural growth The strategies are (1) Green Revolution technology-led agricultural growth, and (2) demand-led agricultural growth Green Revolution technology-led agricultural growth is the exogenous force driving transformation of the agricultural and non-agricultural economies of several Asian, African, and Latin American countries, including Bangladesh, India, Indonesia, The Philippines, Thailand, Zimbabwe, Brazil, and Mexico The development and adoption of highly productive new seed varieties, plus modern inputs on irrigated land, mainly rice and wheat, has been the Green Revolution technology engine driving agricultural growth in the farm and non-farm sectors

Research results of farm and non-farm linkages show that a fast-growing agriculture may generate powerful forward and backward linkages (Haggblade and Hazell, 1989) Cross-country data from Africa, Asia, and Latin America indicate a high correlation between agricultural income and size of the non-farm economy A growing agriculture leads to strong multiplier effects in the non-farm economy that creates many opportunities for microenterprises [3] Time series results for Japan and Taiwan, but not for Korea, also show strong linkages Most analysts explain that the weak linkages in Korea are caused by a neglect of agriculture and consequently slower growth rates, less rural infrastructure investment, and a more concentrated urban industrial policy

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[3] Bangladesh's USAID agribusiness program focused heavily on increasing farm productivity by privatizing fertilizer distribution A fertilizer marketing parastatal was privatized and price and margin controls were eliminated The program key components were fertilizer imports, a credit fund to private dealers through commercial banks, construction of handling facilities and technical assistance and training "Dealers and retailers have emerged in virtually everyone of the 65 000 villages in Bangladesh There are 1,271 private distributors 10 000 dealers and 100,000 sub-dealers (individual retailers) In addition, each distributor owned two warehouses and rented two more, and more than half purchased their own transport facilities" (Kumar, 1995, p 18) Cameroon's USAID Fertilizer Subsector Reform Program objective was the timely provision of fertilizer for food and export crops at minimal cost to farmers and the government The program replaced a subsidized parastatal distribution system with a fully privatized, unsubsidized system The components consisted of technical assistance and a revolving credit fund Cameroon now has a fully privatized fertilizer distribution system that has significantly reduced the user cost of fertilizer without cost to the government (Kumar, 1995)

To estimate the linkages, Haggblade and Hazell develop an input/output model for Asia, Africa, and Latin America with different farm sizes and different farm technologies Technological advance generates substantial increases in rural income in addition to the increase in agricultural earnings Each $1 00 of value added in agriculture leads to non-farm income gains to households of 25 to 75 cents depending upon the technology adopted and the size of farm adopting the technology

Because consumption linkages account for over 80 percent of the income gains, agricultural technology affecting income distribution is most important Biological technology offers more income gains than mechanical technology, and middle size farms appear to generate more non-farm income gains than small or large farms Africa has smaller multipliers than in Asia or Latin America because it has less infrastructure, lower population densities, and lower incomes and consumption Backward linkages in Africa are smaller than Asia because of lower input use and less capacity to produce inputs locally African forward linkages tend to be bigger than backward linkages because food processing represents a significant portion of rural industries

A study modeling the impact of Green Revolution technology and population growth on the non-farm economy in a stylized Asian rice-growing region found that increasing wage rates lead to higher costs of goods and services This cost increase dampens the growth linkage effects (Haggblade and Liedholm, 1991) In this economy they assume (based on Malaysia and others) that (1) food grains account for 25 percent of both income and employment, (2) new agricultural technology increases output by 80 percent among adopting farmers and increases their food grain income by 50 percent, (3) farmers accounting for 50 percent of cropped area adopt the improved technology, and (4) labor-using technology increases labor demand in food grains by 20 percent (low) to 40 percent (high), while labor-saving technology reduces food-grain labor demand by 20 percent Haggblade and Liedholm found that rising agricultural wage rates dampen non-farm income growth, because more labor is available only at higher wage rates The introduction of biological technologies in farming caused real wage rates to increase in the Punjab of India, Thailand, and Malaysia Similar new farm technology introduced in Indonesia, Philippines and Mexico caused real wages to decrease Real wages have frequently declined in countries that introduced mechanical innovations or in countries with a stagnant agriculture such as most of Sub-Saharan Africa They found that population growth of 2 8 percent per year will offset the wage and income gains from a typical new food grain technology in four years

To the extent that small-farm growth strategies are more likely to employ labor-intensive technological change, the labor market effects suggest that a small-farmer strategy may lower income growth in return for greater equity and employment Through the labor market effects of rising wage rates, agricultural growth affects the size and composition of non-farm growth Non-farm growth occurs in higher-value services and trade, and actually declines in low-productivity non-farm activities such as labor-intensive manufacturing, commonly female-dominated cottage industries

In the second growth strategy, demand is the engine leading agricultural growth Exogenous growth in demand, usually export demand, is leading the transformation of the agricultural and

non-agricultural economy of some countries in Asia, Africa, and Latin America In several instances this involves the development of non-traditional agricultural exports (NTAE) Some South and Central American countries have discovered U S export markets with the assistance of a USAID Latin American and Caribbean Technology (LAC TECH) project, the Market Access and Technology Project (MTAP), and the Promotion of Export Agriculture (PROEXAG) and subsequently the Export Industry Technology Support Project (EXITOS) The NTAEs include melons from Honduras, snow peas from Guatemala, organic coffee from El Salvador, lettuce and fruits from Ecuador, flowers from Bolivia and cucumbers and eggplant and onions from Nicaragua (USAID, 1994a and Brower, 1995) [4] Numerous NTAE export growers and companies continue to expand exports after project completion

The story of non-traditional agricultural exports from some countries is an excellent example of the common ingredients of a successful strategy Nontraditional exports or high-value foods (HVF) usually include products such as fresh and processed fruits and vegetables, meats, fish, dairy products and vegetable oils Changing consumer demand in the importing countries has been the engine driving the growth of these developing country exports During the 1980s, the value of traditional exports such as cereals, sugar, and tropical- beverage crops actually declined while the value of trade in HVF increased 4 percent annually for items such as fresh vegetables and fresh meat to over 11 percent annually for dairy products and shellfish Exports of HVF by middle and low-income countries totaled $52 5 billion in 1990 compared to traditional exports of only $26 3 billion for coffee, cocoa, tea, sugar, cotton, and tobacco (Jaffee, 1993)

The successes are examined in a World Bank study of 15 commodity-system success stories from 9 countries (Jaffee, 1993) The 15 cases are (1) Mexican fresh tomatoes, (2) Kenyan specialty and 'off-season' vegetables, (3) Israeli fresh citrus, (4 to 6) Chilean temperate fruit, processed tomatoes, and fish products, (7-8) Brazilian frozen concentrated orange juice and soybean products, (9-10) Argentine beef and soybean products, (11-13) Thai poultry, tuna, and shrimp, (14) Chinese shrimp, and (15) Taiwanese high-value processed foods

These successes exhibit several lessons valuable for donor agricultural export marketing technical assistance projects Each commodity system faced very favorable international market

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[4] A successful project is the USAID Ecuador project that focused on nontraditional agricultural exports of cut flowers, fresh fruits and vegetables, specialty crops, and processed fruits and vegetables In phase one , the project assisted on market information, export policies, promotions, product selection, production technology, and marketing In phase two the project assisted on horticultural research, provision of plants and seeds, information about U S phytosanitary standards, the global marketplace, and postharvest handling and quality grading The program was run by two private sector organizations-the Federation of Ecuadorean Exporters (FEDEXPOR) and the National Association of Business Owners (ANDE) Non-traditional agricultural exports rose from $ 1 million in the 1980s to over $ 60 million in 1993 A Guatemala project assisted small farmer marketing by establishing regional buying centers with cooling and grading facilities for horticultural crops The centers were managed by a cooperative The cooperative was also assisted in production, processing technology, marketing and general management Small farmer membership (average plot of 0 6 hectares) grew from about 150 families in one town to 2,000 families in eight towns (Kumar, 1995)

conditions during the 'take-off' stage and for many subsequent years Most faced favorable macroeconomic policies at the time of their initial 'take-off' Several common ingredients needed for a competitive response to a favorable market were (a) favorable natural endowments, (b) strong human capital, (c) well-developed physical infrastructure, and (d) the capacity to effectively develop and/or adapt imported production and processing technology

Another common factor was the prior or parallel development of complementary industries that lowered input or investment costs or created additional demand In nearly all cases, the private sector played a dominant, if not exclusive role in commercial production, processing, and trading activities In the vast majority of cases, governments provided facilities and services that have either public-good properties, give rise to externalities, or exhibit large economies of scale Developing countries can compete in many export markets for a wide range of high-value products Export diversification often depends upon prior or parallel domestic market development The study concluded that government interventions should be generally geared toward encouraging competitive and flexible export marketing structures and not provide favorable treatment to some (e g monopolies) and exclude others (Jaffee, 1993, pp 57-60)

Linkages to the non-farm sector, to domestic markets, and to international markets are strong from these export products, but estimates of the multipliers have not been published for these cases Results suggest that the opportunities for microenterprise linkages appear strongest in the services to firms in the export business and in the local and regional markets

A recent study of demand-leading growth linkages in Sub-saharan Africa found that 'ex ante' anticipated rural growth linkages are much higher than previously thought (Delgado et al 1994) Agricultural growth linkages were studied for Burkina Faso, Niger, Senegal, Zambia and Zimbabwe Results from the input/output model indicate that additions to income from adding a dollar of new (exogenous) farm income increase total income by $2 75 in Burkina Faso, $2 48 in Zambia, $1 97 in Senegal, and $1 96 in Niger These are much higher than previous estimates because the increments to new spending coming from consumption and intermediate inputs, on-farm and non-farm, are assumed to be non-tradables in the area studied New demand for these items is met by increased local production and cannot be supplied by imports Under-used resources are attracted into local production to meet the new consumer and intermediate demands

Delgado et al conclude that only growth in agricultural exports (tradable goods sector) provides the widespread and recurring income source needed for a sustained pattern of development Comparative advantage will determine what those commodities might be in a particular country The authors speculate that traditional exports such as peanuts, cotton, livestock, and some non-traditional exports such as cowpeas, onions, poultry, and vegetables can play this role They also conclude that growth of consumer spending was most strongly linked to growth of services, non-tradable farm commodities (e g dairy, fruits, vegetables, and some starches) and local non-farm goods More attention needs to be given to increasing supply responsiveness of major non-tradable rural consumption items, including local starchy staples, livestock products and processed foods Without supply responsiveness for the non-tradables that people want to buy as

incomes increase, the income gains from structural adjustment and increased exports could be choked off by rising wages Resource endowments, policies, technologies, institutions and infrastructure differences affect the results among different regions and/or countries For example, maximizing income growth in rural Africa requires a strategic approach that eliminates the main problems of these countries, which are remote, poor, and weakly linked to regional and global markets

III Common Characteristics of Micro- and Small Enterprises Serving Agriculture

Comprehension of the scope and magnitude of the MSE sector begins with an understanding of characteristics common to MSE firms servicing agriculture in developing countries in Africa, Asia, Latin America, and the Caribbean regions These characteristics are

- **Firms are predominately family-owned and operated** Examples are family farms, blacksmith shops, grinding mills, clothing manufacturers, furniture/woodworking firms, food processing activities (peanut or palm oil production), and small scale food and drink businesses (restaurants, grocery stores, etc)

- **The majority of firms are one-person activities** A study of six countries in Southern and Eastern Africa showed that one-person activities make up 60% or more of the MSEs in those countries (Mead, 1994) At the same time other studies have indicated that one-person activities are the least efficient size firms because no specialization of labor is possible (Liedholm and Mead, 1987)

- **Family labor supplies most, if not all, of their labor demand** Even firms on the high end of the microenterprise sector, i e those employing an average of 6-10 workers use predominately family labor

- **As much as sixty percent, or more, of all MSEs are located in rural areas** (Liedholm, 1990, Parker, 1993) [5]

- **Ninety-five percent of all micro- and small enterprises are engaged in trade (50%) and light manufacturing (45%) activities** The remaining five percent are engaged in transport, construction, and other services (Mead, 1994)

- **High birth rate and death rate for MSE firms** Micro- and small enterprise birth rates have been estimated as high as 20% per year in Africa (Mead, 1994) At the same time

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[5] In most articles reviewed the U N definition of rural i e localities with fewer than twenty thousand inhabitants, was used, except for one study in Kenya where towns with populations fewer than 2,000 and all land areas without urban centers were considered rural Liedholm (1990) states that using a more conservative definition than the one used by the U N will not change markedly any of his conclusions Study results, regardless of their definition of rural, are therefore considered similarly in this paper

Liedholm (1990) found MSE firms disappear at rates of 10% or more per year Business failure is frequently due to problems of markets, management and/or finance

- **Family welfare is directly linked to microenterprise success** This is true because of the family composition of the labor force and the subsequent need to provide for the family through net income generated by the business Non-farm activities account for 30-50% of farm household income (Haggblade and Liedholm, 1991)

- **The scale of microenterprise operations is very small** Operators are restricted both financially and by the limited size of the market

- **Most developing countries in which microenterprises function have at best inefficient and at worst non-existent land titling procedures** This restricts the microentrepreneurs' ability to provide collateral for borrowing from the formal sector and increases the MSE's dependence on informal sources of credit (Adams and Fitchett, 1992)

- **The level of income (i e poverty) of local populations and consequently of the microentrepreneurs is extremely low** The low income limits the microenterprise firm's ability to accumulate assets and/or develop "creditworthiness" through borrowing and repaying promptly, and thereby preventing adequate firm capitalization

- **A high percentage of women entrepreneurs and employees** This is especially common with food processing and transformation activities which are done at home Parker (1994) found that women made up 40% of the labor for MSEs in Kenya In fact, women made up 82% of the labor force in women-owned enterprises and 14% in men-owned enterprises In Latin America, women account for a high percentage of MSEs in trade and commerce

It is also important to understand how the MSE firms contribute to employment creation in their countries An understanding of their size and geographical distribution limitations can provide a better understanding of which intervention strategies will be most effective Although the majority of the MSE firms are very small, the amount of employment generated by these firms, per 1,000 of population can be quite high, from 71 in Botswana to 127 in Zimbabwe (Liedholm and Mead, 1987) Furthermore, Liedholm (1990) found that in the six African countries he studied (Sierra Leone, Rwanda, Nigeria, Ghana, Zambia, and Kenya), all had 59 percent or more of their total industrial employment coming from firms with fewer than 10 employees As one can see in Table 3, most microenterprise firms are from 1 to 9 workers with the percentage of the smallest firms as high as 90 percent of all MSEs in Sierra Leone

Furthermore, small increases in number of employees, especially for one-person businesses, are often associated with significant increases in economic efficiency These results indicate not only the relative importance of this sector in employment generation, but also the dynamic

nature of MSE employment growth in countries where the formal industrial sector has often failed to produce any significant employment results

Tables 3, 4 and 5 indicate the predominance of firms in the 1-9 workers category in Africa, Asia, and Latin America and Caribbean regions Therefore, in countries with a growing agricultural sector, sustained improvement of these firms can have a dramatic effect on employment creation and its associated increase in general population welfare

Table 3 Distribution of MSEs by Size in Six Countries in Africa [a]

Share of MSEs	Tanzania[b]	Kenya[c]	Ghana[d]	Sierra Leone[e]	Zambia[f]	Nigeria[g]
1-9 Workers	56%	49%	84%	90%	83%	59%
10-49 Workers	7%	10%	1%	5%	1%	26%
Total MSEs < 50 Workers	**63%**	**59%**	**85%**	**95%**	**84%**	**85%**
≥ 50 Workers	37%	41%	15%	5%	16%	15%

[a]Source The information contained in Table 3, is taken from Liedholm and Mead 's 1987 publication "Small Scale Industries in Developing Countries Empirical Evidence and Policy Implication" (p 15)
[b]Source 1967 data computed from Page (1979) and Chuta and Liedholm (1985)
[c]Source 1969 data computed from Page (1979) and Chuta and Liedholm (1985)
[d]Source 1970 data computed from Page (1979) and Chuta and Liedholm (1985)
[e]Source 1974 data computed from Page (1979) and Chuta and Liedholm (1985)
[f]Source 1985 data from Milimo and Fisseha (1985)
[g]Source 1972 data computed from Page (1979) and Chuta and Liedholm (1985)

Table 4 Distribution of MSEs by Size in Five Countries in Asia[a]

Share of MSEs	India[b]	Indonesia[c]	Korea[d]	Philippines[e]	Thailand[f]
1 - 9 Workers	42%	77%	40%	66%	58%
10 - 49 Workers	20%	7%	7%	5%	11%
Total MSEs < 50	**62%**	**84%**	**47%**	**71%**	**69%**
≥ 50 Workers	38%	16%	53%	29%	31%

[a]Source The information contained in Table 4, is taken from Liedholm and Mead 's 1987 publication "Small Scale Industries in Developing Countries Empirical Evidence and Policy Implication" (p 15)
[b]Source 1971 data from Mazumdar (1980),
[c]Source 1977 data computed from Snodgrass (1979),
[d]Source 1975 data from Ho (1980),
[e]Source 1974 data from Anderson and Khambata (1981),
[f]Source 1978 data from The World Bank (1983)

Table 5 Distribution of MSEs by Size in Jamaica, Colombia and Honduras[a]

Share of MSEs	Jamaica[b]	Colombia[c]	Honduras[d]
1 - 9 Workers	35%	52%	68%
10 - 49 Workers	16%	13%	8%
Total MSEs < 50	**51%**	**65%**	**76%**
≥ 50 Workers	49%	35%	24%

[a]Source The information contained in Table 3, is taken from Liedholm and Mead 's 1987 publication "Small Scale Industries in Developing Countries Empirical Evidence and Policy Implication" (p 15)
[b]Source 1978 data from Fisseha (1982),
[c]Source 1973 data Berry and Pinell-Siles (1979),
[d]Source 1979 data from Stallmann (1983)

More importantly, Table 6 shows the MSE sector's share of total employment in the rural areas in many countries of Africa, Asia, and Latin America Micro and small enterprise employment provides between 14% and 28% of all employment in rural settlements and between 59% and 85% in rural towns The contribution of MSEs to employment in Asia and Latin America is significantly higher than that in Africa Although part of this difference might be due to the inclusion of towns with population between 50,000 and 250,000 as rural, town sizes less common in Africa, much of it may be explained by export increases, both regional and international, of agricultural products through either through green revolution production increases or the introduction of non-traditional agricultural commodities

Table 6 Share of the Rural Labor Force Employed primarily in Non-Farm Activities[a]

Percent of Total Employment	Africa	Asia	Latin America
Rural Settlement[b]	14%	26%	28%
Rural Towns[c]	59%	81%	85%

Source Haggblade, S and P Hazell, "Agricultural Technology and Farm-Nonfarm Growth Linkages" (1989), using population censuses for 43 countries (14 in Africa, 14 in Asia, and 15 in Latin America)
[a] Includes all non-agricultural activities except mining (International Standard Industrial Classification activities 3-9)
[b] Rural settlements in Africa and Asia are those below 5,000, while those in Latin America are 2,500 and below
[c] Rural towns do not exceed 250 000

IV Key Constraints to Successful Integration of MSEs in the Chain of Economic Activity Related to Agriculture

Many factors contribute towards successful integration of MSEs into agricultural growth strategies in developing countries If agriculture leads economic growth, MSEs can be integrated successfully through many forward and backward linkages At the same time there are many constraints to successful agriculture and MSE development These constraints are grouped into the following six categories

MACROECONOMIC POLICIES

- **Inappropriate macroeconomic, financial, and agricultural sector policies** Macroeconomic policies that result in high inflation rates, fiscal deficits, fixed and frequently over-valued exchange rates, trade restrictions, price and interest rate controls, credit rationing, government ownership of firms, and large subsidies to selected groups create severe constraints for agriculture and consequently for MSEs and other firms that seek new opportunities, profits, and efficiency in a competitive market Trade and exchange rate policies that depress prices and incomes in rural areas will adversely affect agricultural performance and the associated MSE activities

- **Highly unstable currency exchange rates and complex, time consuming procedures for acquiring foreign currency to import inputs** The foreign currency problems for importing firms are caused largely by the inappropriate policies mentioned above If the exchange rate is pegged to a foreign currency by the government and subsequently becomes over-valued, foreign currency shortages and instability will be a recurring problem for importers and exporters An over-valued exchange rate taxes exports and subsidizes imports leading to foreign exchange shortages that must be rationed to a large number of users in some way such as controls and time-consuming procedures

- **High customs duties on supplies and equipment imports for export agriculture** High import duties on inputs used in the production of traditional and non-traditional export crops increase production costs and reduce price competitiveness of actual and potential exports These policies penalize entrepreneurial producers and prevent countries from specializing according to their comparative advantage

LEGAL AND ADMINISTRATIVE POLICIES

- **Complex and expensive systems of import and export licensing.** Often long, complex procedures are necessary for approval of both import and export shipments The high transaction costs associated with the licensing system effectively prohibit agricultural firms from obtaining import or export licenses, thereby limiting new market development This indirectly reduces the reduces the linkages of MSEs and agriculture

- **Complex and expensive business registration and taxation systems** Existing rules and red tape make compliance with registration procedures and tax regulations so difficult that continuing in the informal sector is often the only chance for most MSEs (Brugger and Rajapatirana, 1995)

FINANCIAL RESOURCES

- **Limited access to financial services** This includes access to both the formal (bank and non-bank) and informal (friends, family, suppliers credit, customer advances, ROSCAs, and local money-lenders) sources of credit and savings services needed to generate credit worthiness and accumulate assets (capital) for future investment Accumulated assets are used either as collateral for loans or for direct investment in the MSEs In Ghana, Baydas and Graham (1994) found that the three most preferred credit sources for investment in MSEs to be retained earnings, customer advances and supplier credit Only after exhausting informal financial sources did the micro- and small- entrepreneurs mention formal finance However, roughly two thirds of the MSEs sampled in Ghana did use formal financial institutions, predominately commercial banks, for savings accumulation Access to formal finance is less likely for home based MSEs and/or those that exist in traditional markets (Parker, 1993) Many studies have found that existing formal credit programs reach only a small percentage of MSEs, regardless of whether they are urban or rural based Formal access to credit, rather than the cost of funds, is the critical constraint (Adams et al , 1984) Both the strengths and weaknesses of formal and informal financial channels must be examined carefully before attempting to intervene in these markets

- **The unusually high degree of risk.** The high risk results from the frequency of MSE business failure and the unpredictability of repayments resulting from market and economic fluctuations (Brugger and Rajapatirana, 1995)

MARKET CHARACTERISTICS

- **Limited market size** Either the small number of clients, limited financial resources, or too much competition among producers (everyone produces the same products at the same time) often leads to decreased prices due to market saturation, especially in geographically limited markets

- **Lack of basic marketing infrastructure** These include good, accessible road systems, reliable transport, refrigerated trucks and warehouses, and roll-on and roll-off capacity

- **Inefficient or non-existent public market information** This applies to both information on input procurement supply as well as sale and distribution of the finished products, resulting in higher information costs for MSEs

- **Inability to enforce contracts** Lack of contract enforcement may be due to the absence of legislation covering MSEs, corruption, or a lack of human resources to enforce legal decisions

HUMAN RESOURCES

- **High levels of illiteracy.** This accentuates the lack of knowledge, commercial skills, information, and sophistication to participate in complex, international export related commodities production Illiteracy may be less of a problem in local and regional markets that are not as complex or sophisticated

- **High levels of population growth** With population growth rates as high as 3 2% in some developing countries even producing enough staple food resources is difficult

- **Women are often excluded from formal access to education and training, technical assistance, and financial assistance** Although women often dominate in agricultural-related commerce activities, they rarely have access to formal technical training and financial assistance Formal training programs are often held in centrally located towns and require trainees to leave their villages for extended periods of time, an option rarely available to women In many countries a woman must have her husband's approval to receive a loan This

restricts women's access to credit, limits loan amounts and results in businesses that grow more slowly and have high levels of poorly trained workers

AGRICULTURAL PRODUCTIVITY

- **Stagnant or declining agricultural productivity of traditional food and export crops** A growing agriculture is the engine that leads growth of the non-farm sector New technology and/or new markets can be the engine that leads agricultural growth and that strengthens linkages to the non-farm sector If agriculture is stagnant or declining, MSEs will very likely encounter major difficulties surviving as firms

- **Lack of specialization based on each country's comparative advantages in production** Countries often compete in the same product markets rather than diversifying into specific non-traditional agricultural products

- **Lack of phytosanitary standards** This includes the development, verification and enforcement of standard and chemical residue control procedures to comply with regulations in export markets

At the individual-firm level a number of constraints were reported by MSEs in Kenya (Parker and Torres, 1994) While each fits under one of the six categories seen above, the implications for dealing with individual-firm constraints often appear more straightforward Clearly if a favorable macroeconomic policy environment exists, success becomes easier to obtain The constraints most often cited by individual firms are

- **Market saturation and low product demand,**

- **Lack of access to raw material or inputs,**

- **Insufficient working capital and higher capital costs;**

- **Lack of reliable transport;**

- **Poor location, high cost of rent and lack of storage space,**

- **Inflation,**

- **Government involvement or excessive regulation, and**

- **High costs for access to know-how, information, and technology**

At both the macro and the micro levels, numerous constraints make it especially difficult to promote growth of agriculture and the MSE sector without having a fairly broad vision of where the sectors should be going This vision must be shared by both external funding agencies, local governments and especially the MSEs Programs may be required to address macroeconomic, financial, market, legal, human resource and agricultural productivity problems at the same time The literature indicates clearly that the vision, constraints and solutions vary by country, region and production-distribution system A rapid sector assessment may be the best way to identify the vision and the priority constraints for a specific program Information on inter-linkages and probable effects of interventions is rarely known before policy and program strategies are initiated

V Strategies to Promote Growth of MSEs and Agriculture

Current research identifies the following specific strategies to promote growth of MSEs and agriculture

- **Developing countries must achieve the correct macroeconomic policy environment to promote growth of agriculture and MSEs**

  The literature reviewed indicates clearly that promoting growth of MSEs linked to agriculture has a much higher success rate in countries or regions that have the correct policy, infrastructure and technology environment for agricultural growth Development of a policy environment that supports, but does not seek artificially to promote, dispersed manufacturing, commercial and service activities (example of Taiwan and Japan in the 1940s as compared to Korea during the same period) [6]

  Policies that directly or indirectly affect agriculture must be reasonably conducive to agricultural production and related business activity Prices, exchange rates, trade policies, and monetary and fiscal policies must create reasonable opportunities for profit if farmers are to adopt new technology, increase production, and make new investments Without the appropriate incentives, producers may not take the risks of new investments to move beyond subsistence levels (Meyer and Larson, 1993)

[6] Haggblade and Hazell in, "Agricultural Technology and Farm-Nonfarm Growth Linkages" (1989) point out that more rapidly growing agricultural incomes allowed countries such as Japan and Taiwan to invest more heavily in rural infrastructure and supportive policies, thus promoting a rapid and important growth in the non-farm sector activities in rural areas rather than concentrating these types of activities in urban areas Evidence in Latin America and South and Southeast Asia suggests that agricultural growth can stimulate not only greater rural non-farm employment, but also increases non-farm incomes due to diversification into high-return non-farm activities

- **Build adequate infrastructure to speed the growth of agriculture and MSEs**

  Infrastructure in the form of roads, bridges, transport, and storage must be available to open up production areas to trade and commerce As noted by Ahmed and Donovan (1992, p 31), "The degree of infrastructural development is in reality the critical factor determining the success of market oriented sectoral and macroeconomic policies in the developing world " Without this infrastructure, sales of modern inputs and consumer goods to farmers and purchases of increased farm production cannot be conducted at low cost and in a timely and reliable manner

- **Appropriate technology must be developed for agriculture to lead economic growth and strengthen linkages with MSEs**

  Appropriate technology must be available for farm use There must be some supply-side Green Revolution technology or demand-side market opportunity to increase production and productivity of the farm sector If something happens to change a stagnant agriculture into a dynamic, growing agriculture, the linkages are very strong to the local, regional and national economy Research results indicate that the MSE success rate will be much higher in a growing agriculture than in a stagnant or declining agriculture (Haggblade and Liedholm, 1991)

- **Efforts to promote MSE development should focus heavily on businesses in rural areas**

  This is especially important given that more than 60 percent of all MSEs are located in rural areas Although more emphasis on developing the rural sector is important, this does not imply that USAID should abandon effort to develop MSEs in urban centers New efforts must take into account the rural predominance of MSEs and provide a more even, i e more general, growth in employment opportunities throughout a given country Broad-based economic growth will improve both supply and demand simultaneously, rather than favoring only one or two geographic areas

  Furthermore, more focus should be placed on MSEs in local and regional markets and relatively less focus on export markets The forward and backward linkages between agriculture and MSEs appear to be stronger in local and regional markets than in export markets MSEs seem to have a comparative advantage in local and regional markets and larger agribusinesses tend to have a comparative advantage in the more demanding and complex export markets

- **Programs must promote growth and survival of existing MSEs rather than the start-up of new microenterprises**

  Firms that have been in existence at least four years promise the greatest success rate and eventual graduation to the next level of firm employment Extremely vibrant new

businesses should not be excluded automatically, but should be evaluated on a case by case basis Development efforts that focus on firms likely to still be functioning in 3-5 years without external aid, though on a lesser scale, will have more impact on employment generation than assisting firms that can only succeed (marginally) with external support Elimination of subsidies similar to those frequently granted to large firms can be used to level the playing field to stimulate investment in MSEs

Efforts that concentrate on growth and expansion of already existing microenterprises, to help these firms successfully graduate to the next employment/business category, will generate more new employment than either the one-person firms or those with more than ten employees Activities improving business management practices of the entrepreneurs and skill training for employees are two types of training programs that could assist these microenterprises Improving the entrepreneurs' managerial capacity will help them adapt more rapidly to changing economic conditions, therefore becoming proactive rather than reactive managers On the other hand, improving the skill levels of employees will provide a better specialization of labor and improved productivity

- **Programs must be flexible enough to work with several levels of microenterprises, without imposing unrealistic restrictions on any individual level**

Younger businesses (3-4 years) must first insure their survival before attempting to expand their production Therefore, strategies addressed to this market segment should work on production (including input procurement) and quality control in order to develop larger market share for their production Strategies for helping older firms (4-5 years) should be geared to developing new products and/or integrating new processes or services, along with growth of product production A particular emphasis should be put on long-term semi-skilled job creation

Clearly established firms (over 4 years) should focus on marketing their products, both on a larger scale and over a wider geographic region, to take advantage of potential economies of scale and scope, and natural production advantages Potential export markets should be explored with assistance to firms to insure compliance with the importing countries' legal, environmental, and health requirements (i e food quality, pesticide levels, etc) This may involve dealing with regional/international policy issues along with the already numerous local and national issues

Programs must not only be flexible with respect to microenterprise sizes, but also across industries Interventions will likely be different across types of industries (i e food processing versus woodworking/metalworking firms) Programs must take these different factors into account in order to realize the long-term success of microenterprises In fact, long-term sustainable employment growth depends heavily on growth taking place across a large number of industries at the same time Often past efforts concentrated on single industries, leading to overproduction, severe price

reductions (to price levels inferior to production costs), and eventual collapse of the entire sector

- **Greater involvement of women in MSE production**

  This includes all phases of MSE production but must take into consideration the current work load of women in both rural and urban areas, improving their income and therefore their relative importance in their families and communities, without increasing women's total labor time

- **Reform of local labor-market regulations, especially in certain African countries, is necessary to reflect the realities of national market forces**

  This implies that national labor services should not exist simply to fulfil some bureaucrat's idea of employment generation Labor laws should encourage workers to improve job-skill qualifications, both through self-improvement opportunities and employer based initiatives Workers should be able to move around the job market Laws should reflect the real value of labor and not some artificial job category/wage rate Growth and productivity increases must be rewarded thereby encouraging the hiring of better qualified workers Furthermore, MSEs must be able to solve problems of under-performance among workers through effective hiring and firing practices

- **Promotion of greater linkages between formal/semi-formal financial institutions and MSEs, especially in rural areas**

  This can be accomplished through the promotion of formal linkages among credit unions, NGO-based lending institutions, commercial banks, development banks and other financial institutions Experiments using intermediaries to serve as matchmakers between the financial institutions and the MSEs should be promoted (Kula, 1995) Since the development of creditworthiness is key to accessing the formal financial sector, policies could be developed to promote emergence of private credit information collection agencies and thus bridge the gap between semi-formal and formal financial institutions (Shaw, 1995) Establishing sound credit histories would then give MSEs greater access to financing by lowering the risk associated with current MSE financing

- **Promote the production and marketing of non-traditional export crops**

  The production of non-traditional crops provides alternative uses for seasonal labor and contributes to more diversified family income flows Increased production of non-traditional crops will increase the demand for inputs, import services, assembly/transformation services, transportation and packaging services, and export services It is not sufficient to promote production without sustained market development for the non-traditional export crops At the same time, efforts are needed to

develop local and regional markets for surplus or second quality produce This in turn can increase local transformation and sales/distribution

- **Greater dissemination of technical/practical information and market information discovered through research efforts**

  Results from the Export Industry Technology Support Project (EXITOS) indicate that a principal cause of business failure is lack of know-how meaning acquisition of data, information, intelligence, technology and skilful application in pursuit of business opportunities (Brower, 1995) Production of simple radio and television programming and simple brochures in the national languages, pointing out new production and processing procedures, will help disseminate research findings to all interested parties in the host countries, i e institutions, extension services, and end-users (MSEs) Research should be oriented towards the end-users, i e the MSE clients, and the institutions that serve them, and not what the donors desire Increased public market information programs may also reduce the high costs of access to information for MSEs

- **Promotion of partnering and contracting arrangements among agribusinesses, MSEs and farm firms**

  Partnering and contracting arrangements can match the strengths of MSEs and farm firms with agribusiness to the advantage of each party in the contract Contracts can be used to guarantee markets, share marketing costs, provide capital, provide know-how, guarantee supplies, and quality control An excellent example of contracting arrangements is the Thailand silk sub-sector (Haggblade and Ritchie, 1992)

- **Train MSEs in marketing, management, and finance principles using small business associations**

  Train MSEs in marketing, management, and finance principles and technical areas to improve their knowhow This would include short courses, workshops, seminars and visits to other countries The training could be through small business associations MSE growth depends upon their ability to improve all dimensions of operating a successful business

Table 7 Examples of Strategies to Promote Growth of Agriculture and MSEs

- Developing countries must achieve the correct macroeconomic policy environment to promote the growth of agriculture and MSEs,
- Build adequate infrastructure to speed the growth of agriculture and MSEs,
- Appropriate technology must be developed for agriculture to lead economic growth and strengthen linkages with MSEs,
- Efforts to promote MSE development should focus heavily on businesses in rural areas,
- Programs must promote growth and survival of existing MSEs rather than the start-up of new microenterprises,
- Programs must be flexible enough to work with several levels of microenterprises, without imposing unrealistic restrictions on an individual level,
- Greater involvement of women in MSE production,
- Reform of local labor-market regulations, especially in certain african countries, is necessary to reflect the realities of national market forces,
- Promotion of greater linkages between formal/semi-formal financial institutions and MSEs, expecially in rural areas,
- Promote the production and marketing of non-traditional export crops,
- Greater dissemination of technical/practical and market information discovered through research efforts,
- Promotion of partnering and contracting arrangements among agribusinesses, MSEs and farm-firms,
- Train MSEs in marketing, management, and finance principles using small business associations

VI Operational Ramifications of Implementing Strategies Promoting Growth of MSEs Related to Agriculture.

USAID has several operational mechanisms at its disposal to put successful programmatic strategies into action These include financial assistance (loans and grants), commodities, technical assistance, education, and training However, in the past these mechanisms were largely government to government assistance Today's world of open economies, competitiveness, private-sector initiatives and profit-oriented firms requires innovative new approaches to promote MSEs With the new policies it will be important to promote individual responsibility for MSEs rather than the paternalism and reliance on government in the past The goal is reduced subsidies and increased reliance on markets to establish an effective, sustainable development Less aid and more business style partnerships will be needed in this new environment (Brugger, 1995, Chapter 10) This may require new mechanisms or adaptations in current mechanisms

Several institutional forms can facilitate implementation of these strategies promoting growth of MSEs related to agriculture

- Business partnering and contracting,
- Input and output marketing firms,
- Non-government organizations (foreign and host country),
- Small business associations,
- Development banks and/or commercial banks,
- Credit unions and cooperatives, and
- Host country government agencies

The literature reviewed indicates that no one institutional form is clearly superior to another in terms of achieving success with MSEs Examples of program success and failure with MSEs can be found for each of the above institutional forms The most important elements of success include institutions that reach a large number of clients, that have a viable technology, that use appropriate pricing of the services rendered, that have motivated and competent entrepreneurs, and that achieve profitability or financial sustainability

Partnering and contracting arrangements may offer much potential for growth and development of MSEs These arrangements have the advantage of flexibility to satisfy the needs of both parties to the contract Contracts can be specified in many ways to guarantee markets for production, to share in the production, to provide capital for buildings and equipment, to supply production inputs, to provide technical support to producers and to specify performance standards and quality control Some examples are (1) Lindemann Farms in California which markets melons for producers from throughout Central America, (2) Georgia Vegetable Company which buys sweet onions from Nicaragua for sale in the U S and plans to start importing a number of other specialty products, (3) a Mexican tobacco firm (La Moderna) which contracts with small farmers to modernize tobacco production The parties in the La Moderna contract share the production (50 percent each), farmers supply the land and labor, and the firm

supplies the farmers with machinery, equipment, inputs and technical know-how (Torres, 1995), (4) Singer Company equipment leasing to MSEs in Bangladesh (Larson, 1992), and (5) contract broiler production and distribution in many countries

Perhaps the most effective way to reach larger numbers of MSEs, and linkages to farmers, is to work with input and output marketing firms The literature shows that commerce employs large numbers of MSEs These firms live and work in rural areas and have vital commercial linkages to farm-firms and rural households The traders buy farm production, sell production inputs and household goods, and provide technical information, credit and other services to rural areas (Meyer and Larson, 1993 and Larson, 1992) They can become an important mechanism to improve incomes and welfare in rural areas Training and credit programs for these MSEs may be very efffective ways to improve the linkages with farm-firms

Perhaps the most success has been achieved by a few banks and several non-government organizations (NGOs) in working with the MSEs They have incorporated the elements of success mentioned above into their activities Successful and profitable NGO and bank micro-enterprise lending programs (Actuar in Colombia, Banco Solidario in Bolivia, Bank Rakyat Indonesia unit desa system (BRI) and Badan Kredit Desa (BKD) in Indonesia, and Lembaga Perkreditan Desa (LPD) in Bali) have been identified (Christen et al , 1994) Many other NGO and bank programs, however, continue to have major financial problems and must rely upon subsidies to operate (Christen et al , 1994 and Burt et al , 1990) In some NGOs the philosophy is largely grant-oriented, which does not meet the criteria for increased self-reliance and financial sustainability mentioned above

Small business associations and farmer associations may have potential for increased assistance to MSEs They could provide information services on domestic and export markets, short courses, technical assistance and seminars of interest and value to members

Development banks may have some potential for lending to MSEs, but it is clear that a number of financial and management issues need to be resolved before development banks will be able play a major role in assisting MSEs (Adams et al , 1984 and Gonzalez and Graham, 1995) Commercial banks also have great difficulty lending to MSEs because of the small loan size, high transaction costs, higher risk, and perceived poor creditworthiness of MSEs As MSEs grow and prosper, some may graduate to the minimum size desired by most commercial banks

Credit unions and cooperatives already work successfully with many MSEs but credit unions frequently have their own problems of retaining membership, profitability, loan portfolio quality, and management difficulties (Shaw, 1995) Credit unions and cooperatives do appear to be an attractive alternative for MSEs that grow beyond the very small borrower and saver stage but who may not be the larger creditworthy borrower or saver desired by commercial banks

Major changes in many host country government agencies will likely be necessary to work successfully with MSEs While these agencies may be involved in work with MSEs, the literature is clear in emphasizing that the government should focus its efforts on the larger issues

of macroeconomic and political stability, providing adequate infrastructure for MSEs such as physical facilities, public market information, communications, laws and regulations, and education

VII Suggestions for Research on MSEs and Agriculture

- Sub-sector research should be conducted to identify where MSEs may have comparative advantage in production-distribution systems for farm products The research should identify where the MSEs can maximize their contribution to broad based, sustainable development What are the activities that MSEs can perform best? Some possibilities for strong MSE and agriculture linkages identified in the literature and workshop discussions include local and regional markets, and services of all types including input supply, product marketing, consumer goods, finance, repairs, and household services

- Research should be conducted to identify private sector partnering and contracting opportunities for the production of non-traditional agricultural crops in Africa, Asia, Latin America and the Caribbean regions, i e specific crops, local entrepreneurs and market opportunities for regional and international export Additionally, in-depth country-by-country evaluations would be conducted to define export and import regulations that affect the organization of the market, including strategies for compliance with phytosanitary restrictions in the importing countries (U S A and Europe) In-depth studies would only be conducted in countries that showed the greatest potential for developing the partnering relationships In addition, technical assistance requirements and potential contractual specifications must be identified to insure successful partnership arrangements in those countries identified as having the greatest potential

- The strength of the forward and backward linkages between the farm and non-farm sectors is an issue that needs better documentation of success cases Past research has reported large differences in the size of the multipliers Some of the success cases in Asia, Latin America, and the Caribbean should be studied to describe and estimate 'ex-post' the nature and size of the multipliers between the two sectors Cases of demand-led agricultural growth and supply-led agricultural growth should be studied

- The world is entering a new frontier of information technology through the INTERNET information superhighway that will open many new opportunities globally for trade in specialty products that MSEs can supply very efficiently The costs of information through this system will be much lower than current information costs about markets, products and opportunities The costs will be affordable for some MSEs Research should be conducted to determine the opportunities of this information superhighway for MSEs, how they will be able to use this technology for their firm, and how USAID assistance might facilitate adoption of the technology

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