

Partnerships at work: Western Union's 4+1 experience in Mexico¹

This report analyzes the impact of Diaspora investment projects made in partnership with private sector and government institutions with the goal of supporting local economic development in Mexico. Diaspora investment partnerships are financing initiatives undertaken by migrants and another entity from the private or public sector in support of a business in the migrants' home community. The aim is to strengthen local businesses in order to promote local economic growth through increased demand for jobs or locally manufactured materials. One example of Diaspora co-investment is the 4+1 project undertaken by migrant hometown associations in the United States with the support of the Mexican federal, state, and municipal governments and Western Union.

Through an evaluation of the impact of the 4+1 initiative, we find that financing increased the investment capital available to small businesses and permitted entrepreneurs to undertake activities which they had considered for many years, but for which they had lacked funding. By successfully channeling funds to small businesses, the initiative spurred employment and generated commerce in the localities where the investment took place. However, it contributed little to expanding the technical capacity and value-chain integration of the beneficiary businesses, reducing their long-term competitiveness and growth. As implemented, the Diaspora investment partnership helped support the creation of small and micro-enterprises, but did not establish a foundation for sustainability.

To explore these issues, this report reviews the 4+1 investment projects, the various actors and the targeted communities. Then we consider the impact the development scheme had on local communities and close with recommendations for improving the implementation of future co-investment initiatives. The findings of this report are based on a survey of 24 beneficiary projects carried out in November 2010 and January 2011. A complete list of site visits and project profiles can be found in the appendix. The methodology² we use to assess the impact of the 4+1 public-private-diaspora partnership utilizes three indicators: local impact, business development, and program implementation.

1. Migrant Networks and Small Businesses in Developing Countries

Migrant investments in wealth-generation projects are not a new phenomenon, but are growing in popularity given their potential to stimulate economic growth through job creation and increased local production. Migrants have long invested individually in businesses in their home community with the aim of earning an income if and when they return home.³ Collective investments in local development projects also have a long history. Projects such as community centers and urban upkeep bring much desired amenities to local communities, but they are difficult and expensive for community members to maintain and often fall into disuse.⁴ Other projects such as road paving and electrification reduce barriers to production and investment, but do not produce economic

¹ Written by Manuel Orozco and Katherine Scaife Diaz, Inter-American Dialogue. May 2011.

² See Orozco, Manuel. "In search of policy options and solutions: Family remittances, diaspora partnerships and development opportunities." Inter-American Dialogue. 2009.

³ Orozco, Manuel. "Asegurando futuros: el interés de inversión y estrategia de comercialización para los salvadoreños en el exterior." Inter-American Dialogue. 2009.

⁴ El impacto del 3x1 en la gobernanza local. In *El Programa 3x1 para migrantes: ¿Primera Política Transnacional en México?* Rafael Fernández de Castro, Rodolfo García Zamora y Ana Vila Freyer, editors. México, DF: 2006.

growth by themselves. Business investments are an opportunity to provide jobs and incomes for community members, directly improving their well-being. By contributing to a joint investment in a productive project, migrant organizations aim to support the creation of jobs they or their families may one day hold and in this way reduce the need to migrate from their communities.

When migrant associations choose to invest in small and medium enterprises (SMEs) in developing economies, they may help those businesses overcome certain constraints to growth. SMEs typically have limited growth prospects due to a lack of access to capital, technology, and strategic alliances.⁵ SME owners tend to finance a larger share of their investment through informal loans and/or savings, and not through formal financial institutions. The lack of collateral, high degrees of informality, and lack of knowledge about how to access formal financial products limit SMEs' ability to access financing.⁶ Funding from migrant collective investments can stand-in for formal financial flows or reduce dependence on informal financing. Similarly, while SMEs in developing countries often lack access to technology and other capital investments, migrants may be able to source and transport that technology to their home country; more accessible financing products in host countries may lower the total cost of technology investments.

Migrants may also be an invaluable extension to an SME's strategic network, thus helping SME's overcome the third constraint to growth: strategic alliances. Strategic alliances are an SME's network of contacts which can help the business overcome the barriers related to its small size. SMEs can rely on their strategic alliances to find buyers outside their local market, connect with value-chains, obtain inputs at a lower cost, and share knowledge on business management.⁷ Through their business investment and international networks, migrant collective investments represent an opportunity to connect an SME with international buyers and sellers as well as share human capital and management skills learned in the host country. If beneficiary businesses are able to establish connections with migrant networks in the United States and export their goods to immigrant buyers, the investment would further strengthen small businesses by incorporating them into an international value chain.

Diaspora investments in wealth-generation projects represent a two-fold opportunity to leverage remittances for development: first, by investing in job-creation and production activities, and second by assisting the businesses that provide jobs in overcoming growth constraints they typically face. The 4+1 project presents an opportunity to evaluate whether and to what extent the Diaspora investment partnership realized these opportunities and contributed to local development in migrants' home communities.

2. Diaspora and Development Partnership: the case of Mexico's 4+1 program

For decades, Mexican migrants have invested in social and economic philanthropy through clubs and associations and in partnership with local government institutions.⁸ In the last decade, these partnerships have formalized into the 3x1 program. The 3x1 program is an initiative sponsored by the Mexican federal government with the aim of increasing funds available for local development. The initiative matches every dollar that migrant associations abroad contribute to a local development project with equivalent funding from the municipal, state, and federal

⁵ Smallbone, David. "Foreign Direct Investment and SME Development: Some Policy Issues for Transition and Developing Countries." Kingston University.

⁶ Beck, Thorsten and Asli Demirguc-Kunt. "Small and Medium-size Enterprises: Access to Finance as a Growth Constraint." *Journal of Banking and Finance* 30 (2006). pp. 2931-2943.

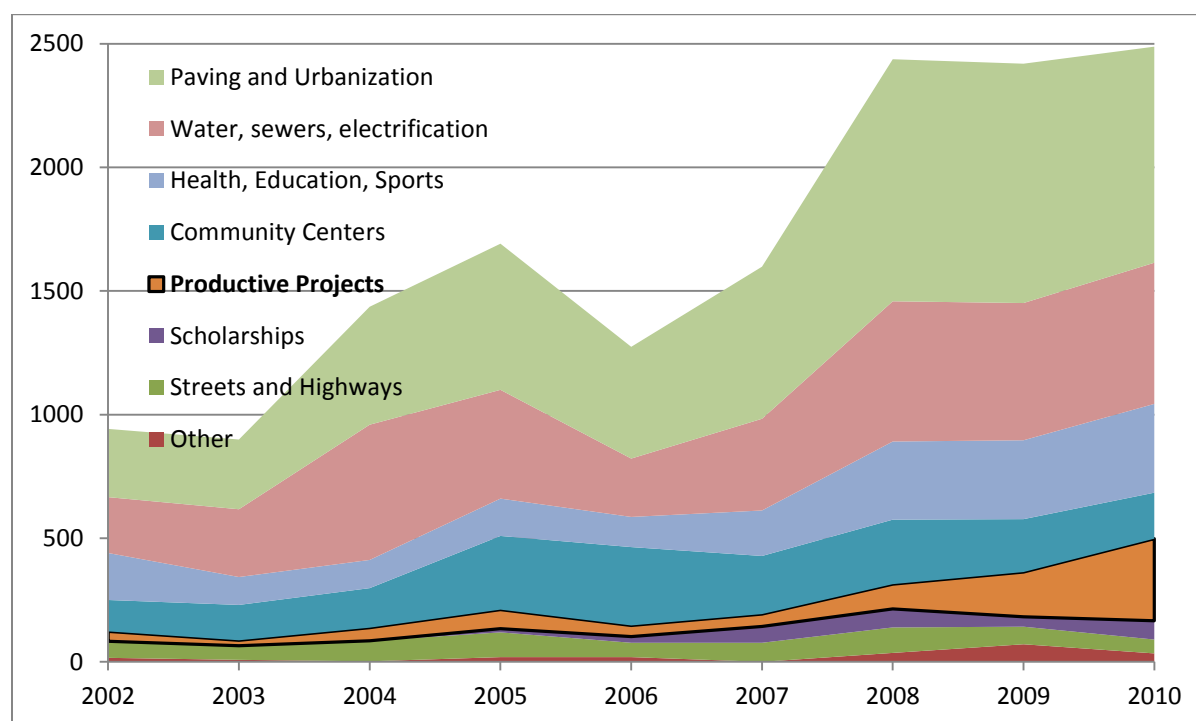
⁷ Smallwood, and Freeman, Susan, Ron Edwards, and Bill Schroder. "How Smaller Born-Global Firms Use Networks and Alliance to Overcome Constraints to Rapid Internationalization." *Journal of International Marketing*. Vol. 14, No. 3, 2006, pp. 33-63.

⁸ Orozco 2003. And *El Programa 3x1 para migrantes: ¿Primera Política Transnacional en México?* Rafael Fernández de Castro, Rodolfo García Zamora y Ana Vila Freyer, editors. México, DF: 2006.

governments. Thus every dollar that a migrant association contributes is quadrupled through the donations of various governmental agencies.

Through 3x1, migrants typically invested in social development projects, with projects such as extending electricity and paving roads among the most popular investments. As seen in Figure 1 below, paving and urban maintenance account for over half of the total number of projects undertaken in the 3x1 program. Productive projects, such as business investments, averaged 4% of the total from 2002 – 2008, but jumped to 7% in 2009 and 13% in 2010. The growing number of productive projects suggests a shift in preferences among Mexican migrant clubs away from beautification projects and toward investments that may increase wealth, jobs, and ultimately provide an alternative to the need to migrate.

Figure 1: Productive Projects are Increasing as a Percentage of All 3x1 Investments



Source: SEDESOL 2011

Developed in late 2005 as a collaboration between Western Union and Hometown Associations, the 4+1 program builds upon the 3X1 framework by contributing funding to businesses initially proposed within 3x1. . The company's goal was to support businesses that would create jobs and sustainably strengthen local economies with high rates of emigration.⁹ The financing supported the establishment or expansion of small and micro-enterprise activities in five states and averaged US\$28,800 per project, contributing to an average total investment of almost US\$200,000. Table 1 in the appendix details the distribution of funds.

The businesses supported within 4+1 are predominantly agricultural and tend to be oriented toward the local economy. Seven businesses raise or process food such as grains, fruits, or vegetables and another six are

⁹ "Western Union Funds Twenty-One 4+1 Projects Across Zacatecas, Veracruz, Guanajuato, Michoacan, Guerrero." Press Release. October 24, 2008.

greenhouses. Six businesses raise animals for meat or dairy products, three businesses are eco-tourism initiatives, and four businesses focus on manufacturing or sale of goods. The majority started production with the assistance of 4+1 funding, though nine were on-going businesses that received funds for expansion. A collective group of shareholders makes up the ownership of every beneficiary business, though quite frequently one or two people make up de facto leadership. In many cases shareholders independently raised additional funds to invest in their business, and some have reinvested their sales and profits.

The businesses are located in states with high levels of migration and which the UN Development Program placed in the bottom third of its 2009 Human Development Index for Mexico.¹⁰ What's more, the municipalities in which the beneficiary businesses are located score consistently below the state-wide Human Development Index, which is to say that the beneficiary communities are poorer, more marginalized, and less developed than the already low state average. Average income in these communities is less than \$5,500 per year.¹¹

3. Methodology

The projects were analyzed according to their performance in the local economy, with an emphasis on three indicators related to small businesses and local development: community impact, business development and project implementation.

The indicators are based on an understanding of the growth constraints to small businesses, as discussed in the previous section, but also take into consideration local communities' constraints to development. The 4+1 program is not simply a financing effort to help small business grow, but rather a development project with the goal of stimulating the local economy. To that extent, the local impact indicators assess whether an application of financing to small businesses stimulates the local economy through increased demand for abundant local resources such as labor or offer a sustainable supply of local resources that are of higher quality or a lower price point than previously available. We also include a measure of social capital to determine how well the co-investment project strengthens transnational community ties, while the value-added indicator takes into account whether there were additional, unforeseen benefits brought about by the co-investment.

Impact Measurement Tools	
1. Community Impact	<i>Economic stimulus</i> <i>Social capital creation</i> <i>Additional value-added</i>
2. Business Development Impact	<i>Revenue generation</i> <i>Value chain integration</i> <i>Business formalization</i>
3. Implementation	<i>Non-duplicative funding</i> <i>Partnership strength</i>

The business development indicators consider the long-term viability of the local market impact by analyzing the businesses' sustainability and prospects for growth. These metrics analyze additional revenue generation, formalization, and value-chain integration as outcomes of the additional financing. The final set of indicators of program implementation look at the ways in which the program's structure responded to the needs and opportunities available to small businesses and the communities in which they are located. A non-duplicative

¹⁰ *Indicadores de Desarrollo Humano y Género en México 2000-2005*. Programa de las Naciones Unidas por el Desarrollo. Mexico, 2009.

¹¹ Excludes projects located in Leon, Guanajuato, a major commercial center. Beneficiary businesses in Leon were located in poor suburbs on the outskirts of the city. We lack disaggregated data on the Human Development Index and annual income for these suburbs, but expect that the same pattern of low HDI indicators would apply to the areas in which the 4+1 projects were implemented.

measure considers the effect that the 4+1 contribution had on business development and whether that effect could have been accomplished without co-investment financing. An assessment of the partnership's strength considers how the implementation process affects the likelihood of continued co-investment efforts.

The predominance of start-ups among the beneficiary businesses requires that the evaluation be made in relationship to the short-term goals achieved and the investment's potential returns. This perspective is further warranted by the fact that the evaluation took place within a few months to 2 years after the funds were contributed, allowing the businesses little time to implement their investments and realize returns. Though the impact of these businesses on the local economy will be made over the long term, we adjust our indicators to offer some early conclusions on the 4+1 co-investment project. Table 2 in the appendix presents examples of these indicators based on their relationship to start-up or on-going businesses.

4. The 4+1 Diaspora investment initiative and local development impacts

The beneficiary businesses had a range of impacts on local development but on balance we find that 4+1 delivered much-needed financing for cash-strapped businesses which strengthened, but does not ensure, the businesses' long-term viability.

a) Community Impact Indicators

Economic Impact

In considering the impact the beneficiary businesses have on their local economy, we analyze separately their supply and demand effects. In general, the beneficiary businesses supply locally abundant goods in a context of intense competition and low prices, competing with other local businesses to sell their goods. The businesses are predominantly oriented to their local market, with 16 of the interviewed beneficiaries supplying the market in their municipality or in neighboring municipalities. In some instances, such as investments in greenhouse tomato production in Guerrero and Michoacán, the mass production techniques the businesses has the potential to flood the local market and drive down prices for area farmers. Other producers, such as milk and horticulture producers in Guanajuato, do not produce enough to affect the local price for their product, but they nevertheless compete in a saturated market. One exception, a fruit-processing plant in Zacatecas, produces an innovative product with few local competitors but nevertheless faced strong competition from national chains of sweets producers. From a supply standpoint, the 4+1 investment was typically invested in goods that were already well-established in the marketplace, either through local supply or national supply networks.

The 4+1 investment did allow some producers to introduce improved production methods to their local community. The pig farmer in Pánuco, Zacatecas, for example, used part of the 4+1 funding to purchase an improved strain of pig for raising and breeding. Though other farmers in the community only sell their improved breeds as hogs or for slaughter, he sells uncastrated piglets, which helps to improve the community's pig stock. Other beneficiary producers, such as a flower grower in Pinoltepec, Veracruz, have expanded their knowledge of agricultural cultivation and care through the 4+1 program, and have shared those improved practices with other growers in the region. The 4+1 beneficiaries may not be introducing new products into their local market, but their ability to innovate and expand under 4+1 has the potential to strengthen local production more broadly.

The businesses' demand for local resources has somewhat stronger outcomes, with an increased demand for labor the predominant effect of the 4+1 investment. The businesses within 4+1 currently support more than 215 jobs, with most projects employing between 3-5 individuals and a few employing more than 20. Funding from 4x1 was often invested in expanding production facilities. The additional labor and materials required during the construction process created a short-term demand for labor that subsided once construction was completed. The 215 jobs currently demanded do not include those short-term construction-related jobs.

Labor demand is also expected to increase significantly in the future. Start-up entrepreneurs had particularly high expectations of their future employment demand, which they estimate at 150-200 new employees across all the businesses in the next 5-10 years. In the case of a mescal processing facility in Zacatecas, once the facility starts producing at capacity, it expects to employ the labor of 250 farmers from the surrounding area. As businesses

scaled up, we also observed modest increased demand for skilled labor. For instance, an agricultural commercializer in Michoacan and a greenhouse in Guerrero both employ local young men trained in business accounting to maintain their books. Such additional demand for local labor resources is expected to generate derivative labor demand as the newly employed increase their demand for other local goods and services.

In communities with high rates of subsistence and smallholder farming, even this modest increase in labor demand and the increased earnings they provide can stimulate the local economy and local earnings. A conservative estimate of the earnings generated by the current and additional jobs created within 4+1 is US\$1 million per year.¹² When compared with the total original investment of US\$5 million provided to these businesses, it is clear that the small businesses have the potential to generate more earnings for more workers over the long-term than a direct cash transfer of US\$5 million to each family would have provided.

The 4+1 businesses helped to diversify income streams for families that invested in them. The beneficiary businesses are predominantly organized as cooperatives, with numerous associates acting as co-owners and in many cases as employees. Eleven businesses have less than ten associates, six employed 11-20, and five businesses have more than 20 associates; some projects involved 60 and one involved 400 community members, including migrants living abroad. In many instances only a few associates are actively involved in day-to-day business operations, and each business maintains its own rules for the division of profits among its members. It can be

Project Highlights: 4+1 supports women-owned and operated businesses

The beneficiary businesses have an excellent track record for being women-owned or women-operated. Fifteen of the 26 businesses are led by women or employ women as a significant portion of their labor. For example, a computer repair shop in Nochistlan, Zacatecas, is owned by three young women. The largest greenhouse in the state of Guerrero is run by a women's cooperative and was financed by 4+1. Greenhouses in Veracruz and Michoacán stated a preference for employing women in detail-oriented plant care and maintenance. Previously unemployed young women in Yuriria, Guanajuato have used part of the 4+1 funding to teach themselves business skills for operating and commercializing their products. The strong presence of women as laborers and managers in the 4+1 businesses suggests improved job market opportunities for women in these

¹² 200 jobs currently created + 200 jobs expected to be created + 100 jobs from economic spillovers = 500 jobs created. At an annual wage of MX\$20,000 (a low minimum wage in Mexico), the generated earnings from these jobs totals MX\$10 million, or almost US\$1 million.

expected, though, that once the businesses consistently generate a profit, dividends to these families should increase incomes for a broad swath of the community. Even if those profits are minimal, the additional income stream will further diversify earnings and reduce risks to a stable income. If achieved, this long-term outcome could improve families' abilities to invest in other income-generating ventures and thus stimulate local economic growth.

In addition to demand for local labor, 4+1 beneficiary businesses generate moderate demand for locally produced materials. Most of the entrepreneurs produce primary materials from their own land or source it from outside the local community. For example, a milking cooperative in Guanajuato grows its own hay and other forage material for its cattle. Other primary materials it purchases include antibiotics and grains, which are produced in other parts of Mexico. Similarly, the computer repair shop in Zacatecas purchases parts and other inputs online. The businesses that tend to be self-sufficient or reliant on externally produced goods add little to demand for locally produced goods, but other businesses draw significantly on local materials for their production. The fruit processing plant in Zacatecas purchases fruit produced by local farmers or picked from communal lands. A cactus-growing initiative that ultimately failed intended to purchase cactus from area farmers in Nochistlan, Zacatecas. A cheese-making cooperative in Moyahua, Veracruz will purchase milk locally. Two eco-tourism initiatives in Zacatecas sourced construction materials locally. Examples such as these demonstrate the ways in which the 4+1 investment strengthened small businesses and had some success in strengthening demand for locally produced goods.

Social Capital Creation

Though perhaps an unusual measure of success for a business investment, the generation of additional social capital is an important characteristic of local development projects.¹³ Social capital generation constitutes a high degree of local community involvement in the design, implementation and use of local development projects, such as improvements to the town plaza or extension of water services. The beneficiary businesses within the 4+1 project are distinct from typical development projects because the costs of running the business and the benefits they generate have some inherent level of exclusivity. What's more, businesses which require consensus among too many stakeholders may be less able to respond quickly to market shifts. Nevertheless, considering the public nature of the government-donated funds and the project's aim of generating widespread increases to local well-being, it is appropriate to consider how much the local community and the migrant community was involved in the project.

Project Highlights: Mescal factory emerges out of transnational ties.

García de la Cadena is a small town in rural Zacatecas hit hard by the crash in the price of agave. A young entrepreneur, Ruth Icela Mena, decided a mescal production facility would help absorb the over-supply of agave. She campaigned for municipal president on that platform, and travelled to the US to convince migrants from the community to support her. She won the presidency and organized a business made up of 250 partners with a total of 2,500 ha of agave. Half of the partners are migrants living in the US. The facility has just begun production, with the ultimate goal of selling mescal to Mexican immigrants in the U.S. In the meantime, the transnational community of García de la Cadena has been brought together in search of a solution to their common economic challenge.

¹³ Orozco, Manuel. "In search of policy options and solutions: Family remittances, diaspora partnerships and development opportunities." Inter-American Dialogue. 2009.

While social capital generation within the community was limited for most of the projects, social capital generation between the businesses and the migrant community abroad was more successful. Few projects chose to include the community in the selection or implementation of the business venture, instead limiting those decision-making processes to associates invested in the business. Nevertheless, several businesses affirmed that the community was watching their initiative closely with an interest in making a similar investment in the future. Some entrepreneurs, such as the pig farmer in Zacatecas, received consultations for business advice. Other businesses, such as the eco-tourism park in Guadalupe, Zacatecas, did not involve the broader community in decision-making, but the park itself offers a space for social gatherings, school fieldtrips, and other events that can serve to increase community ties.

Migrants were somewhat more involved in decision-making around the business investments, especially when family members of the entrepreneurs were associated with the sponsoring club in the United States. In such cases, migrants were an integral part of determining the type of business investment to make and were fairly involved in day-to-day business decisions. What's more, as is discussed in the section on business development indicators, the migrant connection increased the business's opportunities to connect with external, better-paying markets for their products.

Additional value added

The businesses brought more than monetary gains to a number of communities. For example, the textile factory in Yuriria, Guanajuato, brought Internet to its isolated town where telephone lines are often down for weeks at a time. As a result, community members can communicate with migrant family members abroad via internet year-round. The eco-tourism park in Valparaiso, Zacatecas increased local interest and awareness in the value of environmental services. Realizing their unique environment has the potential to attract tourism and investment, community members are seeking ways to protect it. Finally, the pig farmer in Zacatecas is sharing his knowledge of eco-friendly farming with his neighbors to create widespread use of organic fertilizer and locally generated electricity.

There were also improvements to labor conditions, especially in farm-based businesses. For these businesses, the 4+1 contribution often went to capital investments in machinery like tractors, lifters, milking equipment, etc., that automates manual labor. The introduction of tractors and other labor-saving machinery in Leon, Guanajuato and Moyahua, Veracruz reduced the harvest's duration from a week to just one or two days. The manual harvest was back-breaking labor in which all family members would need to participate, including young children. Now that the tractors do the work in a quarter of the time, the family's children spend more time in school and the adults are able to invest the time saved in other aspects of farm labor. The improvements to social, environmental and labor conditions are important outcomes from the 4+1 investment that will see long-term social and economic benefits.

b) Business Development Indicators

We consider three areas of importance within the indicator of business development: revenue generation, integration into the value-chain, and business formalization. Together, these characteristics can help ensure sustainability because they strengthen the small businesses' ability to overcome the financial, technical, and networking constraints they typically face. Consistent revenue generation and formalization together increase an SME's ability to obtain financing from a formal financial institution. Revenue generation will also allow entrepreneurs to invest in technological innovations to remain competitive. Incorporation into the value-chain

facilitates an SME's ability to connect with other markets and providers, and helps the business maintain a steady cash flow which ultimately feeds back into revenue generation.

An overview of the beneficiary businesses and their potential for future growth is provided in below.

Table 2: Profile of the 4+1 Beneficiary Businesses

Business Industry	Agriculture	13
	Tourism	3
	Manufacturing	5
	Other	1
Finances	Making Profits	11
	Incurring Losses	5
	Incurring current year losses, but historic profits	1
	Business not currently marketing	5
Duration of Business Activity	Has not started producing	6
	Up to a year in production	6
	1-5 years ago	5
	5 or more years ago	5
Potential for Economies of Scale	Already producing with economies of scale	4
	Lacking capital investments to achieve economies of scale	4
	Lacking technical know-how to achieve economies of scale	9
	Business not organized to produce using economies of scale	5

Revenue generation

In determining the strength of revenue generation within 4+1, it is important to separately analyze the start-up and on-going businesses, since it can be expected that start-ups operate at a loss for the first few years. Of the nine on-going businesses, all but one are breaking even or making a profit. Among the 17 start-ups, six are generating a profit or breaking even, six are not yet producing, and three operate with losses; only one, a nopal farm in Zacatecas, was shuttered at the time of our visit, though the entrepreneur maintained hopes for its future operation. Notably, two of the three start-ups that currently operate at a loss do so after just one season of greenhouse tomato production. It can be expected that the first season of large-scale production will be made at a loss as outlays for materials exceed profits from sales. Moreover, the owners themselves recognize the first season as a critical learning experience they intend to build upon for the next season. The prospects for those start-ups that are already in operation are quite strong.

Both the on-going and the start-up businesses present potential for future revenue growth in the next 5-10 years. Businesses used 4+1 financial support for working capital (9 businesses), the purchase of primary materials (7), and the acquisition of equipment (8). The additional financing for business investment allowed entrepreneurs to expand the resources available for each project and, as mentioned, make labor-saving investments in equipment. These purchases reduced the cost of production, increased efficiency, and scaled up quality and quantity of output. Such investments have a short-term effect in reducing labor demand; however, in several cases the increased efficiency allows the business owners to invest more effort in expanding their business. Ultimately these investments will strengthen the business, allowing it to be innovative and resilient in the face of market shifts. It will also shift labor demands to new areas, including increased demand skilled labor. As these businesses see

returns and find stronger markets for their product, it can be expected that revenue streams will be largely positive, and profits higher.

Formalization

The experience within 4+1 of business formalization is strongly positive, especially given the low levels of small business formalization in Mexico¹⁴, but the provision of additional business development tools within the program would further strengthen the businesses and ensure their long-term sustainability. Beneficiary businesses under 4+1 were not required to formalize in order to obtain funding from the government¹⁵, but most businesses did formalize by becoming rural cooperatives or associations. Formalization could facilitate these businesses in attracting financing in the future.

Project Highlights: 4+1 leads to formalization and increased access to financing

A grain-growing business in Leon, Guanajuato is now well-positioned to obtain financing for additional tractors following the 4+1 investment. The business used 4+1 financing to purchase several tractors, which increased productivity from 2 to 3 harvests per year. A local tractor salesman observed that the business's formalization and increased profits would make them an attractive client for a low-interest loan on a tractor in a few years. The business, which a few years ago would be considered too risky for a loan, will soon be able to access Mexico's tight credit market at preferential rates. Increased productivity was a direct result of 4+1, but the business's formalization was an indirect outcome and a crucial element in the transition from informal to formal access to credit. Ultimately that transition will be the key to the business's long-term success.

While many 4+1 beneficiary businesses formalized, their knowledge and ability to access the benefits of formalization remain under-developed. Many business owners are not aware of or do not know how to obtain credit or state-provided assistance to small business owners. Only two businesses obtained private financing alongside the 4+1 grant, while four businesses sought additional 3x1 funding. Most businesses said they would look to an additional 3x1 grant or other state-supported grants in obtaining financing in the future; only four thought they would pursue loans from a bank or other financial institution. Despite the larger pool of financing that formalized businesses can attract, there is a tendency among the beneficiaries to see the 3x1 program as the exclusive way for entrepreneurs to channel resources to their business. This view is underlined by the fact that most businesses are cooperatives or non-profits, and as a result may be less attractive to private lenders when seeking a loan.

Integration into value chain

The clear challenge for most of the businesses in 4+1 is incorporating themselves into a value chain, either as an input in a processed good or by commercializing their product for export. Several of the start-ups that are not currently producing have yet to identify a viable market for their good. In each instance, a market does exist to buy their product, but the businesses have not been able to connect with that market. The obstacles to broaden their participation in the value chain often relate to the nature of small businesses and their poor access to larger companies. These businesses have limited capacity to generate enough production to fill one shipping container

¹⁴ *Políticas de apoyo a las PYMES en América Latina: Entre avances innovadores y desafíos institucionales*. Carlo Ferraro and Giovanni Stumpo, editors. Comisión Económica para América Latina y el Caribe (CEPAL). 2010.

¹⁵ Reglamentos de Operación. Mexican Federal Government. 2009.

and thus sell to intermediaries who buy smaller quantities at reduced costs. This is especially the case of the greenhouse and animal husbandry businesses, which struggle to produce the quantities and qualities necessary to fill a container export. An exception is the greenhouse in Vista Hermosa, Michoacán, which sold their first crop of cucumbers to an intermediary for export to Bakersfield, California. The harvest generated substantial profits which were reinvested in another greenhouse; in a few seasons production from both greenhouses should allow the business to fill a commercial container with its own product and sell consistently for export.

The 4+1 initiative offers small businesses an unparalleled opportunity to increase their incorporation into supply chains and find higher-paying export markets through the program's connection with migrant communities. Indeed, there is some indication that this is already happening. The fruits processor in Zacatecas works with migrant clubs to obtain import licenses to sell its sweets to migrants in the US. The club is also helping look for intermediaries and other outlets for sales once the licenses are approved. These advances could significantly improve the business's margins, permitting increased investment and greater demand for labor and local goods. Similar alliances are developing between the migrant organization and the eco-tourism park, also in Zacatecas, which it supported. In this instance, the owners count among their clientele the migrant families which contributed to their project. Through word of mouth among migrants in the United States, the owners hope to expand their client base beyond the domestic market. With similar stories emerging from a number of projects, the opportunities for collaboration between migrant networks and beneficiary businesses within 4+1 increase the prospects for greater integration into a value chain and the businesses' long-term sustainability.

Project Highlights: *Business development programs are a critical next step for many beneficiary businesses*

Integration into a value-chain wasn't so much a challenge of "if" but "how"—many entrepreneurs lack the business management skills to seek out connections to a larger marketplace. In the case of a textile factory in Yuriria, Guanajuato, the plant itself is capable of producing intermediate or finished goods as part of a larger supply chain, and it is located only about 4 hours away from Leon, a global production center for shoes and clothes, and the colonial town of Guanajuato, a major tourist attraction with the potential for sales in locally manufactured and embroidered clothes. The young female managers are inexperienced in sales, lack foresight in identifying business opportunities, and most do not know how to drive the business's small pickup truck to transport finished product. These shortcomings have impeded their ability to close deals, aside from a few isolated sales to hotels. These challenges are not insurmountable with training, and the group has already reached out to a business development trainer to guidance.

To summarize, the participant businesses exhibited characteristics and experiences of success that are similar or greater than other micro or small enterprise in Mexico. Consider, for example, agricultural production and commercialization of tomatoes. This is an activity that is labor intensive, requires significant start-up investment to procure modern equipment, and faces fluctuating commodity prices. Successful businesses likely need to produce for at least two harvests with sales of US\$80,000. Very few micro or small enterprises could achieve even those modest sales without an initial injection of US\$150,000. The fact that such gains have already been made suggests that economic growth and development could result as these enterprises expand. For now, the businesses are generally producing above a subsistence level, yet are not creating sufficient wealth to reinvest profits at economies of scale. However, once on track and with modest incentives these businesses have the ingredients to grow.

c) Program Implementation indicators

In addition to indicators of local impact as a result of the 4+1 initiative, we also consider the quality of implementation of the development project. It can be expected that a ground-breaking initiative such as 4+1 will encounter some challenges in carrying out the project for the first time. Therefore, we pay less attention to the project's smooth implementation and consider instead the relevance of additional funding to business development and whether this pilot project was implemented in a way that strengthened partnership among the various actors and increased the likelihood of similar funding mechanisms in the future.

Non-Duplicative Funding

The first metric we consider is whether the 4+1 financing provided non-duplicative funding to the beneficiary businesses. In other words, we ask how the beneficiary businesses would have achieved their current position had they not received any funds through 4+1. In the large majority of cases, the owners responded that they simply would not have been able to invest in their business at the levels provided via the 4+1 program (see Table 3 below). Without 4+1, they affirmed, the jobs, revenue, and increased demand for local resources would not have been possible. This reality is underlined by the fact that most of the entrepreneurs had the idea for their business more than three years ago, with six entrepreneurs planning for this investment more than 10 years ago. That they did not invest earlier indicates that the 4+1 funding did not replace some other private financing the entrepreneurs might have obtained. As mentioned previously, only two businesses coupled outside financing with the resources from 4+1, and most displayed limited knowledge of how to access other financing mechanisms. This suggests that the 4+1 funding was an unique investment opportunity for these small businesses.

Table 3: Alternative funding sources in the event of no 4+1 funding

Funding source	Number of projects
Private loan	1
State loan or matching grant	1
Personal funds	5
I would not have financed my business	17

In a few instances owners replied that they would have gone deeply into debt by seeking a personal loan, or saved for many years in order to make the purchases. Such actions could have limited the families' other financial endeavors, such as sending children to school or paying for medical expenses. It is also likely that the initial investment would not have been as large as the 4+1 donation even after years of saving. The resulting SME would have been chronically under-financed, like so many other SMEs in Latin America.¹⁶ The 4+1 investment jump-started a revenue-stream that will allow the entrepreneurs to continue to develop their businesses with less strain on their personal finances.

Partnership Strength

Given the slow-moving bureaucracy of the various levels of the Mexican government, funds took a long time to reach the beneficiaries. Sometimes delays on the part of government agencies caused business losses. This was the case of farming cooperative in Leon, Guanajuato, where a state budget crisis caused delays in the funding allocation. By the time the funding arrived, the price of tractors had risen beyond the reach of the 3x1 funding. Western Union's additional allocation allowed the cooperative to purchase the tractors it had budgeted for. Similar

¹⁶ Cepal 2010.

delays frustrated the owners of the eco-tourism park in Valparaiso, Zacatecas, who affirm that working with the government is too slow for a business's needs; they plan on seeking additional financing elsewhere in the future.

Project Challenges: Public-private partnerships face numerous bureaucracies

Although several businesses expressed frustration at the slow process with which the various Mexican government entities and Western Union dispensed funds for investment, there was a high degree of satisfaction with the process once completed. In other words, the financing the entrepreneurs ultimately received was well worth the bureaucratic process of obtaining it.

One state's experience stands out as an exception: Veracruz's participation in the 4+1 project was particularly fraught with delays. In fact, none of Veracruz's projects received funding from the federal or municipal governments, an outcome stemming from disagreements among the various levels of government. The migrant groups themselves were not required to make a donation to the project, and internal disagreement within the Veracruz state government continues to delay the allocation of state funds to the beneficiary projects. At the time of our site visits, the state still had not designated an entity responsible for allocating those funds, and no estimate could be given of when the businesses would receive them. Western Union determined that it would honor its commitment to the projects approved for the 4+1 initiative in 2008, and in 2010 contributed funds to the six Veracruz projects. As a result, the beneficiary businesses in effect received only one of the five portions they originally expected, which greatly limits the businesses' impact on local economic development in the very poor communities in which they are located.

Public-private partnerships face additional challenges given the complexity of regulations and requirements among participating agencies. When projects fail to meet one institution's standards, it can cause a cascade of implementation and funding challenges. In instances like these, as in the case of 4+1, one institution may need to take leadership in resolving the challenge. Western Union might have been able to use its role as a ground-breaking private sector actor to urge the other partners to fulfill their obligations and achieve the end-goal of improved local development.

Beneficiaries of the 4+1 program struggled as they waited for the promised funding, and the cost to those businesses from delays likely caused them to dip into their own savings, if only temporarily.

Conclusion

Mexico's 4+1 program is an innovative initiative between migrant communities, three levels of the Mexican government, and the private corporation Western Union which, at this early stage, appears to be modestly successful at stimulating local development. The financing made available to start-up and on-going businesses helped many to invest in technology for improved labor conditions and efficiency gains. Additional labor demanded could prove to be a long-term economic stimulus to local communities, especially in the depressed markets for women's and skilled labor. The connections that 4+1 helped build between migrants and small businesses in their home communities has the potential to expand the businesses' market, generative higher profits, and developing a greater sense of transnational community. Those aspects of program implementation which we identified as areas for improvement, including a disconnect between business financing and business development strategies and the bureaucratic process for releasing funds, had minimal impact on the overall outcome of the initiative. They also have strong potential for incorporation in future iterations of this project.

Given the early signs of success within the 4+1 program, opportunities to improve and strengthen this type of partnership are important to consider. The addition of Western Union funds in particular demonstrates the viability of multi-sectoral partnerships with migrants. Partnering with migrants is a relatively new area for expanding development efforts, one in which governments, much less the private sector, are only beginning to realize. It is hoped that the early success of this initiative will crowd in more private-sector funding for migrant-led development projects. With this goal in mind, in this concluding section, we offer recommends for improving and expanding the program, focusing in particular on the potential role for Western Union or another private sector entity to provide leadership in public-private-migrant investments.

First, given the slow-moving bureaucracies of the various levels of the Mexican government funds took a long time to reach the beneficiaries. Sometimes delays on the part of government agencies caused business losses. This was the case of farming cooperative in Leon, Guanajuato, where a state budget crisis caused delays in the funding allocation. By the time the funding arrived, the price of tractors had risen beyond the reach of the 3x1 funding. Western Union's additional allocation allowed the cooperative to purchase the tractors it had budgeted for. Similar delays frustrated the owners of the eco-tourism park in Valparaiso, Zacatecas, who affirm that working with the government is too slow for a business's needs; they plan on seeking additional financing elsewhere in the future. Beneficiaries of the 4+1 program struggled as they waited for the promised funding, and the cost to those business from delays likely caused them to dip into their own savings, if only temporarily.

Veracruz's participation in the 4+1 project was particularly fraught with delays and other problems with the funds contribution. It is noteworthy that none of Veracruz's projects received funding from the federal or municipal governments, an outcome stemming from disagreements among the various levels of government. The migrant groups themselves were not required to make a donation to the project, and internal disagreement within the Veracruz state government continues to delay the allocation of state funds to the beneficiary projects. At the time of our site visits, the state still had not designated an entity responsible for allocating those funds, and no estimate could be given of when the businesses would receive them. Western Union determined that it would honor its commitment to the projects approved for the 4+1 initiative in 2008, and in 2010 contributed funds to the six Veracruz projects. The beneficiary businesses in effect received only one of the five portions they originally expected. This is a serious discrepancy, and greatly limited the capacity of those businesses to strengthen local economic development in the very poor communities in which they are located.

Some barriers that 4+1 businesses face, and which a technical advisor could help overcome include:

- *Continued financing:* Most businesses were unfamiliar with obtaining business development loans, and a few lack knowledge of governmental funding sources. A technical advisor could help connect these viable businesses with financial institutions interested in supporting them.
- *Marketing:* While many businesses were skilled in developing and producing their product, they faced uncertainties how to market. A technical advisor could assist in finding local, national and international markets for goods and support the businesses in reaching those markets.
- *Business Administration:* Support in managing a growing business would greatly improve the experiences the small business within the 4x1 project faced. Technical assistance with managing budgets, cash flow, and employees would be a valuable addition.
- *Business Formalization:* Technical advice early on in the formalization process regarding the costs and benefits of different types of legal identities would enable the entrepreneurs to choose the designation

most appropriate for their business. The businesses would also benefit from financial counseling to learn how to leverage their formalization for the enterprise's future growth.

Efforts such as these would ensure that more businesses overcome barriers that might cause them to shut down or, at the very least, slow business growth and limit the economic impact of each awardee. It is estimated that a part-time technical advisor could sufficiently respond to the needs of the 26 projects currently in place, with the result being improved development impact within 2-3 years. This exercise may involve increasing the amount of funding, but would generate greater dividends for local development over the long-term.

APPENDIX A

Table 1: Projects funded in Mexico's 4+1 initiative

	Business	Investment made within 4+1					Total
		Federal	State	Municipal	Migrant	Western Union	
	Guanajuato						
1	Farm Equipment for Milk Production	\$ 285,125	\$ 285,125	\$ 285,125	\$ 287,156	\$ 171,075	\$ 1,313,606
2	Textiles Manufacture	\$ 510,160	\$ 510,160	\$ -	\$ 1,118,838	\$ 216,628	\$ 2,355,786
3	Farm equipment for Cattle Feed Production	\$ 372,725	\$ 372,725	\$ 372,725	\$ 374,610	\$ 223,635	\$ 1,716,420
4	Farm Equipment for Horticulture Production	\$ 786,873	\$ 786,873	\$ 786,873	\$ 801,277	\$ 472,124	\$ 3,634,020
	Guerrero						
5	Greenhouse for Vegetable Production	\$ 800,000	\$ 800,000	\$ 800,000	\$ 800,000	\$ 334,000	\$ 3,534,000
	Michoacan						
6	Lamb Farm	\$ 143,500	\$ 143,500	\$ 143,500	\$ 143,500	\$ 144,760	\$ 718,760
7	Commercialization of Tortilla Products	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 315,840	\$ 1,515,840
8	Greenhouse for Production of Tomatoes	\$ 375,000	\$ 375,000	\$ 375,000	\$ 375,000	\$ 329,000	\$ 1,829,000
9	Greenhouse for Production of Tomatoes	\$ 500,000	\$ 500,000	\$ 500,000	\$ 500,000	\$ 329,000	\$ 2,329,000
	Veracruz						
10	Greenhouse for Flowers	\$ -	\$ 122,341	\$ -	\$ -	\$ 122,341	\$ 244,682
11	Milk Products Production	\$ -	\$ 164,984	\$ -	\$ -	\$ 164,984	\$ 329,968
12	Milking Equipment	\$ -	\$ 239,687	\$ -	\$ -	\$ 239,687	\$ 479,374
13	Agri-Tourism	\$ -	\$ 271,306	\$ -	\$ -	\$ 271,306	\$ 542,612
14	Pork Farm	\$ -	\$ 324,669	\$ -	\$ -	\$ 324,669	\$ 649,338
15	Greenhouse for Flowers	\$ -	\$ 584,150	\$ -	\$ -	\$ 584,150	\$ 1,168,300
	Zacatecas						
16	Assembly of Computers	\$ 19,865	\$ 19,865	\$ 19,865	\$ 19,865	\$ 19,865	\$ 99,325
17	Cultivation and Sale of Prickly Pear Vegetables	\$ 24,351	\$ 24,352	\$ 24,351	\$ 24,351	\$ 24,351	\$ 121,756
18	Fish Farm	\$ 64,140	\$ 64,140	\$ 64,140	\$ 64,140	\$ 64,140	\$ 320,700
19	Fruit and Vegetables Processor	\$ 213,090	\$ 213,091	\$ 213,091	\$ 213,091	\$ 213,091	\$ 1,065,454
20	Green House	\$ 351,750	\$ 531,415	\$ -	\$ 523,835	\$ 329,000	\$ 1,736,000
21	Commercial Marketplace	\$ 978,512	\$ 1,557,024	\$ 150,000	\$ 1,228,512	\$ 329,000	\$ 4,243,048
22	Eco-Tourism Park	\$ 1,005,681	\$ 1,005,681	\$ 1,005,681	\$ 1,005,681	\$ 329,000	\$ 4,351,724
23	Pork Farm	\$ 122,500	\$ -	\$ -	\$ 122,500	\$ 375,000	\$ 620,000
24	Eco-Tourism Park	\$ 683,320	\$ 683,320	\$ 683,320	\$ 683,320	\$ 683,320	\$ 3,416,600
25	Mezcal Factory	\$ 906,776	\$ 968,224	\$ 937,500	\$ 1,187,500	\$ 1,630,000	\$ 4,442,500
26	Mezcal Factory	\$ 906,776	\$ 968,224	\$ 937,500	\$ 1,187,500	\$ 1,630,000	\$ 4,442,500
	Total	\$9,350,144	\$11,815,856	\$7,598,671	\$ 8,585,676	\$ 9,869,966	\$47,220,313

Comments
Western Union's contribution in pesos to projects #6,7,8,9,20,21 & 22 is estimated based on their contribution in dollars and the exchange rate most frequently cited for the other donations (13.16:1)
No data is available for Western Union's exact contribution to projects 16, 17, and 18. Estimates are made based on Western Union's total contribution of US\$750,000 to the 4+1 initiative.
WU's contribution averages 24% of the total investment, but only because projects in Veracruz didn't receive a contribution from the federal, municipal govt or the migrants. Excluding Veracruz, the proportion of WU's contribution drops to 16% of the total investment (see columns P and Q).
WU's average contribution is estimated at MX\$380,000 or \$28,800, with a total contribution of MX\$9.87 million or \$750,000.
Sources: Western Union; state governments of Guanajuato, Guerrero, Michoacán, and Zacatecas.

Table 2: Evaluation Indicators and Their Definitions for Start-up and Continuing Businesses

Indicator	Start up	Continuing
Community Impact Indicators		
<i>Economic stimulus</i>	The business hires employees to initiate its operations and guarantee a stable source of income to the labor force in the local community. Has the potential to reduce the cost of a locally scarce resource or increase demand for a locally abundant resource.	Hiring additional workers increases productivity while it increases labor demand in the local community. Presents a consistent consumption of locally abundant resources such as farm products and/or lowers the cost of a locally scarce resource.
<i>Social capital creation</i>	Integrates members of the community and the diaspora to work on the decision making, business design and roll out of the business	The business engages the local leaders and invites other households/families to join the association to grow into a larger business.
<i>Additional value-added</i>	The enterprise represents some new service or innovation useful to the community.	The investment allows the business to improve social conditions of its workers or community.
Business Development Indicators		
<i>Revenue generation</i>	Initial production at one year of operation generates sales just below or at breaking point.	For businesses in operation for more than two years, sales increase by 20% and leave profits for reinvestment or shareholders distribution
<i>Value-chain integration</i>	Production unit formalizes and carries out contracts with other enterprises in the commodity's value chain	Achieve vertical growth by selling to larger distributors, adopting new methods to increase productivity
<i>Business formalization</i>	The business register its existence with the local authorities	Registration and licensing is expanded to most of its activities
Implementation Indicators		
<i>Non-duplicative funding</i>	The startup would struggle to move forward without the funding and could not access those funds elsewhere.	The ongoing business was able to utilize these funds to proportionally expand production in a way it otherwise would not have.
<i>Partnership strength</i>	The extent to which the development project was implemented smoothly, transparently, and with minimal delays. Likelihood of continued co-investments occurring in this or another community.	

Appendix B: Selected 4+1 Project Descriptions

Agriculture	
<i>Greenhouse Production</i>	<ol style="list-style-type: none"> 1. Greenhouse for Production of Tomatoes – Vista Hermosa, Michoacán 2. Greenhouse for Production of Tomatoes – Francisco Villa, Michoacán 3. Greenhouse for Production of Tomatoes – Pilcaya, Guerrero 4. Greenhouse for Flowers – Tepatlaxco, Veracruz
<i>Field Production</i>	<ol style="list-style-type: none"> 5. Nopal Cultivation – Nochistlán, Zacatecas 6. Cattle Feed Production – Leon, Guanajuato
<i>Animal Husbandry</i>	<ol style="list-style-type: none"> 7. Fish Farm – Mayahua, Zacatecas 8. Pork Farm – Pánuco, Zacatecas 9. Milk Cooperative – Leon, Guanajuato
Tourism	
	<ol style="list-style-type: none"> 10. Eco-tourism – Valparaíso, Zacatecas 11. Eco-tourism – Zoquite, Zacatecas
Manufacture or Sale of Goods	
	<ol style="list-style-type: none"> 12. Milk Products Production – Miahuatlán, Veracruz 13. Computer Assembly Shop – Nochistlán, Zacatecas 14. Fruit and Vegetables Processor – San Mateo, Zacatecas

1. Greenhouse for Production of Tomatoes – Vista Hermosa, Michoacán

Reinvestment of profits and connections with profitable markets ensures strong growth in a local greenhouse.

In La Angostura, about 15 people have invested in a tomato greenhouse that's half a hectare in size. Dividends from the profitable first season of production were reinvested in a second greenhouse that is still being completed. In addition, there is a solar panel to pump water, and the manager, Don Luis, intends to start composting the vegetable waste to use as fertilizer for upcoming seasons. Old horse corrals nearby will be converted into offices, and a sheltered area is used for sorting and packing produce. They have name-branded boxes designed, which helps build name recognition among buyers. The associates themselves work in the greenhouse, paying themselves MX\$150 a day. They also employ a number of women, especially and pruning and packing since, the manager Don Luis observed, women tend to be more detail-oriented.

In the first season of production, Don Luis exported cucumbers to Bakersfield, California. They made sure that the cucumbers were cut and packaged at the right moment to ensure export quality, and only a small box of cucumbers was ultimately rejected. Those were given away to associates and the community. The growers switched to tomatoes this season because they knew at the time of planting that their harvest would occur when cucumber prices were lowest, but tomato prices would be higher. They currently sell tomatoes in Guadalajara, but are looking for export possibilities there too.

Don Luis affirms that building their greenhouse business is a project that will last several years and that they can't expect to see returns in the short-run since there remains a lot more construction to be done. He would like to see obtain more 3x1 funding to achieve these goals.

2. Greenhouse for Production of Tomatoes – Francisco Villa, Michoacán

A greenhouse has the potential to raise incomes once it incorporates itself into the value chain.

The rural cooperative of 60 associates began with a half hectare greenhouse for growing tomatoes, but through several years of 3x1 support and some investment by the members, there are now 3 greenhouses each a half hectare in size. The most recent batch of 3x1 funding dug a well near the greenhouses to reduce the cost of irrigation. They grow tomatoes, with one area set aside for incubating and sprouting tomato plants so that they don't have to buy the plants from another grower. About 8 people, and up to 12, work regularly in the greenhouse for MX\$150 a day. These are mostly young men whose families are not associates of the cooperative and as such are earning an income additional to any income the investors may receive.

At this point the growers are selling to the local market in Morelia, where the price of tomatoes varies but averages MX\$4 per kilo—which the growers say is about the cost of production. As a result, associates haven't received any dividends from the endeavor since they are always breaking even. One time they tried to export tomatoes, but they did not classify their crop, instead turning it all over to the commercializer. The commercializing company picked through the tomatoes, selecting only export quality, and did not pay for the rest. After this experience, which the associates termed "robbery," they haven't tried exporting again. Given the highly developed infrastructure the cooperative already has in place, the cooperative has the potential to develop a successful partnership with a commercializer or as an integrated part of a value-chain industry (e.g. salsa or ketchup). With an additional business management skills, they could begin to see profits from their investment.

3. Greenhouse for Production of Tomatoes – Pilcaya, Guerrero

The 4x1 program produces Guerrero's largest greenhouse and provides livelihoods for 30 women. The project still needs financing to make it profitable.

In 2007, the new municipal president, a young man raised in Bakersfield, California but born near the small town of Pilcaya, organized the community to build greenhouses. Most greenhouses were 1000m², but with 4+1 resources a group of 30 women constructed a greenhouse that covers one hectare of land. In the fall of 2010, the women produced their first crop, but the yield hit the market precisely when Florida, California, and Sinaloa tomatoes were also marketed, dropping the price of tomatoes to 7 pesos a kilo. As a result, earnings were low at \$400 per woman after several years of work and a significantly larger investment of savings on the part of each woman. The women felt the pressure of debts and school costs and so chose not to reinvest profits in the purchase of supplies for next season. Now they need about \$30,000 financing for the next season, and have few ways of obtaining that money other than saving it among themselves. The personal investment has grown far larger than any of them imagined, and some women are dropping out of the project.

Despite the poor returns this year, the investment has the potential to be very productive. First, the greenhouse's tomatoes would get a better price if the yield was timed to come in before the modern and mechanized harvests of northern states. Second, the cooperative's member could increase efficiency through improved cultivation techniques. Third, given the potential size of their harvest, they could contract directly with a commercializer instead of going through intermediaries, and that commercializer could direct their product to export markets. These three changes should sufficiently increase profitability to allow each family

to take home some money from the investment and still leave some for reinvesting in the greenhouse. Some expenses that they will need to prepare for are repairs to the greenhouse roof (every 3 years), maintaining a constant supply of fertilizer and other inputs, improvements to the soil, construction of a processing and packaging area in front of the greenhouse, and a truck to transport their product. By integrating these last two steps, they would be able to retain even more of the earnings from the tomatoes.

Other greenhouses constructed in the area have been profitable, indicating that Pilcaya's greenhouse can also be profitable if it overcomes its current hurdles. Several families started with one greenhouse of 1000m², and reinvested the profits in one or two other greenhouses. Some families have diversified into peppers, another plans to start producing tomatoes from seed and selling the seedlings locally (currently seedlings are sourced from greenhouses in Mexico state). These examples indicate that greenhouses are profitable; the biggest difference with the greenhouse in Pilcaya is scale. Pilcaya's larger scale is an opportunity to improve efficiency and increase profits per investor—as long as their tomatoes can reach a large market. Otherwise, their crop would flood local markets and reduce the price per kilo, harming the women involved in the cooperative as well as other tomato-growing smallholders in the area.

4. Greenhouse for Flowers – Tepatlaxco, Veracruz

A greenhouse provides incomes to send children to school and supports the local economy in marginalized communities.

David Peralta was a migrant in Orange County, where he worked for 5 years in a restaurant. When he returned home, he tried several income-generating projects, including raising chickens (which eventually died from avian flu) and supporting local party leaders in Veracruz (which required more money spent than he directly earned). While he was in the US, he sent money to his mother to build a small greenhouse in which she could grow anthuriums. The plants grew quite well, and after the failure raising chickens David decided to invest in another larger greenhouse. He heard about 4+1 through his political contacts, who helped him submit the application. The funds from Western Union arrived in late 2010 (see discussion in full report), and were used to purchase plants from Belgium and to finish the greenhouse that David started with his own investment. The greenhouse is now complete, despite destruction from a September 2010 hurricane, and the majority of plants are producing flowers. David has identified red anthuriums as his niche market, since demand is constant and the red flowers are hardiest as compared to white or other colored flowers.

The greenhouse is currently earning a profit and supporting five families. The income is divided among the families according to how many children they have, as the profits are intended to pay for the children's schooling. Expenses include fertilizer (MX\$730 for 50 kilograms; needed every two months), additional natural fertilizers that he buys from local producers (such as coffee bean shells, manure, sawdust, and broken lava rock); pest killer; the part-time labor of 2 women to clean the flowers (one of whom is disabled); and transport to Xalapa (about two hours away) every week or so to sell the flowers (in David's own truck). David also has to purchase flowers from Belgium twice a year in order to maintain a quality stock. This costs MX\$90,000, though he shares the cost with growers in the area. A general estimate of David's expenses is MX\$150-200,000. Income during the hot season is MX\$10,000 a week, and MX\$6,000 every two weeks in the cold season. According to these estimates, about half of revenue is a profit.

David plans to double the size of his greenhouse to 30,000 plants. He estimates that it will take 4 years to do so without further financing. He plans on cutting down coffee trees to make way for the greenhouse, and ultimately get out of coffee completely since he recognized that the coffee market is very unstable. In addition to a larger greenhouse, he wants to buy a refrigerated truck to allow him to transport his flowers further—Cancun, for example, pays 3 and 4 times per flower what Xalapa does. His vision for an expanded greenhouse would employ about 12 people. In addition, he would continue to purchase from the smaller area growers, further driving local demand for goods and services.

5. Nopal Cultivation – Nochistlán, Zacatecas

Unforeseen problems scuttle a business that lacked planning, but had the potential to demand local resources.

The nopal farm financed under 4+1 consisted of 3/4 hectare of land on which some nopal cacti are planted. The business is now defunct, though the entrepreneur insists that it can start up again easily as soon as there is more demand in the market. The business plan was to purchase a small parcel of land and sell nopales to a tortilla factory in nearby Morelos, Zacatecas. The original 8 business partners would employ three people to water and care for the cactus, and they would buy up more cactus for neighboring farmers. The contract with the tortilla factory owner was to pay MX\$5,000 for 5 tons of nopal each week. Since the plot of land would only produce 1 ton of nopal every 6 months, the intention was to buy from other farmers in the region and split the price with them. Estimated costs were MX\$1,250 for transporting the nopal, MX\$150 for paying wages and \$150 for irrigating the nopal. The profits from the sales would be invested in 4 ha more land for growing nopal, with estimated additional employment of 12 people, and ultimately a tortilla factory in Nochistlan. None of this happened because in 2008, just when the contract was about to begin, the factory owner's sister was kidnapped and he sold many of his machines to pay her ransom. The entrepreneur funded through 4+1 also received threats and went to Canada for several months. The factory owner is now thinking of re-opening, but is seeking financing to buy new machines. There is no other significant demand for nopales in the area, and transport to other states is too expensive. The business is abandoned for now, until a new offer comes along.

The 4+1 experience was further marred by the fact that the previous municipal president didn't prioritize 3x1 in his policy agenda, so didn't provide much support to the business. The government managed all purchases and kept a very limited budget that didn't allow for all the necessary purchases. Now that the new municipal president is more interested in the program, the entrepreneurs are thinking of seeking a new 3x1 grant to build the tortilla factory in Nochistlan.

6. Cattle Feed Production – Leon, Guanajuato

Tractors and other machinery increase income and opportunities for a farming community.

The farming cooperative is located on nutrient-rich soil fed from black water run-off from the city of Leon. The farm land is not suitable for growing food for human consumption, but is excellent for growing pasture for farm animals. Before the 4+1 grant, the community harvested by hand, which took 2-3 days. With the purchase of 2 tractors and some additional machines, that labor now takes a few hours. Tractors are rented

out to business partners and neighboring farms, and there is a maintenance fund for repairs. The time savings has allowed cooperative members to complete three almost harvests in one year, up from two in years past, and increased productivity from 8 tons to 13 tons per hectare. Revenues are now 2-3 times the costs per hectare. That extra income is being invested in cattle. There is also new demand for skilled labor in tractor operation and maintenance. A 16-year old told me he had worked in the U.S. for a time and would have migrated again if not for the tractors—he is now a driver and his little brother, 11, likes to cut school to learn how to drive one. In general, the population in this area is much younger than the other two farming cooperatives we visited, suggesting that youth see opportunities for earning an income in the area as an alternative to the need to migrate.

We spoke with the tractor dealer that sold the tractors to the cooperative, who said that with 2-3 years of strong production the association could qualify for a low interest loan. Without 4+1, they would never have bought the equipment, hence would never have produced at the rates they have today, hence would never qualify for that future loan.

7. Fish Farm – Mayahua, Zacatecas

A business model with the potential for invigorating the local economy needs a market for its product.

The fish farm was originally intended to be a pitahaya (an exotic fruit) farm, but the owner Guadalupe Degadillo says that the person who had made that proposal was unable to secure the land or additional funds necessary. Lupe is president of the club that made the donation, and since he didn't want to see the money go to waste he decided to invest in a fish farm. If the funding hadn't been available, he wouldn't have invested in the farm (though he is an entrepreneur, and he might have made another investment sometime in the future). The farm consists of two buildings with four tanks each; each of the tanks is filled with about 2000 fish. The buildings will last 6 years without the need for significant repairs, and the tanks should last 10 years. It took about three years to construct, employing a contracting service from outside the village, and parts of the farm started functioning almost a year ago. The current batch of fish will be the first large though. So far they have only sold to the local community, but they will have to look for an outside market with the latest harvest. At the moment, Lupe subsidizes the business from his earnings as a roofer in California, and that subsidy in part pays the salaries of the three employees: his mother, father, and a neighborhood girl. He is currently working with his brother, the previous municipal president, to obtain a 50% subsidy for electric usage, which is the largest expense; without the subsidy the farm would not be able to make a profit.

Lupe is planning a second phase, once the first is well-established. He'd like to build a restaurant on premise where people could order the fresh fish and have a recreation area nearby. The plan would be to employ 12 people at the restaurant. He would like to get additional 3x1 funding for that, but is also considering a 2x1 program with the Fish Department. He has also made some investments on his own, including a creating a man-made pond irrigated by an underground stream which maintains fish inexpensively—there is no need to clean, no electricity, and the food comes from the ground. He has plans for continued expansion as the sales of fish bring a profit. The fact that the local market may not support his supply is some cause for concern.

8. *Pork Farm – Pánuco, Zacatecas*

A pig farms gets off the ground with the 4+1 program, but needs additional funding in order to produce to scale.

The pig farm is a small but on-going business established about 15 years ago by Gerardo's father. Today, his father, brother, and he make up the business, though Gerardo puts in the most effort and receives the most revenue. Gerardo stated that his intention is for the farm to be a family business that employs no outside labor. It consists of two buildings, about five sows, one boar and a revolving number of piglets. The farm produces almost enough food and scraps to feed the pigs, and Gerardo has to buy some feed to sustain them. The feed comes from the wholesale market nearby. The farm also sells worm casings, which are grown from the organic waste and manure created by the pigs. The organic fertilizer business supplements the sale of pigs, which is mostly to the local community. Gerardo says that there's high demand for his pigs, despite plenty of competition, because people know he raises them well and in a clean environment. Also, he is willing to sell unneutered pigs, which means that others can access the imported Arabian pig strain that he purchased. He has also taught people about pig and worm-farming.

If Gerardo had not received Western Union funds, he would have invested in the pig farm himself, though growth would have been even slower. The 4+1 funds built the second building, but the money wasn't enough to cover electricity or finish the building (open windows etc.) This leaves the pigs more vulnerable in winter.

Gerardo has many plans for how to grow his business, but no knowledge of how to access financial products that would help get him there. A company in Venezuela wanted to buy pigs from him recently, but the contract required too large and frequent production—he needs about a 100 sows to keep up with that demand. Similar contracts in Mexico have also fallen through. He has a credit history in the US and would like to get a loan, but says it wouldn't be approved for a business in Mexico. He doesn't know how to get a loan in Mexico and finds banks in Mexico distrustful of his business. As a result, he is stuck in the long slow process of saving little by little to grow his business, and is unable to scale up to meet the demands of large purchasers. In an effort to remain sustainable, Gerardo looks for ways to become entirely self-sufficient, limiting his demand for outside resources including electricity—he plans to develop a generator that can convert the runoff muck for the pigs into electricity.

9. *Milk Cooperative – Leon, Guanajuato*

4+1 assistance improved labor conditions in a well-established milk cooperative, but the impact on the local economy may have been minimal.

The Nuevo Lindero milk cooperative was established in 1995 when a group of 45 partners (about 10 families) received financing for a Canadian breed of cattle. A typical family owns about 10 milk cows, which each produce 15L of milk a day. SIGMA pays MX\$4 per liter, providing gross revenues of MX\$600 per day for a family. Costs include vitamins and antibiotics for the cows, plus fodder—though the cooperatives aims to be self-sufficient, last year was not a good year for pasture, and many bought fodder for their cows, which eat 20 kilos of food each day. Two years ago the cooperative obtained financing through SIGMA, a distributor of dairy products, to buy new cattle stock from New Zealand—they will continue to pay SIGMA MX\$60 a week for one more year for the new cattle. The cooperative charges ten cents for every liter of milk sold to SIGMA

for a maintenance funds for the machinery. Many in the community are supported by remittances, as income from the milk is not enough to cover costs.

Under 4+1, the cooperative's members bought tractors, lifters, mowers, packers and milkers to reduce the reliance on manual labor. Before this investment, tasks such as milking could take an hour, but is now completed in 15 minutes; harvesting fodder would have taken several days, and is now complete in half a day. As a result, more labor is freed up for other jobs and for increased investment of labor in the milking cooperative.

The machines were divided up based on families' needs (according to a municipal resident accompanying us) so male-headed families received tractors and female-headed households got milkers; those lacking tractors must rent them from another person. A woman member of the cooperative approached us during our visit to request a tractor from Western Union, suggesting that the division of machines left some dissatisfied.

The migrants' contribution was donated from the remittances each family received. When the project was approved, the state's money came too slow due to a budget crisis, and by the time it did, the price of iron was very high. As a result, the cost of the machinery was beyond what had been budgeted for. If Western Union hadn't arrived at that time, the cooperative would not have been able to complete its purchases.

Plans for expansion include interest in buying a pasteurizing machine that would increase the value of the milk by MX\$2 per liter. They would also like to buy a bottler and sell the milk locally. They are looking to get financing from the state in a 1x1 deal. Another goal they have is to manufacture the pellet feed for animals.

10. Eco-tourism – Valparaíso, Zacatecas

Entrepreneurs willing to make large investments see limitations in the 4+1 program; while the funding is a good start, they now face the challenge of financing the rest of their business.

The eco-tourism park Villas Paraiso (www.paraisoresort.com.mx) is made up of 400 hectares of land stretching across four distinct biomes. It is run by 19 associates, some more involved than others. Many of the members are returned migrants, some are still abroad. One member donated his land, another donated capital, another a smaller amount of land. They have agreed with the nearby communal landholders that run a hot springs park that Villas Paraiso will offer amenities the hot springs do not have, such as cabins and a convention center, as well as eco-tourist attractions and hunting. Included in the price of staying at Villas Paraiso is the cost of a ticket to the hot springs (MX\$20), so each client to the park is also a client/ticket sale for the communal landholders. At the moment there are 12 employees, but expect to add another 6 during the high season in December. These are paid between MX\$1,000-\$1,200 a week depending on their responsibilities. Currently about 200-300 people visit per month during the high season, and 40-50 per month during the low season. The hot springs receive about 28,000 guests per year, though it should not be expected that the 28,000 would become guests at the tourist park. The principal market is the regional population living no further than 300km away, though there is interest and plans to expand to a national market. Also at the moment about 3% of the market is international—mostly migrants visiting their families. While initially the associates contributed to expenses, after the first 3 months of the park's running the receipts from sales were covered expenses (though not allowing for recouped investments).

The associates acknowledge that 4+1 helped them during the start-up phase of their project, but given some frustrations with the financing process, they intend to seek other financing methods in the future. In particular, the local government's preference towards caution in investing caused the project to be less ambitious than it could have been, where other investors might have taken higher risks for greater rewards. In addition, after much negotiation, the associates gained control over their purchases and spending, allowing them to stretch the 4x1 funds much farther than the original budget allowed and than municipal government intended. From those efficiencies they had enough funds to build two additional cabins high in the mountains. In sum, the entrepreneurial sense of the associates clashed with the governmental bureaucracy in the project.

While the business has many plans, it also has a number of challenges ahead. One associate estimates that another hundred million pesos would allow him to complete the project, employing a total of 60 people and fully recuperating the investment. The roads to many of the cabins, though, are unpaved, dangerous, and in the rainy season many times impassable. Also, significant drug running occurs in the mountains, dampening interest in camping there. While the new municipal president spoke to me with interest in paving the roads to the cabin, mentioning that it would also bring paving to many marginalized communities, there are larger problems in the area which could dampen growth in the long-term.

11. Eco-tourism – Zóquite, Zacatecas

A development project that was nominally converted to a productive project, investing in the museum had large opportunity costs for the town and micro-enterprises involved, but it offers some opportunities for educating children and increasing interest in environmental protection.

Don Pablo and some acquaintances had an idea for a museum that researched and taught reclamation of the semi-desert regions of Zacatecas. They formed a civil association of engineers and professors from the community and local communal landholders donated 20 hectares of land. The one employee, Doña Celia, is an 80-year old woman who maintains the 20 ha of land. Part of the idea of the 4+1 project was to form micro-enterprises like food vendors that would be located within the park and sell to visitors. Another idea was an artisanal textile workshop within the museum that would sell goods. A lack of ticket sales means there's not much business and people who invested in a micro-enterprise are growing disillusioned. Local resources that were used include labor, bricks, some other building materials for the museum. Construction is over now, though, so there isn't any more demand for those goods.

The 4+1 funds were used to construct barracks-style bunks for camping out overnight; however, the project has not been completed—there are no bunk beds yet, no water and no drainage, so effectively just a shell of a building. The municipality managed the purchases and continues to manage the accounts for the museum. The municipal government covers the costs of maintenance (MX\$500/week for Doña Celia) and repairs; no one can foresee a time when the municipality will no longer need to subsidize the museum. The few additional costs are covered with the MX\$300-\$400 obtained weekly from ticket sales. Migrants visiting family at the end of the year are a strong source of sales, as are school children out on field trips. The municipal population tends not to use the park since they don't know what it offers and haven't been very involved in the decision-making process. Still, there was some acknowledgement that the museum has been a useful tool for teaching children about their heritage and offering a family-oriented place to pass the time. They hope to expand the market to include visitors to the church in a neighboring village, where the *Niño de*

las Palomitas is a growing pilgrimage site. The *Niño* is the only tourist competition, but that also means there's very little tourism in the area, which increases the difficulty of attracting customers. Plans for growth include additional expansions to the museum, for which they would like to take out another 3x1 grant.

Significant community resources (from the municipality and human resources of the civil association) have been invested in the museum which could have been invested elsewhere. The families of the micro-businesses have also invested assets, and the communal landholders have invested land. Despite a great deal of effort, the future of the museum as a productive enterprise and job creator remains uncertain.

12. Milk Products Production – Miahuatlán, Veracruz

A cheese-making facility remains in the proposal phase.

This project is a joint production with the milking cooperative. The 15 women and families in the cheese-making cooperative plan on running a facility that buys milk from the milk cooperative at rates slightly higher than the cheese processors in the area. They plan on selling the cheese in markets in Veracruz city, where specialty cheeses are more expensive than in nearby Xalapa. There's a good deal of competition in the region for cheese, but they intend to sell to the niche market of all natural products, with the aim of obtaining a high price for their goods. Competition in the area does ensure that there is plenty of access to transport vehicles to carry their products to distant markets.

These ideas remain a plan at the moment, since the women only recently purchased some equipment following Western Union's delivery of funding in June 2010. The equipment includes a table and processor for making cheese and yogurt. The women acknowledge they need to make many more purchases before being able to market their product. They are unsure where they will obtain the financing, though.

Similar to the milking cooperative, the women in the cheese coop did not know much about the 4+1 process or the ultimate plans for their cooperative. They turned to a local development specialist with those questions. An optimistic interpretation of the specialist's role would be that he is leading the group by the hand and introducing business management to them in stages they can handle, managing the rest himself until they can take it on. A more cynical view sees him as ensuring the continued need for his presence, and with that more support for his own livelihood, which he gains through state, federal, and some local contracts.

13. Computer Assembly Shop – Nochistlán, Zacatecas

A small computer assembly business might have fared better if it had financed itself— by starting out smaller and managing its own budget, it may have found more efficient modes of production.

Five young women opened the computer assembly shop in 2007 with 4+1 funds, though now only three are officially involved and one of those has gone to the US to work. The business entails constructing desktop computers and selling them locally, though they have also expanded into purchasing laptops online and selling them at a small markup, selling computer and cell phone apparatus and candy as well as offering internet in their small shopfront. The expansion was necessary because computer assembly alone wasn't bringing in enough money. All materials are sourced online and shipped to them in Nochistlan, where they sell to families

and some schools—the sponsoring club in 3x1 bought computers from them to donate to a local school. They have a loyal clientele in the internet café whom they help understand and navigate the web; customers mostly come from the two block radius around the shop. Competition is intense, with another internet café right next to them. Recently they had to reduce from two to one location, and then again to an even smaller shop in order to reduce costs. Earnings are low and profits are divided between the two girls at the end of the month—about MX\$1,500 for each per month. They provide no subsidy to the business, but the low earnings means they cannot afford an employee. As a result, both women trade-off overseeing the shop, and neither have any time to invest in plans for expansion or increasing profits.

The women's school initiated their involvement with 4+1. The school completed the application and the government created the budget. There was a total of MX\$100,000 donated, but one of the owners, Beatriz, informed us that they didn't need everything that was included in the budget; it was purchased anyway, though, and remains unused. While there was minimal ownership and direction of the process on the part of the shop's owners, Beatriz was content with the way the process was managed and felt sure that every cent was accounted for (though possibly not spent in the way most desirable for her). Beatriz said that if they hadn't received the 4+1 money for the store, they would have opened a shop anyway with their own money.

The original idea for the computer assembly shop, and the goal they still have for themselves, is to open 3 stores, one for each of the women. They had even identified a potential new shopfront recently, near the university and so offering lots of potential clients. There's no internet infrastructure reaching the shopfront yet, though, because there is a lack of demand for phone lines in the area. The store is in a small crisis at this point, and while there's not talk of closing, there's also no hope for growth.

14. Fruit and Vegetables Processor – San Mateo, Zacatecas

A business plan based on artisanal production will have limited local impact on supply or demand unless it manages to jump from micro-business to international export.

Jose Luis and Andrea started a fruit production business in their patio 12 years ago, and about 4 years ago they built a small building next to their house to expand the enterprise. Officially, the business is a small civil association, made up of their children, in-laws and another family, but on the ground the couple are the main and only proprietors. They employ 12 people, though not continuously, for 8 hour shifts and pay them MX\$80. They also pay for the locally collected fruit, in addition to collecting themselves. Other primary materials such as sugar, coconut and bags comes from the wholesale market in Fresnillo. Their local market is predominantly in San Mateo, where they sell at cost. They are unable to compete against mass-produced sweets and candies in Valparaiso, the neighboring municipality. They've also started to consider nostalgic trade in the US, but the sanitary analysis of each product to obtain the import license costs \$4,500. So far they have obtained one license, but have been unable to finance additional licenses.

The 4+1 program is one of several programs the entrepreneurs have taken part in. Originally they obtained MX\$75,000 from Sedago to build the workshop. Next they received funds from FUNAIS as part of a government project for entrepreneurial women. Then they started going to agro-industrial fairs looking for other ways to finance their growth. They also went to the municipality, but were told the local government would invest in them only once the family was "driving the latest model cars." Similarly when they heard about 4+1, Jose Luis approached a club in the US, but the club was distrustful and offered to sponsor the

business, but did not contribute funds. The funds were eventually contributed by Jose Luis and Andrea. They received funding to buy a grinder, a canner, a sealer, and work tables. The municipality controlled the funds, managed the budget, and made the purchases. Jose Luis and Andrea felt they had plenty of oversight and assurance that the funds were all spent, but they did not touch the money themselves. During the process, they have achieved a stronger connection with migrant clubs, which now contribute to the purchase of machinery and assist the company obtain import licenses.

Though the 4+1 funds have been spent, they haven't yet been put to use. The grinder that was purchased would greatly increase the efficiency of the work but it needs a different electrical current than the one they receive in the workshop. The transformer costs about MX\$70,000. They are looking into a loan from Sagarpa to make the purchase. Until then, the workshop is under-utilized and the company can't reach production quantities needed for export to the US.