



USAID
FROM THE AMERICAN PEOPLE

FORWARD LINKAGES AND WELL BEING OF OUTSOURCEE MICROENTERPRISE HOUSEHOLDS IN PERU

microREPORT #137

SEPTEMBER 2008

This publication was produced for review by the United States Agency for International Development. It was prepared by Geetha Nagarajan, Anthony Leegwater, and Arthur Shaw of the IRIS Center at the University of Maryland, with assistance from Chemonics International's field staff in Peru led by Benjamin Friedman.

FORWARD LINKAGES AND WELL BEING OF OUTSOURCEE MICROENTERPRISE HOUSEHOLDS IN PERU

microREPORT #137

DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

SUBMITTED BY

The IRIS Center, University Research Corporation International

SUBMITTED TO

Scott Kleinberg, CTO (USAID/EGAT/MD)

CONTRACT NUMBER

GEG-1-00-02-00029-00 Task Order # 5

ACKNOWLEDGMENTS

This publication was prepared by Geetha Nagarajan, Anthony Leegwater, and Arthur Shaw of the IRIS Center at the University of Maryland, with assistance from Chemonics International's field staff in Peru led by Benjamin Friedman.

CONTACT INFORMATION

IRIS Center
University of Maryland
Department of Economics
3106 Morrill Hall
College Park, MD 20742
USA

E-mail: info@iris.econ.umd.edu
Phone: +1.301.405.3110
Fax: +1.301.405.3020
Web: www.iris.umd.edu

CONTENTS

ABSTRACT	1
INTRODUCTION	2
METHODOLOGY	3
KEY FINDINGS	5
SUMMARY OF FINDINGS	13
PROGRAMMING IMPLICATIONS	14
FUTURE ANALYSES	15

ABSTRACT

This report examines if micro and small enterprises (MEs), by integrating into broader value chains through outsourcing relations with medium and large enterprises (LEs), improve the well-being of their households.

This report focuses primarily on the ME households that reported outsourcing relationships with medium and large enterprises (LEs). The information on households before and after entering into outsourcing relationships with LEs is used to examine the association between outsourcing and household well-being. In addition, preliminary results are also provided comparing well-being indicators between MEs in the sample that are engaged in outsourcing relationships with LEs (treatment group) and those MEs that are not currently in outsourcing relationships with LEs (comparison group).

The importance of linkages into higher-level value chains for increasing ME incomes and business investments is underscored. The majority of outsourcee MEs respond that the current outsourcing relationships with LEs produce positive effects, and that they would be worse off without them. It is noted that if current LE clients were not available, they would search for linkages with other higher-level clients in the value chain. A considerable percentage of MEs, after linking with LEs, invest in business improvements.

However, consumption of household goods and dwelling improvements are not found to be affected by the outsourcee relationships with LEs. The results tend to hold both when results are compared for the outsourcee MEs before and after outsourcing relationships, and when compared with non-outsourcee MEs. Outsourcee ME firms purchase fewer consumer items and make fewer dwelling improvements after the linkages (compared to before linkages), and also compared to non-outsourcee ME firms.

In sum, the analyses indicate that outsourcing relationships boost ME sales, household income and business improvements. However, the increase in income may not translate into other measures of improved household well-being such as the purchase of consumer durables and dwelling improvements.

The research above helps identify some effects of outsourcing on MEs households. In the future, however, a thorough examination of the effects of outsourcing relationships with LEs on MEs is essential to draw clear policy and programming conclusions. The analyses, using a larger sample for each category, could focus primarily on the following: (i) analysis across agricultural and non-agricultural sectors, (ii) the incorporation of household characteristics, and (iii) analysis of the poverty status of outsourcee and non-outsourcee households using a poverty assessment tool tailored to the information available in the survey such that new survey is not essential to capture information required by the existing poverty assessment tool for Peru.

INTRODUCTION

This study examines if micro and small enterprises (MEs), by integrating into broader value chains through outsourcing relations with medium and large enterprises (LEs), improve the well-being of their households. The improved well-being may help MEs, in turn, contribute to economic growth.

The field work was conducted between April and December 2006 in conjunction with the USAID-Peru Poverty Reduction and Alleviation (PRA) project, administered by Chemonics International, Inc.

Using information collected through surveys of 264 MEs located in the regions of Ayacucho, Cajamarca, Junin, Puno and Cuzco, the report discusses key preliminary findings.

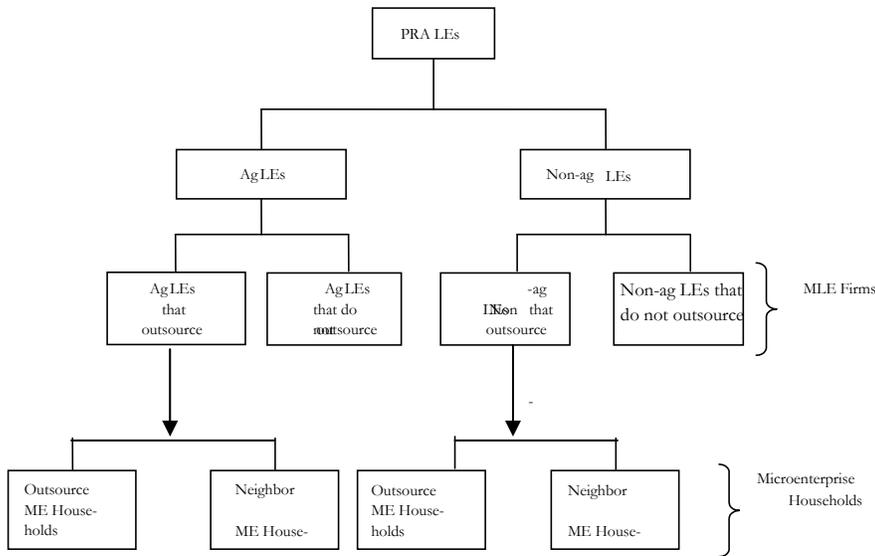
The findings below focus primarily on the ME households that reported outsourcing relationships with medium and large enterprises (LEs). The information on households before and after entering into outsourcing relationships with LEs is used to examine the association between outsourcing and household well-being. In addition, results are also provided comparing several indicators between MEs in the sample that are engaged in outsourcing relationships with LEs (treatment) and those MEs that are not currently in outsourcing relationships (comparison) with LEs. This comparison could be expanded in scope and detail, as delineated later in this document.

METHODOLOGY

To generate a ME treatment group, the study first identified MEs who work with the LEs in the PRA project. Next, the study selected a subset of these outsourcee MEs. Then, the study conducted interviews with this sub-sample of firms.

Figure 1 depicts the sampling methodology for this study.

Figure 1: Sampling methodology



To constitute a comparison group of non-outsourcee ME households, the study identified “neighbors” of the treatment group MEs. The neighbors were identified by their similar size and geographic area. These MEs were considered the comparison group to facilitate analysis of the effect of outsourcing on development at the household level.

The study gathered comparable information on changes to the ME and the ME’s household to facilitate comparison between outsourcees and non-outsourcees. For the treatment group, the survey gathered information on changes in income, business investments, household expenditures on consumer durables, and home improvements since the beginning of its outsourcing relationship. For the comparison group, the survey collected qualitative impressions of changes since the founding of the business.

To make the analysis geographically representative, the study sampled firms in five PRA areas—Ayacucho, Cuzco, Puno, Cajamarca, and Huancayo. In total over the five areas, the study sample comprised 264 ME households (see Table 1), with 110 control group and 154 treatment group MEs, respectively.

Table 1: Sample distribution, by region, products and outsourcing relationships with LEs

Region	Products	Comparison: Non outsourtees to LEs (number of MEs)	Treatment: Outsourtees to LEs (number of MEs)	Total (number of MEs)
Ayacucho	Ceramics	11	9	20
	Textiles	19	15	34
	Sarhua Folk Paintings	2	3	5
	Altarpieces	2	4	6
	Alabaster Carvings	5	6	11
	Others		2	2
	Total	39	39	78
Cajamarca	Artichokes	0	17	17
	Tara ¹	0	12	12
	Jewelry	0	14	14
	Total*	0	43	43
Junín	Clothing and apparel	5	5	10
	Artichokes	23	23	46
	Trout	5	5	10
	Engraved gourds	9	9	18
	Total	42	42	84
Puno	Clothing and apparel	13	13	26
	Trout	10	10	20
	Total	23	23	46
Cuzco	Ceramics	6	7	13
	Total	6	7	13
TOTAL		110	154	264
*No comparison group could be found since all MEs producing Artichokes, Tara and Jewelry in this region were engaged in outsourcing relations with LEs. These outsourcing relations were facilitated through the PRA project.				

ME interviews were conducted at the workplace, which was often also the home, depending on the sector. Initial contacts with the MEs were made by PRA project staff in many cases. Due diligence was used to maintain respondent privacy and data confidentiality.

¹ Tara, or taya, is the common name for leguminous seed pods of the *Caesalpinia spinosa*, an indigenous tree that grows in the warm valleys of the Andean Sierra in Peru, Ecuador, and Bolivia. The tree's seed-pod husks are ground to powder to make high-quality vegetable tannins used to tan leathers and in chemical processing to extract acids. The seeds are roasted and ground to extract a food gum that is considered an ideal stabilizer in dairy foods. Both products experience very strong demand in the international markets.

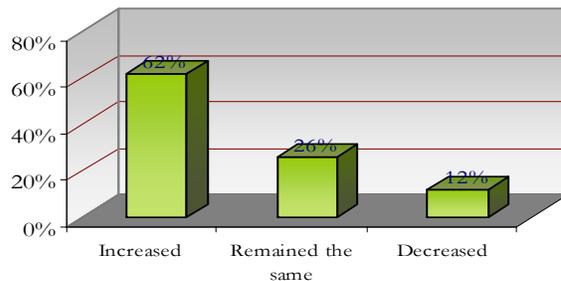
KEY FINDINGS

The findings below focus primarily on the 154 outsourcee MEs. The information before and after entering into outsourcing relationships with LEs is used to examine the association between outsourcing and household well-being. Some results are also presented to compare outsourcee and non-outsourcee ME households on certain well-being indicators.

ME HOUSEHOLD INCOMES AND OUTSOURCING RELATIONSHIPS

Outsourcee MEs report increased household incomes. Of the 154 MEs that participate in outsourcing relationships with LEs, 62% report higher earnings since outsourcing (compared to incomes before outsourcing). For 26% of the outsourcees, earnings remain the same, and only 12% report lower earnings. Thus, initial findings suggest that in the majority of outsourcee MEs, family income increases following the establishment of outsourcing relationships with LEs (Fig. 2).

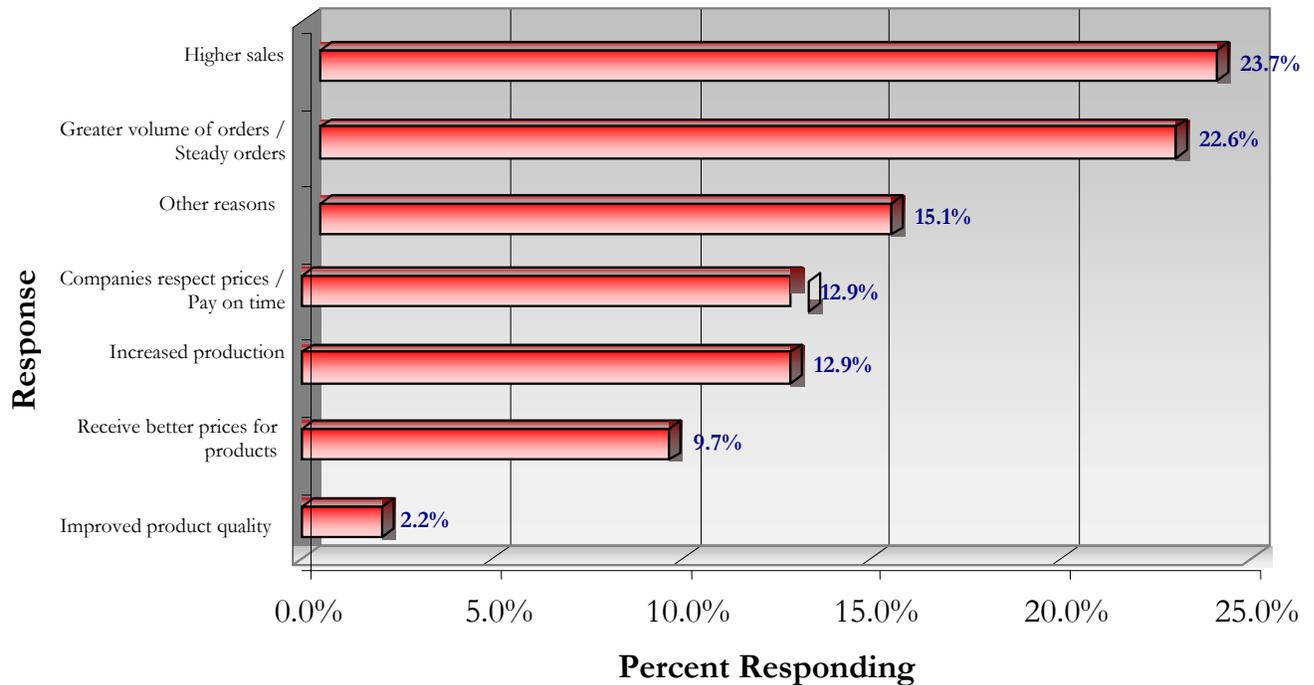
Figure 2: Changes in ME family income since outsourcing



Higher sales, greater volume of orders, and stable sales are among the main reasons for higher income (Fig. 3). The increase in sales and frequency of orders, however, could be either caused by the LEs with which they have outsourcing relationships or could be caused by other clients of the MEs. This limits conclusions on the benefits of outsourcing relationships with LEs. ²

² In the case of enterprises reporting reduced incomes, the main reasons given were delayed payments and a downturn in profit levels, which are related to customers.

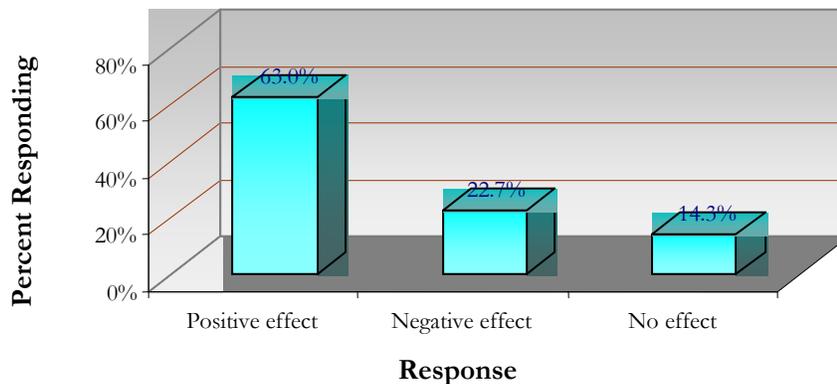
Figure 3: Reasons for increase in family incomes of outsourcee MEs



RELATIONSHIP BETWEEN MES AND LES

Outsourcee MEs report positive effects from their relationships with LEs (Fig. 4). About two-thirds of the outsourcee MEs report that their outsourcing relationships produce positive effects.

Figure 4: Effect of outsourcing relationship with LEs on MEs



Key positive effects include contractual compliance with respect to orders and payments (30%), higher income for the home and the microenterprise (22%), a larger number of orders (10%), and the provision of production facilities by the LE (9%). These responses suggest that the outsourcing relationships are perceived by the MEs as favorable to their development.

However, about one-third of the outsourcees report negative or no effects from their outsourcing relationships. Two common reasons include failure by LEs to fulfill their obligations (62% of responses) or to make timely payments

(33% of responses). This reveals that the outsourcing relationships are not entirely problem-free, and that these problems have certain repercussions for MEs engaged in outsourcing relationships.

Illuminating information can also be drawn from a hypothetical question in which outsourcee MEs are asked how their business would differ if they would not be engaged in their current outsourcing relationship. As described in Table 2, about 42% of the MEs report that they would continue production and seek out other clients and markets to replace their LE clients. These responses suggest the resourceful nature of the ME households, and that not all MEs are totally dependent on the LEs with which they are currently connected. However, the importance of integration into higher-level value chains is underscored in that they would still search for newer clients and markets.

Table 2: Hypothetical situation of MEs without outsourcing relationships with LEs

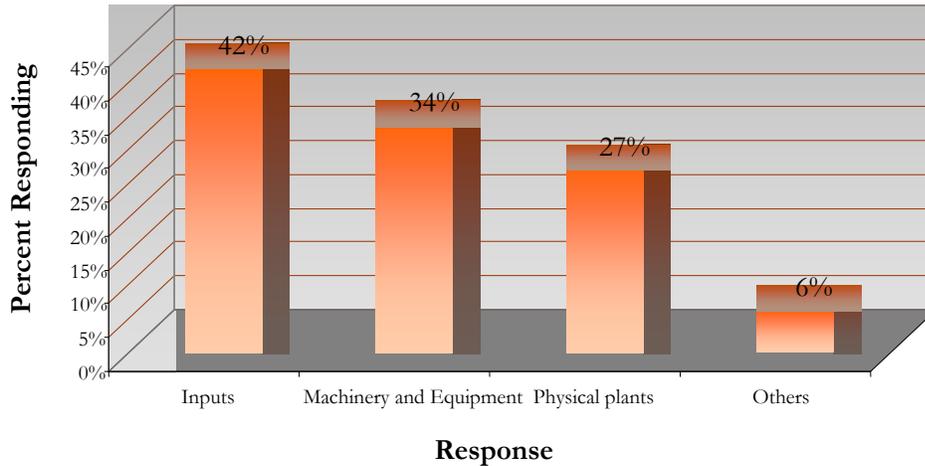
Response	Percent responding
Would continue production and sell to other clients / markets	42.3%
Would switch to a different activity/product	15.2%
Would reduce orders, volume of production and sales	18.5%
Would not exist	18.5%
Would remain the same	4.6%

The responses in Fig. 4 and Table 2, when taken together, suggest that the absence of outsourcing relationships could hurt the MEs. Responses such as smaller orders, lower production, and reduced sales (18.5%), would not exist (18.5%), and would carry out a different activity or would produce another product (15.2%) suggest the value for MEs of outsourcing relationships. Moreover, while 42% of surveyed MEs would possibly enter into business arrangements with other clients, more than half of the surveyed micro enterprises would be markedly affected by the absence of current outsourcing relationships with LEs. The search for newer markets and clients involve additional costs that may hurt the ME profits.

ME BUSINESS IMPROVEMENTS AND OUTSOURCING RELATIONSHIPS WITH LES

The majority of the outsourcee MEs (67%) increase investments in their enterprises. As shown in Fig. 5, since entering into outsourcing relations with LEs, most of the investment is oriented towards improving or upgrading the quality of inputs (42%), followed by improvements made to machinery and equipment (34%), and installations (27%).

Figure 5: Improvements by MEs with outsourcing relationships with LEs



It is possible that additional investments are required to produce quality products in order to attract and retain the LE clients. These investments could be financed through the reported increase in family incomes by the majority of the outsourcing MEs (see Fig. 2) since entering into outsourcing relations with LEs.

ME WELL BEING: BEFORE AND AFTER OUTSOURCING RELATIONSHIPS WITH LES

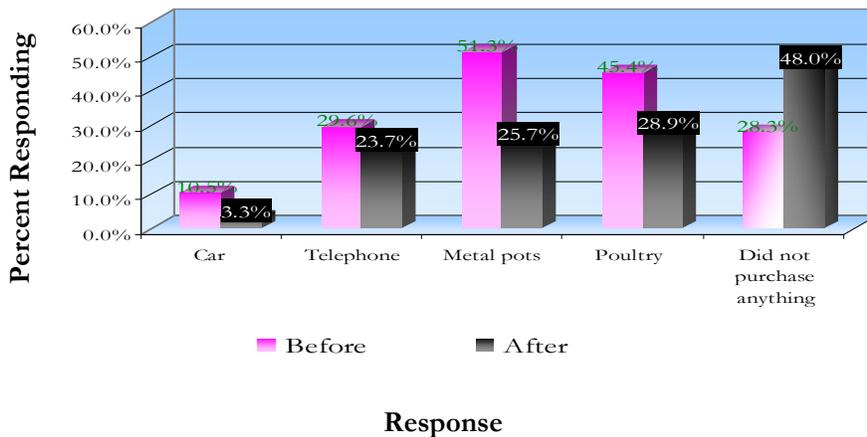
In this section, we discuss whether entering into outsourcing relationships with LEs improves the well-being of the households of the outsourcee MEs. The study considers increased expenditures on selected consumer goods—automobile, phone, metal pots, and live poultry—as proxies for the well-being of the MEs.³

Comparisons are made on the level of consumption of selected goods before and after the establishment of the outsourcing relationship to assess any changes in consumption patterns due to outsourcing. MEs are asked if they have purchased any of these items since (i) since starting their enterprise, (ii) since starting their outsourcing relationship.

Outsourcee MEs purchase more of these consumer goods before the establishment of the outsourcing relationship than after. Nearly half of the respondents do not purchase any consumer goods after the establishment of the outsourcing relationships with LEs, while only 28% do not purchase the same goods before that (Fig. 6).

³ Consumer goods of this sort have been shown to be important predictors of poverty status in other IRIS research—including in poverty tools developed for Peru.

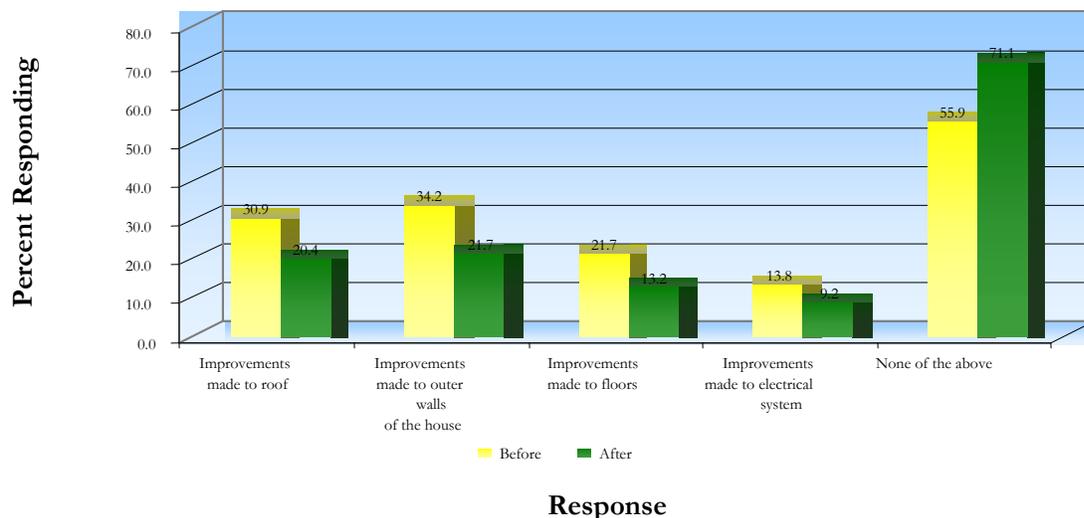
Figure 6: Purchase of consumer goods by outsourcee MEs - before and after outsourcing relationships with LEs



The time frames in which these purchases are made may be relevant. To use an exaggerated example, an ME in business for 20 years might reasonably be expected to purchase one of these goods in that span, while it may not do so in the last 2 years since starting an outsourcing relationship. However, further examination reveals that the respective time frames are relatively close. The median age of MEs that outsource in this sample is 6 years, while the median age of their outsourcing relationships is 3 years. Furthermore, this age difference does not help explain (according to statistical significance) the consumption behavior of those MEs that purchase goods before their outsourcing relationship but then purchase none of the items afterwards.

Outsourcee MEs make more home improvements before the establishment of the outsourcing relationship than after. MEs are asked if they make any home improvements or repairs—to roofing, walls, flooring, and electricity connection—since (i) starting their enterprise or (ii) starting their outsourcing relationship. These home improvements are an additional proxy for household well-being. As shown in Fig. 7, MEs dedicate more resources to roofing material and related supplies, outer walls, flooring, and electrical systems before entering into the outsourcing relationship with the LEs than after. While nearly 72% of micro enterprises do not invest in home improvements of any kind after the relationship with LEs, it is about 50% of MEs before the relationship began.

Figure 7: Household improvements by outsourcee MEs: before and after outsourcing relationships with LEs



However, the time frames involved in both questions may contribute to the result that firms make home improvements before but not after outsourcing; firms with longer outsourcing relationships relative to their total firm age are more likely ⁴ to make home improvements after outsourcing (given that they made home improvements before outsourcing).

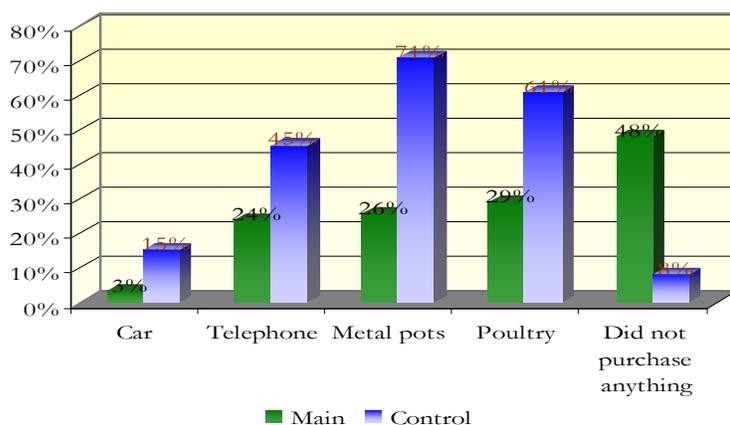
ME WELL BEING: COMPARISON OF OUTSOURCING AND NON-OUTSOURCING MES

To better understand whether having an outsourcing relationship with an LE offers benefits at the household level, it is important to compare the pattern of expenditures by households with and without these relationships.

An examination of expenditures on consumer items and household improvements—similar to that in the previous section—among households that engaged in outsourcing relationships with LEs and those that did not reveals interesting findings.

MEs without outsourcing relationships with LEs purchase more of selected consumer goods compared to MEs with outsourcing relationships (Fig. 8). MEs without relationships with LEs (control group) are more likely to purchase goods such as automobiles, telephones, and metal pots than MEs with outsourcing relationships (main/treatment group). Of the control group in the sample, 28 % do not purchase any of the consumer items after starting their enterprise, versus 48 % for the treatment group.

Figure 8: Purchase of consumer goods by MEs – with (treatment) and without (control) outsourcing relationships with LEs



However, we must pay attention to the time frames in which these purchases are made, as older firms would be more likely to purchase one or more of these items since they founded their business. It is to be noted that outsourcee MEs are younger than their non-outsourcee counterparts: the median age for outsourcees in this sample is 6 years versus 16 years for the non-outsourcees.

Regression results (Table 3) indicate that while firm age is important in explaining consumption, it does not eliminate the difference between outsourcee and non-outsourcee MEs: The outsourcee MEs are less likely to have purchased at least one of the consumer items, compared to non-outsourcee MEs. ⁵

⁴ The correlation between the event (making a home improvement before outsourcing, but not in the period after) and the ratio of years outsourcing over firm age is statistically significant at the 7 percent level.

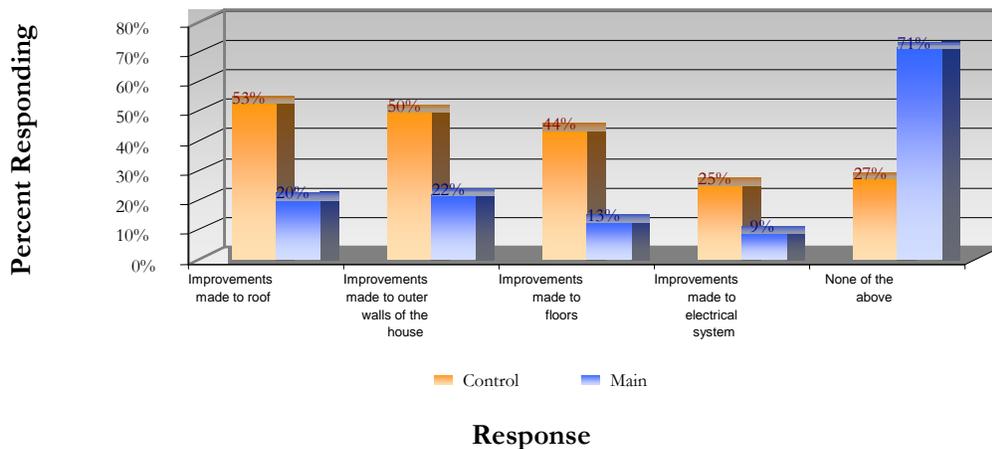
⁵ For purchases of separate items, the difference between outsourcee and non-outsourcee groups is less pronounced. For instance, outsourcee firms are less likely to have purchased metal pots since starting their enterprise, but the effect is only statistically significant at the 10 percent level.

Table 3: Household purchase of at least one consumer item (Probit)

Variables	Coefficients
Outsourcee MEs (dummy)	-0.529*
Firm age (years)	0.053**
Constant	0.639**
Observations	262
* significant at 5%; ** significant at 1%	

MEs with outsourcing relationships report making fewer home improvements compared to MEs without any outsourcing relationships with LEs. Most notably, 71% of MEs with outsourcing relationships do not make home improvements after starting their enterprise compared to only 27% in the control group (Fig. 9).

Figure 9: Household improvements by MEs – with (treatment) and without (control) outsourcing relationships with LEs



Similar to earlier results obtained for the purchase of consumer items, firm age can explain the reduced likelihood that outsourcee MEs make at least one home improvement (Table 4). Outsourcee MEs are also less likely to make individual home improvements compared to non-outsourcees.

Table 4: ME household has made at least one home improvement (Probit)

Variable	Coefficients
Outsourcee MEs (dummy)	-0.564**
Firm age (years)	0.032**
Constant	0.069
Observations	262
* significant at 5%; ** significant at 1%	

MEs with outsourcing relationships report spending more on clothing in the last 6 months compared to MEs without any outsourcing relationships with LEs. Clothing expenditures are considered a proxy for overall household expenditures—and, by extension, household well-being.⁶ In this sample, outsourcee MEs report spending an average of 177 Soles (roughly \$55 dollars at current exchange rates) more on clothing in the last 6 months than the non-outsourcee MEs. This difference is statistically significant at the 5 % level. Unlike the more qualitative indicators earlier in this section, this result points to an association between improved ME household well-being and outsourcing relationships with an LE. However, one must interpret it with some caution, as the clothing values are susceptible to measurement error over a recall period of considerable length (6 months). In addition, household size and demographics may influence clothing expenditures. Further analysis should incorporate household size and demographic structure in comparing clothing expenditures between the outsourcee and non-outsourcee households.

⁶ Work by the IRIS Center in developing poverty assessment tools in 12 countries, including Peru, for USAID has found clothing expenditures to be consistently correlated with overall household consumption expenditures.

SUMMARY OF FINDINGS

Findings from outsourcee ME households, before and after entering into outsourcing relations with LEs, can be summarized as follows:

- Family earnings increase after establishing outsourcing relationships with LEs.
- The increased earnings are mainly attributed to an increase in sales and the constancy of orders. It is not clear whether this is due to the outsourcing relationship with LEs or because ME households acquire additional clients.
- The majority of MEs acknowledge that the outsourcing relationships with larger enterprises bring positive effects.
- When asked how they think they would fare in a hypothetical scenario in which there is no outsourcing relationship with the current LE, more than 50% of the MEs indicate that they would be worse off. But, roughly 40% indicate that they would look for newer clients and markets. The new clients could also include selling directly to the public or to another LE. If it is the latter, the responses clearly underscore the need for linking with higher-level, value chain actors.
- A considerable percentage of MEs with established outsourcing relationships invest in business improvements.
- With respect to the increased consumption of household goods and household improvements, results show that consumption is higher before the establishment of outsourcing relationships, even when controlling for age of the firm. There was no significant improvement in ME household consumption after the outsourcee relationship began.

A comparison of outsourcee MEs with non-outsourcee MEs shows the following:

Outsourcee ME firms purchase fewer consumer items and make fewer home improvements compared to non-outsourcee ME firms, even when controlling for their younger age. However, the consumer items and home improvements made by the outsourcee firms before intervention were higher than the comparison group.

Outsourcee MEs do report greater clothing expenditures compared to non-outsourcee MEs.

PROGRAMMING IMPLICATIONS

The study indicates that outsourcing relationships boost ME sales, household income and business improvements, and clothing expenditures. However, the increase in income does not translate into other measures of improved household well-being such as purchase of consumer durables and dwelling improvements.

The study results imply that expectations about the effects of policies to improve household welfare through strengthening of outsourcing relations between MEs and larger enterprises need to be optimistically cautious. While the effects could be visible with long term focused interventions, the short term effects could only be observed in increasing business incomes and household incomes. A stable increase in incomes, however, could eventually affect household welfare in the long run. Improving the enabling environment that fosters long term contractual outsourcing relations and markets for the products are essential to affect such sustained increases in incomes.

FUTURE ANALYSES

The findings of the study shed some light on the effect of outsourcing relationships on ME households. However, there remain issues that require in-depth study to draw clear policy implications. It is, therefore, important for future studies to investigate why increases in incomes did not contribute more to household well-being of outsourcee MEs. The data collected for this study, however, were not sufficiently detailed on this point. Might this trend be associated with contractual terms and conditions of the outsourcing relationships or household-specific characteristics prior to entering into outsourcing relationships? Answers to such questions will help with programming decisions on the use of value chains to improve the well-being of ME households.

It is also important for future studies using this data base or others to focus on comparisons across agricultural and non-agricultural sectors among the outsourcee ME households and non-outsourcee ME households. Studies have shown that sectoral characteristics influence outsourcing relations and firm performance. Indicators to examine in this regard include income, business investments, home improvements, and purchases of consumer items.

The analysis above includes firm-level characteristic such as firm age to explain differences in well-being between outsourcee and non-outsourcee MEs. Several household level factors also influence household well being. Further analysis of the same data base or other data should include household size and demographic structure in addition to firm characteristics such as firm age and sector of activity to fully explain the well being of the household.

In order to assess poverty status of the households in this study, it is possible to construct a poverty assessment tool (PAT) only tailored to the information available in the survey conducted on 264 households. The tool, while similar in construction to the tool IRIS developed for USAID,⁷ could contain only indicators that are found in the Peru MCME household survey. The tailored PAT would allow estimates of household expenditures for the outsourcee and non-outsourcee ME households and the comparative poverty rate between these two groups.

Such additional research would allow a thorough examination of the effects on ME households of outsourcing to LEs, from which clear policy and programming conclusions could be drawn.

⁷ The full PAT for Peru is available at http://www.povertytools.org/USAID_Tools/USAID_Tools.htm

U.S. Agency for International Development

1300 Pennsylvania Avenue, NW

Washington, DC 20523

Tel: (202) 712-0000

Fax: (202) 216-3524

www.usaid.gov