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Leveraging low income farmers' performance through empowerment: Analysis of a sustainable initiative in Mexico

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Abstract: Several researchers have said that the real solution to alleviating, or at least reducing, the level of poverty is not to view poor people only as customers, it is important also to view this sector as producers, or in other words integrate these people into the value chain of Multinational Companies (MNCs). The objective of this research work is to analyze how the MNCs with sustainability initiatives can generate better individual performance through the creation of empowerment in the Low Income Sector (LIS). We conducted 47 interviews to build our model. Then we developed and applied surveys to 212 participants. To test our hypotheses, we used PLS-SEM and analyzed two groups: LIS people that currently belong to the sustainable initiative and LIS people that belonged (graduates of the sustainable initiative). We confirmed the positive relationship between psychological empowerment and individual performance, also found that consumer behavior constructs, like coping strategy, moderate in both conditions of this relationship. Finally, we demonstrate that trust moderates the relationship, also. Theoretical and managerial implications as well as limitations and future research avenues are discussed.

Keywords: low-income sector, empowerment, performance, trust, coping strategy, risk aversion, social entrepreneurship, inclusive business, base of the pyramid.

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Introduction

Despite its being an ancestral problem, the topic of poverty has become fashionable in the global public agenda in response to the objective of the Millennium Development Goals of halving the number of people living in extreme poverty, by the year 2015, outlined by the Organization of the United Nations (UN, 2008). According to the Development Goals, two of the primary ways to generate development are: Goal #1, Eradicating extreme poverty and hunger, and Goal #2, Promoting gender equality and empowering women. This objective has also been adopted by other international organizations, such as the International Monetary Fund, the World Bank, the Inter-American Development Bank, and the Organization for Economic Co-operation and Development; however, the challenge is enormous. Currently, two out of three people in the world live in poverty; most of these live in emerging economies (Prahalad, 2004).

This part of the world's population has been called the "Bottom of the Pyramid" or the "Base of the Pyramid" (BoP), indicating this group's huge size and lower position in the economic order (Prahalad and Hart, 2002). Prahalad (2004) in his seminal book *The Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits* mentioned that more than 4 billion people live at the BoP on less than \$2 USD per day. However, this BoP definition is not the same for some companies, for example the Brazilian Casas Bahia claim to target the BoP, and their average customer has an income of \$6.66 per day (Karnani, 2007). Obviously, the BoP of citizens of different countries depends on cultural and socio-economic scenarios. Another example of this, according to Székely (2005), is Mexico, where the number of poor people has reached approximately 50 million.

To better understand these 50 million people in Mexico, the Mexican Association of Market Research and Public Opinion Agencies (AMAI in Spanish) classifies the Mexican population into six different socio-economic segments or tiers. Socioeconomic status in Mexico is measured using the "10x6" AMAI rule. This rule is an index that classifies households into six levels, accounting for nine characteristics, including household possessions and schooling of the household head, but, the people living in poverty (not necessarily in extreme poverty) account for more than 60% of the Mexican population (AMAI, 2009). Thus, in this article, we will define the Low-Income Sector (LIS) as AMAI's levels D, D+, and E.

To better understand these decisions, it is important to describe briefly the different socioeconomic levels in terms of their possessions. In accordance with these socioeconomic levels, half of the population at the D+ level are homeowners, most households have showers but only two thirds have a water heater, one out of four families owns an automobile, two thirds have a telephone, and the household head's education ranges from junior high to incomplete elementary school. Half of the populations from the D level are homeowners, one out of four does not have a restroom at home, they do not own automobiles, two out of five have a telephone, and the household head has

finished only elementary school education. Those in the level E houses have floors of soil, three out of five of these homes are not connected to a sewer system, they do not have toilets, they do not own any automobiles, only a few have a telephone, and the household head has not finished elementary school (AMAI, 2009). As we can see, from socio-economic level D down, the people begin to face increasing challenges to day-to-day living.

Going forward, in order to understand the LIS in the article, it is necessary to understand the best ways to eradicate the poverty, particularly in Mexico. For example, during recent years, several entrepreneurial perspectives, such as the BoP stream (Prahalad and Hart, 2002) and the socially inclusive business (Karnani, 2006) approaches, among others, have contributed to solving this problem (Bruton et al., 2008). It is important also the involvement and participation of MNCs with their stakeholders, like a government and community members among others.

According to Narayan (2005), poor people are the most important resource in the fight against poverty. They have imagination, courage, knowledge, experience, and a deep motivation to overcome poverty. As the Voices of the Poor study (Narayan et al., 2000) showed, poor people are no different from those of moderate or substantial means in their desire to live in a safe and secure world and to have access to income so they can educate, clothe, and house their children with dignity. They long to belong and participate in their communities on an equal footing with others. Most of all, they do not want charity; they want an economic opportunity that gives them fair returns for their labor.

The BoP proposition brought back the old idea that marketing to the poor in developing countries is the best way to develop emerging economies while increasing corporate profits (Drucker, 1958; Porter, 1996). In this sense, the term “BoP” became popular because the promise of a fortune to be made by selling to the poor grabbed immediate attention not only in the academic field but also among business and development practitioners. In addition to the practitioners, a growing chorus of scholars (e.g. Delios, 2010; Guthrie and Durand, 2008; Hinings and Greenwood, 2002) during recent years has also argued that it is crucial for corporations to think beyond economic returns and take a more active and expanded role in society. However, with few exceptions, it has been demonstrated that the alleged fortune at the BoP does not exist (Karnani, 2007; Social Enterprise Knowledge Network, 2011). Several researchers have said that the real solution to alleviate, or at least reduce, the level of poverty is not to view poor people as customers; instead, it is important to integrate these people into the value chain of MNCs (Karnani, 2007). In the literature we can find an increasing number of case studies that confirm the integration of the LIS in the value chain (e.g. Unilever, Heineken, Cargill, ADM, Nestlé). An analysis of the interviews in our research also demonstrates, in general, that this inclusion generates positive effects in terms of productivity and revenues.

In summary, this research work will be attending the following problem: How the MNC's can help through their strategies to alleviate the poverty. In order to try to understand better the problem exposed, first we will develop a literature review to have a more extensive map of the different concepts like social entrepreneurship and empowerment, among others. Then, based on research questions generated by our exploration of the literature, we will develop a theoretical framework with the help of explorative research and interviews, leading to a set of hypotheses. Finally, we will explain the methodology selected to test the hypotheses, and we will explain the results and also the theoretical and practical implications to MNCs, government and other stakeholders involved in the integration of LIS into value chains.

Social Entrepreneurship

The social entrepreneurship concept dates from the early 80's, mainly in the U.S. and Europe (Hoogendoorn et al., 2009). But the first author that put social entrepreneurship on the map as a research area was J. Gregory Dees (1998) with his seminal article "The meaning of social entrepreneurship". Social Entrepreneurship means different things to different people in different places (Dees, 1998). To define it, in terms of how this can fit better with the research purposes of this article, we need to move away from the tautology of explaining social entrepreneurship by adding the adjective "social" to characterize elements of the definition (e.g., social goal, social mission, social change, and social value). According to Santos (2012), to define social entrepreneurship, we need to subjectively assign a normative connotation of "social" to some activities and not to others. For example, helping low-income people is social entrepreneurship, helping high-income people is not (Santos, 2012). Using this distinction we can say that empowering the LIS is social entrepreneurship. This way, we will use the definition proposed by Santos (2012): "*social entrepreneurship is the pursuit of sustainable solutions to neglected problems with positive externalities*" (p. 337).

In light of this definition, it can be argued that social entrepreneurship can be sustained and improved by the MNCs through CSR programs (Mitra and Borza, 2011). Many organizations during the recent years have created certain strategies to try to eradicate poverty by using different approaches, and attending the study of this type of business the concept of inclusive business has emerged (SEKN, 2011). An inclusive business is one which seeks to contribute to poverty alleviation by including lower-income communities within its value chain while not losing sight of the ultimate goal of business, which is to generate profits (WBCSD and SNV, 2006, p. 2). Inclusive businesses are entrepreneurial initiatives that are economically profitable and environmentally and socially responsible. Underpinned by a philosophy of creating mutual value, inclusive businesses contribute to improving the quality of life of low income communities by integrating them in the business value chain: as suppliers of services and/or raw material, as distributors of goods and/or services and as consumers, by offering goods and services to fulfill their essential needs at prices they can afford (WBCSD and SNV, 2011, p. 10).

As previously mentioned, we define the Low-Income Sector (LIS) as AMAI's levels D+, D, and E. This decision is based on two factors: 1) As was noted in the introduction to this article, in Mexico the people in extreme poverty do not represent a large proportion of the total population (only around 6%), and 2) to generate a real impact on the development, the people in the LIS need to have some initial capabilities (economic and social).

One of the most important factors to generate a successful integration of the LIS in the value chain as producers or suppliers is the real involvement of the MNCs in the process. Some examples of this are Danone with their project "Margarita", Pepsico with their project "Girasol" or Starbucks with their project "C.A.F.E.". A common thread in these cases is the generation of social and economic empowerment, first to generate the conditions to start the operations (with the creation of groups of farmers), then with the creation of instruments to obtain access to financial resources, and finally with the creation of formal programs to generate skills in the LIS. For example, in a cooperative, the company needs a minimum capacity of production to obtain revenues in the long term. Obviously, this cannot happen at the beginning of the integration. The company must first assemble a large group of producers.

Empowerment

The concept of empowerment is conceived as the idea of power, because empowerment is closely related to changing power: gaining, expending, diminishing, and losing (Page and Czuba, 1999). Recently, power has been understood as shared because it can actually strengthen while being shared with others (Kreisburg, 1992). Empowerment is also conceived as "a multi-dimensional social process that helps people gain control over their lives" (Page and Czuba, 1999, p. 25). There are three basic issues to the understanding of empowerment. First, empowerment is multidimensional in that it occurs within sociological, psychological, economic, political, and other dimensions. Empowerment also occurs at various levels, such as individual, group, and community. Third, empowerment as both a process and an outcome (Spreitzer, Kizilos and Nason, 1997; Thomas and Velthouse, 1990) has been examined across a variety of disciplines. For the purposes of this research work, the best way to understand empowerment, first on an individual level, and then as an element belonging to each person at the LIS, we selected the study of empowerment as a psychological approach. Thomas and Velthouse (1990) argued that this type of empowerment is multifaceted and that its essence cannot be captured by a single concept. Spreitzer (1995, p. 1443) based on Thomas and Velthouse (1990) defines psychological empowerment as "increased intrinsic task motivation manifested in a set of four cognitions reflecting an individual's orientation to his or her work role: meaning, competence, self-determination, and impact".

We examined the target population for this research work – the LIS – and the different perspectives for exploring this sector. Finally, we selected the LIS as supplier perspective. The generation of empowerment by the MNCs can help them to achieve successful integration of the LIS into their value chains.

Theoretical Framework

In our study we followed the steps proposed by Jabareen (2009) to generate a conceptual framework. In this sense, to obtain a better understanding of the phenomenon, we conducted 47 interviews with key players involved in the development and implementation of a selected case, identified using the snowballing technique (Sharma and Verdenburg, 1998). We chose the program “Fomento Lechero” improved by Sigma Alimentos in Lagos de Moreno and Monterrey in Mexico. Sigma Alimentos is the largest producer and distributor of refrigerated and frozen food in Mexico, and an affiliate of Mexican industrial holding company ALFA. “Fomento Lechero” is a program for the development of small milk producers, with over 15 years of operation, which aims to ensure the supply of raw material to the company. Our research endeavor was guided by the following research questions:

- What is the effect of social and economic empowerment generated mainly by the companies in the Mexican Low Income Sector (LIS)?
- How, through the generation of Psychological Empowerment in LIS, can the people in this sector improve their individual performance (in terms of production)?
- What other externalities (variables) can affect the relationship between psychological empowerment and individual performance?

After reviewing all the information from interviews and the theoretical literature, we focused our interest on certain concepts that had to be reviewed more thoroughly: 1) the direct relationship between psychological empowerment and individual performance; 2) the presence of trust, coping strategy and risk aversion as mediators in the relationship between psychological empowerment and individual performance of LIS.

The role of psychological empowerment on individual performance

A growing body of research supports the idea that psychological empowerment is related to individual performance (Liden et al., 2000; Spreitzer, 1995; Spreitzer et al., 1997; Thomas and Tymon, 1994). For example, Thomas and Tymon (1994) found their measure of choice (conceptually related to self-determination in the Spreitzer model) related to work effectiveness. Impact, meaningfulness, and choice were each related to job satisfaction. From the qualitative analysis with each member of the Sigma Alimentos organization, in regards to their project “Fomento Lechero”, we established that they have generated both economic and social impact over time, not only for the dairy farmers, but also inside the company. Thus, after reviewing the information from the interviews and the theory, we propose the following first hypothesis:

H1a: *There is a positive relationship between psychological empowerment and performance of the LIS people that belong to the sustainable initiative (with Sigma Alimentos).*

As we mentioned previously, some people, with the help of different programs, grew in different ways. In some cases, these people decided to remain independent of Sigma Alimentos for different reasons. For example, one reason was because they wanted a better price for their milk. In this sense,

these people decided to work independently because they felt confident in their abilities and skills to perform better milk production with the empowerment provided by the sustainability initiative through the first years. They also convinced other people and formed groups in which to work together. For this reason, we also propose the following hypothesis:

H1b: *There is a positive relationship between psychological empowerment and performance among LIS people that belonged to the sustainable initiative (with other milk buyers).*

Trust

To keep this analysis manageable, we treat trust as a steady state and avoid feedback issues as discussed by Mayer et al. (1995) and Bouty (2000). Based on Mayer et al. (1995, p. 772) trust is defined as “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor (person that creates trust), irrespective of the ability to monitor or control that other party”.

The presence of trust improves the chance of success in the supply chain. On the other hand, the lack of trust among the value chain participants often results in inefficient and ineffective performance as a transaction cost.

From the interviews and the qualitative stage of analysis of documents, we found that, with the creation of the “Fomento Lechero” program, Sigma Alimentos staff was given the task of eliminating the middleman to generate trust among producers. In the early years, mostly intermediaries conducted the purchase of fluid milk. This was eliminated, and reliance entirely on intermediaries was averted in just a couple of years.

After reviewing all of the information from interviews and theory, we propose the following second hypothesis:

H2a: *The greater the trust, the stronger the relationship between psychological empowerment and performance in the LIS people that belong to the sustainable initiative (with Sigma Alimentos).*

However, as was mentioned previously, not all groups that start with the sustainable initiative are part of it now. They do not work under the same conditions as were initially provided by Sigma Alimentos. In other words, they do not feel the same trust with the current milk buyers as they did with Sigma Alimentos. For this reason, we also propose the following hypothesis:

H2b: *The lower the trust level, the weaker the relationship between psychological empowerment and performance in the LIS people that belonged to the sustainable initiative (with other milk buyers).*

Coping Strategy

Several definitions of the coping construct exist. Drawing on their common essence, Duhachek (2005, p. 42) defines coping as “the set of cognitive and behavioral processes initiated by consumers in response to emotionally arousing, stress inducing interactions with the environment aimed at bringing forth more desirable emotional states and reduced levels of stress”. In the LIS

sector, people who do not have sufficient self-confidence try to pursue a coping strategy to obtain better results in all the activities in their lives. Baker et al. (2005) mentioned in their study that consumers who experience vulnerability are not just passive recipients of bad things that come their way. Instead, they use a variety of coping strategies to deal with their vulnerability, including cognitive, emotional, and behavioral coping strategies (Heckhausen and Schulz, 1995).

In general, when these people need to solve problems, they seek information to make better decisions. During the interviews, we also found that LIS producers seek help from their partners when they face problems. For example, if they had a sick animal, they first asked other farmers how they would attend to the animal. If they waited for direct attention from the veterinarian, the animal would die. After reviewing all of the information from the interviews and the theory, we propose the following third hypothesis:

H3a: *The greater the coping strategy, the stronger the relationship between empowerment and performance in the LIS people that belong to the sustainable initiative (with Sigma Alimentos).*

The coping strategy is a relatively common behavior present in people who try to find solutions. In this sense, people who do not currently belong to the sustainable initiative also need to compare strategies with their partners to try to solve similar problems. For this reason, we also propose the following hypothesis:

H3b: *The greater the coping strategy, the stronger the relationship between empowerment and performance in the LIS people that belonged to the sustainable initiative (with other milk buyers).*

Risk Aversion

Risk aversion is defined as “the extent to which people feel threatened by ambiguous situations and have created beliefs and institutions that try to avoid them” (Hofstede and Bond, 1984, p. 419). People with high risk aversion tend to feel threatened by risky and ambiguous situations (Hofstede, 1991). In the selected case study, during the interviews, we found that the people generally felt risk aversion in uncertain scenarios. In recent years, there has been a strong dry period. For this reason, many producers were unwilling to invest in new machinery. However, under certain scenarios, such as the assurance of timely payment by Sigma Alimentos, the producers are expected to improve their situation through this certainty of payment. Thus we propose the following fourth hypothesis:

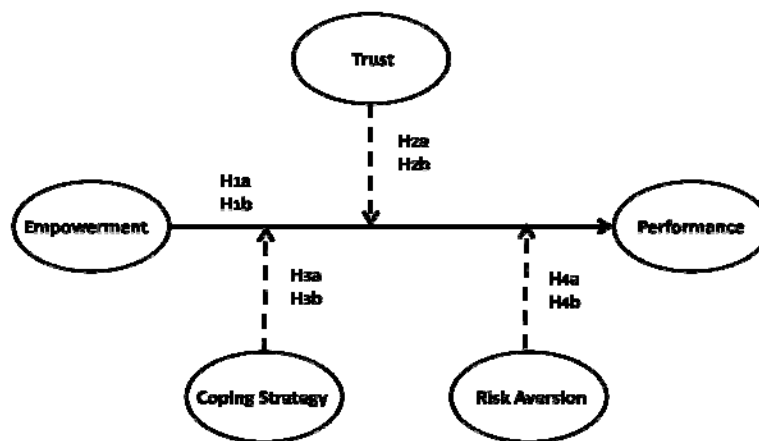
H4a: *The greater the risk aversion, the weaker the relationship between empowerment and performance in the LIS people that belong to the sustainable initiative (with Sigma Alimentos).*

Risk aversion is, like a coping strategy, a common behavior present in people who try to find a better option for decision making during every purchase in a usual day. In this sense, people that do not currently belong to the sustainable initiative also need to compare prices and also need to make decisions about the purchase of new equipment to improve the milk production, for example. For this reason, we also propose the following hypothesis:

H4b: *The greater the risk aversion, the weaker the relationship between empowerment and performance in the LIS people that belong to the sustainable initiative (with other milk buyers).*

In the Figure 1, we have combined all of our hypotheses to present our final theoretical framework:

Figure 1. Theoretical Framework



Methodology

Research can be undertaken from three different perspectives: quantitative, qualitative, and mixed. There can be little doubt that research that involves the integration of quantitative and qualitative research has become increasingly common in recent years (Bryman, 2009). But for more than a century, the advocates of quantitative and qualitative research paradigms have engaged in ardent dispute over which of the two approaches is better (Johnson and Onwuegbuzi, 2004). To solve this dispute, in recent years, several researchers have used mixed methods. The goal of mixed methods research is not to replace either of these approaches (qualitative and quantitative), but rather to draw from the strengths and minimize the weaknesses of both in single research studies and across studies. Our research work is framed within the mixed methods perspective.

Development of the Instrument

As we mentioned before, the first stage in generating the theoretical model was developed using qualitative approaches based on in-depth interviews with the key participants of the sustainable initiative. To test the hypotheses generated, we developed an instrument to measure the different relationships. First, we applied the instrument 10x6 developed by AMAI (2009) to validate the socio-economic level of the respondents. Psychological empowerment was measured using the four dimension scale developed and used by Spreitzer (1995), which has 12 items. Individual performance was measured individually according to the change of the performance of milk producers during recent years (average

liters per day) and the increase in the number of cows on their farms. Trust was measured by adapting the trust scale used by Morgan and Hunt (1994) and also used by Bansal (2004). To measure coping strategy we used a scale developed by Duhacheck (2005) to measure the instrumental support of the farmer's pairs. And finally the risk aversion scale is based on the original scale developed by Raju (1980) which was used subsequently by Keaveney and Parthasarathy (2001) and Bao et al. (2003). It contains three items. The final survey had a total of 41 items, resulting in a questionnaire of a proper length according to other researchers who recommend approximately this number of questions when the respondents belong to LIS because they have low literacy levels and it is more difficult to apply larger questionnaires (Bernal et.al, 1997). All the items were measured using a Likert scale from 1 – total disagreement to 7 – total agreement.

Finally, we applied this survey in two stages: 97 surveys with LIS farmers belonging to the sustainable initiative and then 115 surveys with LIS farmers not involved in the sustainable initiative; thus, the final sample was of 212 respondents. Under both conditions, we used the same measurement instrument, and in all cases, the participants responded in writing, with a previous explanation, in order to ensure that they understood each item, as recommended by Curry et al. (2009) for special populations with low literacy levels.

Data collection

The data from the two groups of farmers were obtained from villages near Lagos de Moreno, Jalisco in Mexico, where we were given access to a local group of milk producers with the help of the staff of the sustainable initiative. During two time periods during the day - in the morning (5:30am to 10:00 am) and in the afternoon (3:30pm to 6:30pm) - the farmers delivered the milk collected on their farms, and then this milk was delivered to one collection center by the leader of the cooperative.

First, we talked with the leader of each group of farmers, and we used rapport techniques to gain his confidence and that of some of his workers (Morgan and Smircich, 1980). Some researchers use these techniques as a form of nonverbal communication between the researcher and the participants; one example is eye contact. Under conditions of cooperative tasks among peers, eye contact is indicative of positive feelings, yet under conditions in which the interactants feel a personal threat or competitiveness toward one another, it may indicate aggressiveness (Kleinke, 1986).

To each farmer, we explained the specific instructions on how to respond to the questionnaire. We asked participants to read each statement carefully and respond to each using the provided response options. For example, participants read the item "The work I do is very important to me" (meaning). After reading the statement, they had to imagine themselves in that situation, and if they fully identified with the statement, they needed to select the response option 7 or close to 7; if they did not feel any identification with the statement, they were urged to select option 1 or close to 1. Finally, if they felt indifference toward the statement, they could select option 4.

Construct Validity

The CFA loadings were computerized using SPSS Version 17, and the results of the reliability measures of Cronbach's alpha, composite reliability (CR), and the average variance extracted (AVE) were obtained by using SMARTPLS 2.0 M3 (Ringle et al., 2005). All the results of the scales are summarized in Table 1.

Table 1. Summary of Reliability Test of Measures used

Construct	Item	Loading (CFA)	CR	AVE	Cronbach's Alpha
Psychological empowerment Spreitzer (1995)	The work I do is very important to me (EM1).	.498	0.585	0.535	α = 0.71
	My job activities are personally meaningful to me (EM2).	.736			
	The work I do is meaningful to me (EM3).	.733			
	I am confident about my ability to do my job (EC1).	.535			
	I am self-assured about my capabilities to perform my work activities (EC2).	.685			
	I have significant autonomy in determining how I do my job (ESF1).	.635			
	I can decide on my own how to go about doing my work (ESF2).	.865			
	I have considerable opportunity for independence and freedom in how I do my job (ESF3).	.811			
	My impact on what happens in my group is large (E1).	.837			
	I have a great deal of control over what happens in my group (E2).	.697			
	I have significant influence over what happens in my group (E3).	.840			
Trust Morgan and Hunt (1994) Bansal (2004)	I feel that I can trust our current milk buyer completely (T1).	.769	0.819	0.546	α = 0.78
	Our milk buyer is truly sincere in its promises (T2).	.885			
	Our milk buyer is honest and truthful with us (T3).	.820			
	Our milk buyer treats me fairly and justly (T4).	.892			
	I feel that our milk buyer can be counted on to help me when I need it (T5).	.729			
I feel that our milk buyer does not show me enough consideration (T6). Rev.Code.	.956				
Coping Strategy Duhacheck (2005)	Ask friends with similar experiences what they did (C1).	.749	0.821	0.609	α = 0.70
	Try to get advice from someone about what to do (C2).	.862			
	Have a friend assist me in fixing the problem (C3).	.758			
Risk Aversion Raju (1980)	I am cautious when trying new/ different products (R1).	.798	0.812	0.594	α = 0.68
	I never buy something I do not know about at the risk of making a mistake (R2).	.762			
	I usually buy new things to try. (R3) Rev. Code.	.784			

Note: α = coefficient alpha; CFA= Confirmatory Factor Analysis CR = composite reliability; AVE = average variance extracted.

In terms of the reliability test, all of the alphas of the scales are above 0.70 except one – 0.68 (risk aversion). However, all the scales exceed the rule of thumb of 0.60 (Nunnally, 1978; Peterson, 1994 as mentioned in Siren et al. 2012), thus showing good reliability. In other words, there is optimum internal consistency among the items, and the scale produces identical results of a particular construct if it is measured repeatedly. As a result, the assessment of the degree of consistency between multiple measurements of a variable is adequate.

Hypotheses Testing

Upon verifying that the sample does not follow a normal distribution, and due to several considerations associated with the data and the research model, it was determined that using partial least squares (PLS) structural equation modeling was advantageous. While better-known techniques of structural equation modeling are referred to as covariance-based structural equation modeling (CBSEM), PLS is considered to be a component-based SEM (Chin, 1998). The data were analyzed using structural equations modeling, employing partial least squares estimation using SmartPLS 2.0 (Ringle et al., 2005). PLS estimation has several important benefits over the maximum likelihood estimation method (Chin, 1998; Fornell and Bookstein, 1982; Hulland, 1999; Wold, 1985). PLS path modeling is a component-based approach to structural equations modeling, as opposed to covariance based (as in LISREL). Consequently, PLS analysis does not require multivariate normal data; it places minimal requirements on measurement levels and is more suitable for small sample sizes.

Figures 2 and 3 summarize the results of the PLS-SEM analysis for each group. We assessed the path coefficients and their significance values to test the proposed hypotheses. To do so, we applied the bootstrapping procedure (with 500 bootstrap samples and 200 bootstrap cases for both groups, using individual sign changes) to evaluate the significance of the paths (Nevitt and Hancock, 2001).

The first model was evaluated without problems, and with a total of 85 observations for the Belong Group, the model accounted for 21.5% ($R^2 = .215$) of the variance. The effect of psychological empowerment on individual performance turns positive if the farmer belongs to the sustainable initiative ($\beta = 0.464$, $p < 0.01$). The hypothesis H1a is supported. With respect to Hypotheses 2a, 3a, and 4a, we considered the contingency effects of coping strategy, risk aversion, and trust on the psychological empowerment – individual performance relationship. Two approaches are available to test the moderating effects in PLS-SEM: the product term approach and the group comparison approach. As our moderator variables are categorical, we decided to use the former approach (Henseler and Fassott, 2010; Wilson, 2010). We ran moderating analyses first on the sample obtained in the Belong Group. To analyze the moderating effects, we tested whether the path coefficients that capture the moderating effects differed significantly from zero (Henseler and Fassott, 2010). Secondly, we assessed the strength of the identified moderating effects using the effect size. The results show that the impact of psychological empowerment on individual performance decreases when the trust level

decreases (interaction effect $\beta = -0.201$, not significant) the expected result under the theoretical model proposed was the opposite; however, the T-value (1.414) indicates that the result is not significant and that hypothesis H2a is not supported. Additionally, the impact of psychological empowerment on individual performance increases when the coping strategy levels increase (interaction effect $\beta = 0.225$, $p < 0.05$). The expected result according with the theoretical model proposed was the same; so, hypothesis H3a is supported. Finally, the impact of psychological empowerment on individual performance increases when the risk aversion levels increase (interaction effect $\beta = 0.319$, not significant). The expected result in the theoretical model proposed was the opposite; the T-value (1.335) indicates that the result is not significant, and thus hypothesis H4a is not supported.

Figure 2. PLS SEM Results for Belong Group (N=85)

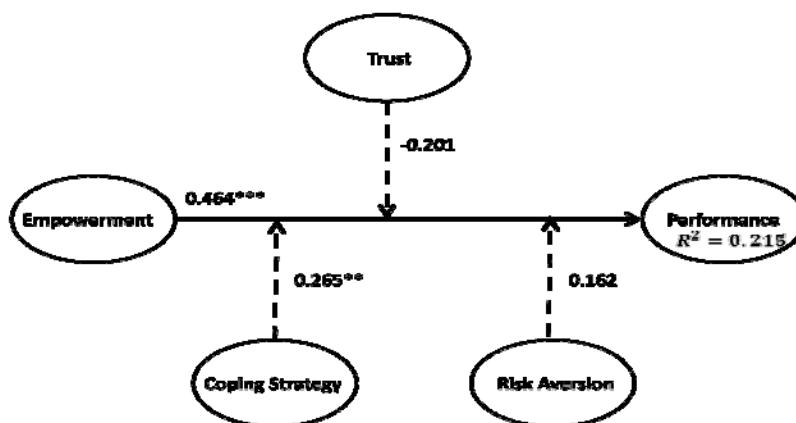


Table 2. Hypotheses Test: Belong Group

Expected Relationship	B	T-value	Hypothesis	Supported
Empowerment → Performance (+)	0.464***	8.634	H1a	Yes
Empowerment x Trust → Performance (+)	-0.201	1.414	H2a	No
Empowerment x Coping Strategy → Performance (+)	0.265**	2.211	H3a	Yes
Empowerment x Risk Aversion → Performance (-)	0.162	1.335	H4a	No

Note. $p < .01$, ***. $p < .05$, **. $p < .1$, *

The second model was also evaluated without problems and, with a total of 119 observations for the Belonged Group, the model accounted for 29.1% ($R^2 = .291$) of the variance. To test the hypotheses for the Belonged Group, we followed the same process. The results are as follows. The effect of psychological empowerment on individual performance also turns positive if the farmer belonged to the sustainable initiative ($\beta = 0.539$, $p < 0.01$). The hypothesis H1b is supported. With respect to Hypotheses 2b, 3b, and 4b, to test the moderating effects of trust, coping strategy, and risk aversion on the relationship between psychological empowerment and individual performance, we also decided to use the former approach to review if it is necessary to

eliminate items with low inter-item correlation (Henseler and Fassott, 2010; Wilson, 2010).

We ran the moderating analyses, but this time with the sample obtained in the Belonged Group (N = 119). The results show that the impact of psychological empowerment on individual performance decreases when trust levels decrease (interaction effect $\beta = -0.263$, $p < 0.01$). The expected result according to the theoretical model proposed was the same, so hypothesis H2b is supported. The impact of psychological empowerment on individual performance increases when the coping strategy levels increase (interaction effect $\beta = 0.226$, $p < 0.01$). The expected result according to the theoretical model proposed was the same; therefore, hypothesis H3a is also supported. Finally, the impact of psychological empowerment on individual performance increases when the risk aversion levels increase (interaction effect $\beta = 0.319$, $p < 0.01$). The expected result according to the theoretical model proposed was the opposite; therefore, hypothesis H4a is not supported.

Figure 3. PLS SEM Results for Belonged Group (N=119)

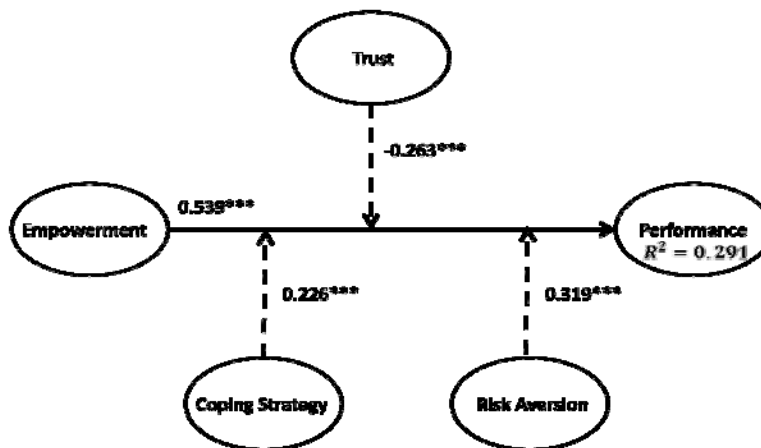


Table 3. Hypothesis Test: Belonged Group

Expected Relationship	β	T-value	Hypothesis	Supported
Empowerment \rightarrow Performance (+)	0.539***	9.316	H1b	Yes
Empowerment x Trust \rightarrow Performance (-)	-0.263***	3.101	H2b	Yes
Empowerment x Coping Strategy \rightarrow Performance (+)	0.226***	2.597	H3b	Yes
Empowerment x Risk Aversion \rightarrow Performance (-)	0.319***	3.378	H4b	No

Note. $p < .01$, ***. $p < .05$, **. $p < .1$, *

Implications for Theory and Practice

The increasing numbers of sustainable initiatives aimed at impoverished communities in developing countries suggest the need to develop a more nuanced understanding of the dynamics of this market. We questioned the assumption that increasing consumption and generating unskilled employment improves social welfare (Karnani, 2007; London, 2004).

In this sense, we present, as have a few other authors, the view of this market as not merely consumers. It is also important to understand how these people can improve their life conditions through the generation of psychological empowerment. As we mentioned, the relationship between psychological empowerment and individual performance has been studied and confirmed by other authors (Liden et al., 2000; Spreitzer, 1995; Spreitzer et al., 1997). The results of this research work show that independent of whether or not these persons currently belong or previously belonged to sustainable initiatives like Fomento Lechero, they can also generate better individual performance in their daily operations. The first general conclusion is that this research confirms the relationship in the Mexican context and also suggests that the sample used to confirm this relationship (those in the LIS) is an important contribution.

Another important theoretical contribution is the inclusion of the constructs of trust, risk aversion and coping strategy as moderators in the relationship between psychological empowerment and individual performance. The inclusion of these constructs was a product of the analysis of in-depth interviews with low-income farmers.

Regarding practice, companies that wish to set up an integration of the low income sector into the value chain can draw on our conclusions that identify some of the most important factors that can affect the successful establishment of these strategies. Additionally, they should integrate the affected process owners within the company as well as from external supply chain partners in the development and implementation of the new strategy, and continuously optimize the strategy by drawing on process improvement techniques. This increases both the technical and economic feasibility as well as the acceptance of the new supply chain strategy.

Our research demonstrates that multinational companies should partner with federal and local government entities and other stakeholders to obtain a successful integration of the low income people into the value chain. This research explored how the social and economic empowerment generated by the MNCs and government entities can improve the individual performance of low income people.

Future Research Avenues

Based on the research work generated, there are a number of future research possibilities to support the understanding of sustainable initiatives to generate empowerment, mainly in the LIS. One of these avenues could be the exploration of the theoretical model in different industries and cultural contexts to compare with the results obtained in our study.

From this work, researchers can generate and test other instruments to measure the social and economic empowerment generated by sustainable initiatives. This work can be used as an initial effort to clarify the generation of new instruments that can help to better measure the impact of this kind of program.

In terms of the variables used in the theoretical model proposed here, researchers can develop future studies using another unit of analysis. For example, the construct of empowerment has been studied in groups (Israel et al., 1994); in this sense, the use of social network theory (Peredo and Chrisman, 2006) as a foundation could be useful. It also could be useful to analyze these groups through a longitudinal study to better observe the impact of this kind of program (Raffai, 2013).

Finally, it is also important to state that other units of analysis in the relationship between this sector and the MNCs are important to analyze in the future. For example, within and outside these companies exist social intermediaries (Kristruck et al., 2012). The role of these people is fundamental to the success of the sustainable initiatives.

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