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Investigation note

Social capital and public policies for rural development. Analysis of the sowing life program

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Abstract

The objective of this research was to know the elements that determine the social capital in the beneficiaries of the Sowing Life Program, based on quantitative and qualitative information obtained from the beneficiaries. Two trust measures were used, with which three levels of trust were built: low, medium and high, and the proposed equations were estimated using a Probit model. The estimated models allow concluding that those beneficiaries surveyed who are older, inhabitants of rural populations and who voluntarily participate in local groups or organizations, have a greater probability of belonging to the groups of greater trust. Using the trust measure based on the perception of reliability of the people from the locality, the results of the model indicate that gender and ethnicity status have a negative and positive effect on trust level, respectively. While the model based on the rating given to different local actors suggests that these two characteristics have a negative effect on the level of trust. On the other hand, it was observed that, at higher levels of trust of the beneficiaries, their organizational performance through peasant learning communities increases.

Keywords: peasant learning communities, Probit model, trust.

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One of the priority programs of the current administration of the Government of Mexico is the Sowing Life Program (SLP). The SLP began in 2019 attending agrarian subjects of legal age inhabitants of rural localities, in municipalities with levels of social backwardness and who are owners or possessors of 2.5 ha available to be worked in an agroforestry project, in 20 states of the country. This, in addition to considering the productive dimension, seeks to promote social organization as a way to recover the social fabric (Secretaría de Bienestar, 2020).

Of the three types of support granted by the SLP, the economic one, through direct transfers, is the main one. On the other hand, the support in kind for the installation of community nurseries or biofactories is delivered to the sowers or to the CACs, the central collective figure for the exchange of knowledge and training. The support of technical and social accompaniment seeks to enhance community organization, the recovery of local knowledge and in this way, favor the rebuilding of the social fabric (CONEVAL, 2020).

The working hypothesis of this research is that, as the social capital is greater, the performance of the CACs will be greater, thus contributing to the achievement of the objectives of the SLP in relation to the social fabric. According to Leiras (2007), in recent decades, a more active participation of civil society in the public policy cycle has been observed. In Mexico, few studies have been conducted on social capital and its relationship with the implementation of public programs. Ordoñez and Ruíz (2015) carried out a study to determine the formation of community social capital from programs to combat poverty in Mexico, focusing on the impact of the Habitat Program.

Specifically, research on social capital in rural Mexican spaces focuses on its role in rural enterprises, in the organizational processes of agricultural producers and networks of social actors (Custodio and Martínez, 2018). The central interest of this research work was to know the role of this concept in the performance of the collective action of the beneficiaries, based on the definition of social capital formulated by Putnam (1993), understood as those 'elements of social organizations, such as trust, norms and networks, that can improve the efficiency of a society, facilitating coordinated actions', this definition does not address, as in the case of Bourdieu, their temporality, since he defines it as the product of social investment strategies consciously or unconsciously oriented towards the institution or reproduction of directly usable social relationships, in the short or long term (Bourdieu, 2007).

The research was based on the method of multiple case study considering that 'its greatest strength lies in the fact that through it, the behavior of the people involved in the phenomenon studied is measured and recorded', according to Yin (1989). A combination of qualitative and quantitative methods was used, as the combination of two or more methods produces better results (Morgan, 1998), including five cases of CACs of the states of Oaxaca, Tlaxcala and Veracruz. The selection of the sample included an entity from each of the defined strata (high, medium and low) based on the number of beneficiaries: Tlaxcala (5 000), Oaxaca (29 642) and Veracruz (67 773).

The selection of the CACs was made considering the information restrictions of the SLP in this regard, as well as the sanitary measures derived from the SARS-COV 2 pandemic, Table 1. The research techniques used were two: the survey, through a structured questionnaire and the in-depth interview. We sought to survey at least 50% of the CACs considering that each one is composed of an average of 25 people.

Table 1. Actors included in the study, according to state, municipality and locality.

State	Municipalities	Localities	CAC	No. of sowers interviewed	No. of productive or social technicians
Oaxaca	San Miguel Tequixtepex	San Miguel Tequixtepec	Chocholtecos Sembrando Vida	15	2
	San Pedro Tapanatepec	San Pedro Tapanatepec	El Mexicano	15	2
Tlaxcala	Españita	San Agustín	El Renacer	17	2
		Vicente Guerrero	Guerreros por la naturaleza	14	2
Veracruz	José Azueta	Ejido Tierra y Libertad	Ejido Tierra y Libertad	12	2
Total	4	5	5	73	10

Based on information collected in the field.

Two measures of trust were used: C^1: the beneficiaries' response to the question: do you consider that the majority of people in your locality are reliable? The affirmative answer was coded 'with trust', if the answer was that sometimes it can be trusted, it was considered as 'intermediate trust', if the answer was negative it was classified as 'with distrust', C^2: using the rating given from 1 to 10 to different local actors, such as: relatives, CAC colleagues, neighbors, friends, local authorities, co-workers, law enforcement agencies, political parties and the Church. This allowed three levels of trust to be generated: low: from 0 to 4; medium: from 5 to 7; high: from 8 to 10.

The model of trust at the individual level was represented by the following equation (Cárdenas *et al*., 2015). Where: i indicates individuals or observations and j the trust measurement to be used: $\Pr\left(C_i^j=k\backslash x_i\right)=\Phi\left(\mu_k-x_i^{'}\cdot\gamma\right)-\Phi\left(\mu_{k-1}-x_i^{'}\cdot\gamma\right)$. Where: j=1,2; $x_i^{'}\cdot\gamma=\alpha+\beta\cdot D_i+\delta\cdot E_i+\pi\cdot PM_i$; C_i^j: takes values 1 (low trust level), 2 (medium trust level) and 3 (high trust level), for both trust measures used; D_i: vector of sociodemographic variables of individuals (sex, age and education level); E_i: vector of environmental variables (population size, degree of marginalization and ethnicity); PM_i: vector of the variable of belonging to local or regional voluntary organizations; β, δ and π: coefficients of each group of variables; α: vector of constants. These equations were estimated by using a Probit model in the statistical package STATA. CAC performance was classified into three levels: i) high performance; ii) medium performance; and iii) low performance.

Table 2 presents the statistical parameters of the two trust measures used. As can be seen, the first measure yields slightly optimistic results, since four out of ten beneficiaries indicate distrust in the majority of people in their locality. Through the second measure, a considerable improvement is observed, since two out of 10 respondents indicated low trust.

Table 2. Statistical parameters of the trust measures used.

Variable	Mean or (%)	Standard deviation
C^1	1.85	0.84
Distrust	43.84%	
Intermediate trust	27.4%	
With trust	28.77%	
C^2	2.18	0.77
Low trust	21.92%	
Medium trust	38.36%	
High trust	39.73%	

Based on information collected in the field.

According to Table 3, in general, there is a slight majority of male respondents, with an average age of 47 years, a differentiated analysis allows concluding that women are, on average, six years older than men. In terms of education level, the average schooling is 8.8 years.

Table 3. Statistical parameters for different variables characteristics of the respondents.

Variable	Mean	Standard deviation
Sex	1.42	0.5
Age	47.12	12.5
Education level	8.84	2.03
Rural population	1.2	0.41
Degree of marginalization	2.07	0.63
Indigenous language speaker	1.82	0.38
Volunteering	1.53	0.5

Based on information collected in the field.

On the other hand, eight out of ten beneficiaries live in rural areas, with a medium degree of marginalization prevailing in 60.3% of cases. The presence of speakers of an indigenous language is 17.8% and 46.6% have participated as a volunteer in a local group or organization.

According to Table 4, using trust in the local population, four of the seven coefficients were statistically significant: age, rural population, indigenous language speaker and volunteering. For the model in which the rating given to different actors is used, six coefficients are significant: sex, age, education level, rural population, degree of marginalization and volunteering.

Table 4. Statistical coefficients of estimated Probit models of trust.

Variable	C^1	C^2
Sex	-0.077	-0.1113*
	(0.0644)	(0.0566)
Age	0.004**	0.0082***
	(0.003)	(0.0011)
Education level	0.008	0.0319***
	(0.0085)	(0.0071)
Rural population	0.469***	0.4464***
	(0.0866)	(0.088)
Degree of marginalization	0.064	0.1455***
	(0.0543)	(0.0507)
Indigenous language speaker	0.222***	-0.0913
	(0.1)	(0.126)
Volunteering	0.201***	0.3409***
	(0.0721)	(0.0612)
N	73	73
Pseudo R^2	0.0215	0.0512

Significance of coefficients: $p< 0.1$, $p< 0.05$, $p< 0.01$. Standard errors are reported in parentheses. Based on information collected in the field.

In both models, beneficiaries who are older, inhabitants of rural populations and who voluntarily participate in local groups or organizations are more likely to belong to the most trusted groups. The statistical coefficients obtained in the first model indicate that being a woman has a negative effect on the level of trust, while belonging to an ethnic group has a positive effect. On the other hand, the results of model two indicate that these are two attributes with a negative effect on the level of trust.

In the case of the second model, the results are similar to those reported by Alesina and La Ferrara (2002) in relation to the positive and decreasing effect of age on trust. Regarding education level in the same model, Helliwell and Putnam (1999); Knack and Zak (2003) observed a positive effect of education on trust. On the other hand, Nikolakis and Nelson (2018) found no relationship between education and trust, but obtained evidence that negatively associates the latter variable with age. On the other hand, Alesina and La Ferrara (2002) also point out negative effects on the level of trust on the part of women.

With regard to the performance of CACs and the levels of trust observed, the results presented in Table 5 indicate a positive relationship between these variables, since, as the trust of the beneficiaries increases, the performance of the CAC increases. According to Ostrom and Ahn (2003), by establishing activities in a coordinated manner, groups of individuals are more productive regardless of the level of physical and human capital they possess.

Table 5. CAC performance by trust level.

Variable	CAC performance (%)		
	High	Medium	Low
C[1]			
Distrust	3.1	34.4	62.5
Intermediate trust	30	65	10
With trust	38.1	57.1	4.8
C[2]			
Low trust	6.3	18.8	75
Medium trust	35.7	39.3	25
High trust	51.7	27.6	20.7

Based on information collected in the field.

Conclusions

The levels of trust in the beneficiaries of the SLP, prior to their participation in the program is high, focusing, mainly, on the people of their family and those who live in the same neighborhood or locality. After their participation in the program, trust increased, substantially improving their perception of the people they currently work with.

The estimated models allow concluding that those beneficiaries surveyed who are older, inhabitants of rural populations and who voluntarily participate in local groups or organizations have a greater probability of belonging to the groups of greater trust. In the first model, the results indicate that being a woman and belonging to an indigenous group have a negative and positive effect on the level of trust, respectively. While in the second model, being a woman and belonging to an indigenous group are two characteristics that have a negative effect on the level of trust. On the other hand, the results indicate that, at higher levels of trusts of the beneficiaries, the performance of CACs increases.

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