

Local Governments and Their Relation with the Presence of Agricultural Organizational Hybrids in Colombia

¹Sanchez Cespedes Juan Manuel, ²Rodriguez Miranda Juan Pablo and ³Pedraza Martinez Luis Fernando

¹Department of Electronic Engineer, GIIR Investigation Group, Faculty of Engineering,

²Sanitary and Environmental Engineer, AQUAFORMAT Investigation Group,
Faculty of Environment and Natural Resources,

³Department of Electronic Engineer, Faculty of Technologic,
Francisco Jose de Caldas District University, Bogota, Chapinero, Colombia

Abstract: This study aims to show the results obtained out the analysis from the relation of local governments and the presence of organizational hybrids in agriculture in 25 Colombian municipalities with different insecurity levels. Initially, different investigations were reviewed related to organizational hybrids in agriculture. Then, the posed hypothesis was “Support and governability of local governments benefits the presence of organizational hybrids”. The methodology for validating or rejecting the hypothesis first consisted on gathering pertinent information, in regards to the surveys carried out by the Administration Faculty of Andes University in the 25 municipalities on their investigation called “study of associative organizations in Agro-Industrial Colombian projects of Colombia”. The investment plans from the 25 municipalities were also reviewed and the constitution of the municipal councils from the 25 municipalities when the surveys took place. Then, it was determined what variables were pertinent for the study and also determined which of them were related to each other using the Chi-square test. After determining what variables were related to each other, the next step was to find the relations between the related variables categories, in order to do it, the Simple Correlation Analysis (SCA) and Multiple (MCA). Considering the obtained results, the hypothesis was successfully validated but in some cases, on which local governments were related to the presence of organizational hybrids in zones where the local government’s investments in agro are high and the security levels are low.

Key words: Local governments, organizational hybrids, security, agriculture, simple correlation analysis, multiple correlation analysis

INTRODUCTION

Now a days, in different places of the world, there’s a great interest on analyzing the different organizational structures formed in agriculture. As an example of this, here are presented some results of the studies that served as a reference framework for this study. The first study to mention is (Perico, 1998) which was a project that carried out a reflection, investigation and discussion exercise, in order to provide a long term orienting vision for the Colombian rural sector based on three axes: transition, coexistence and sustainability. In that study, integrality of agro is remarked, related to the social phenomenon in regards to the environment, the gender and the neo institutionally. Even though, it doesn’t dig into the consequences of political and social insecurity in the different regions of the country as

a variable that explains the formation of organizations and different companies or cooperatives in such regions.

The second study was made by Machado (2000) where he institutionally analyzes organizations on agriculture where it concludes the recognition of public and private organizations that played a key role on the sector development, it shows that today there’s a asymmetry with the market dynamics and with the institutional development. Therefore, they have plenty of difficulties to guarantee its permanence and contributions to development.

In Latinamerica, a study carried out in Brazil, presents an analysis about the contract types and its weak application on tomatoes industry, evidencing the issues generated by the high transaction costs on its execution.

They found that opportunism relations exclude the stability possibilities on contractual relations of the region the probabilities of violating the agreements that are influenced by variables as credit sources, distance of the farms and the farmer's reputation (Nadalini and Zylbersztajn, 2003).

Later, a study made by Andes University based in Bogota, Colombia found that insecurity perception is negatively related to the subjective well-being levels and there's also a significant contribution of social capital to the subjective well-being levels (Herrera *et al.*, 2011). In regards to the organizational hybrids, the study found that the perception of insecurity and the objective violence measurements are positively related to the adoption of hybrid organization shapes of production and the distribution (Pineda *et al.*, 2014).

Another study in Latin America. In Argentina, they analyzed the inclusion of agrarian collectives on global value chains. In this study, they determined the importance of strategies to enhance products, processes and functional strategies including the certification of quality and alimentary safety protocols, technology investments, brands positioning and commercialization in the international context (Wilches, 2014).

Later on, in Ethiopia they evaluated the impact of agricultural collectives on small producer's technical efficiency. It was established that a higher participation of agricultural collectives enhances the benefits among small farmers (Abate *et al.*, 2014).

Another study in Colombia shows that the conditions that ease the development of agricultural organizational hybrids are not reached in Colombia. Therefore, it proposes the formulation of public policies that allow the State to play an enabler role for forming and developing organizational hybrids among small agricultural producers so they are auto-sustainable (Gutierrez, 2014).

Finally, a study in Rwanda analyzed the agricultural collectives and their effects on reducing poverty. What they found was that collectives members increase incomes and reduce poverty and those effects are higher for huge farming in the most remote zones (Verhofstadt and Maertens, 2014).

As observed, there are many investigations aiming to understand how agricultural organizational hybrids have enhanced conditions in agriculture. Therefore, it is also important to determine the formation and presence of organizational hybrids in rural areas and their relation with local governments support. Based on this inquiry, the following hypothesis comes up. "Support and governability of local governments encourages the presence of organizational hybrids".

MATERIALS AND METHODS

As a Project base, there were considered the surveys made as a primary information instrument by the Faculty of Administration. In order to apply the instrument, the faculty developed a methodology that considered the following aspects: identification of target population, pilot test execution, sample selection and fieldwork per se. For collecting reference information regarding local governments from the 25 zones selected for the study, government plans were consulted and also the results from local elections of the closer period when the faculty of administration of Andes University carried out the survey in those zones. Taking that information it aims to documenting two relevant topics for the study: political willingness from local governments reflected on the percentage of productive projects investments regarding the total budget assigned and the reflected governability on the municipal council proportion that is part of the Majors political party; all this reflected within the context of an investing and political-social representative map in those zones.

Having collected the information from the investments plan of 2005 for the 25 municipalities from the study, it was classified in order to perform a categorization in regards to the levels of investments made in those municipalities. In order to perform the classification, they observed the percentage of investment on agricultural projects regarding the total budget of each municipality. The description of these levels is detailed as follows.

Very high: When the investment is >3% of the total municipality budget.

High: When the investment is >2 and < 3% of the total municipality budget.

Medium: When the investment is >1 and <2% of the total municipality budget.

Low: When the investment is <1% of the total municipality budget.

Finally, it was consolidated the indicators by departments with intervention to find a productive projects representativeness indicator against the total investment. This consolidated is presented on Table 1 and 2.

In general, in zones of study the municipalities make average investments on productive projects that are not >1.41% out of the total budget (medium investment level). The highest investment is made in Narino Department,

Table 1: Percentage of investment on productive projects by studied municipality, year 2005

Departaments/Municipality	Productive projects investment levels classification (%)		
	1	2	3
Bolivar			
El Carmen De Bolivar	0.65	Low	1
El Guamo	2.54	High	3
San Juan Nepomuceno	0.22	Low	1
San Pablo	2.26	High	3
San Alberto	0.39	Low	1
Huila esar			
Algeciras	1.21	Medium	2
Iquira	1.40	Medium	2
Oporapa	1.22	Medium	2
San Agustin	1.11	Medium	2
Santa Maria	2.44	High	3
Meta			
Acacias	1.25	Medium	2
El Castillo	0.67	Low	1
Lejanias	0.65	Low	1
San Carlos de Guaroa	0.18	Low	1
San Martin	0.82	Low	1
Narino			
La Union	6.22	Very high	4
Los Andes	2.96	High	3
Policarpa	1.52	Medium	2
Ricaurte	0.69	Low	1
San Pablo	1.36	Medium	2
Santander			
Cimitarra	1.01	Medium	2
Puerto Wilches	2.05	High	3
Sabana De Torres	0.12	Low	1
Sucre			
Los palmitos	1.39	Medium	2
Toluviejo	1.34	Medium	2

Table 2: Representativeness of investment on productive project made by local governments in study zones

Departments	Investment level (%)		
	1	2	3
Narino	2.54	High	4
Huila	1.40	Medium	3
Meta	1.03	Medium	3
Sucre	1.36	Medium	3
Bolivar	0.96	Low	1
Cesar	0.39	Low	1
Santander	0.94	Low	1
Totales	1.26	Medium	3

medium in Huila, Meta and Sucre and Low in Bolivar, Cesar and Santander. In order to find the governability levels in the 25 studied municipalities, they considered the information regarding the elections from when the surveys were made in each municipality, comparing relation among the Major's political party and the conformation of seats at the municipal council according to the political party, in three levels as follows.

High governability: When the political party to which the Major belongs is the same from most of those from the municipal council and furthermore, there is at least half plus one seats from the council.

Table 3: Governability levels in the 25 studied municipalities

Departaments/Municipality	Governability level	
	1	2
Bolivar		
El Carmen De Bolivar	Low	1
El Guamo	Low	1
San Juan Nepomuceno	Medium	2
San Pablo	High	3
Cesar Huila		
San Alberto	High	3
Algeciras	Low	1
Iquira	Medium	2
Oporapa	Medium	2
San Agustin	Medium	2
Santa Maria	Medium	2
Meta		
Acacias	Low	1
El Castillo	Medium	2
Lejanias	Low	1
San Carlos De Guaroa	Low	1
San Martin	Low	1
Narino		
La union	Low	1
Los Andes	Low	1
Policarpa	Medium	2
Ricaurte	Low	1
San Pablo	Low	1
Santander		
Cimitarra	Low	1
Puerto Wilches	Medium	2
Sabana De Torres	Low	1
Sucre		
Los Palmitos	Medium	2
Toluviejo	Medium	2

Medium governability: When the political party to which the Major belongs to is the same as the majority from the municipal council but there are not half plus one seats from the council.

Low governability: When the political party to which the Major belongs is not the same as the majority from the municipal council. The consolidated of this information is observed on Table 3. In general, at the studied zones the municipalities have a low governability. The higher governability levels are shown in Cesar, medium in Huila and Sucre and low in Bolivar, Meta, Nariño and Santander.

For processing and analyzing the information, as a base they considered the type and amount of variables of the affected surveys and their relevance for the study when raising the hypothesis, aiming to find the relation among the organizational variables of the productive and agroindustry units, against the variables related to the insecurity levels and investment and governability levels.

Considering that the types of variables used in the study are categorical, the analysis was determined in two phases. The first one consisted on applying

the Chi-squared test to the group of variables in order to determine which of them were related to each other and the second one was used to determine how the categories of the related variables are grouped, finding that the most appropriate method for processing information are the simple and multiple correlation analysis.

The variables used in such study are shown as follows: first, they identified the variable that allows to differentiate whether the individual that belongs to the survey corresponds to the productive units (productive units with >5 ha) or to the agroindustry (productive units with <5 ha). The second group is consists of the variables that maintain a relation with the types of organization in the productive units and the agro-hybrids.

The thirds one is a variable that considers the objective insecurity level in the studied municipalities (this indicator was designed by the faculty of Administration of Andes University in function of the offences reports in the municipalities during the time the study took place.

The fourth component is the governability variable, which classifies the municipalities according to the governability grade through the relation among the Major's political party and the conformation of seats from the municipal council according to the political party (in three levels: high, medium and low).

Finally, the fifth component is the investment in agricultural productive projects, reflected on the municipality's budget classified within the 4 levels (very high, high, medium and low).

RESULTS AND DISCUSSION

There were different analyses that aim to approve or reject the hypothesis first raised: "Support and governability of local governments benefits the presence of organizational hybrids" The results obtained from the different analysis made are described as follows.

Analysis of the influence given by the insecurity and the local government dynamic, upon the land's proprietary in the productive and agroindustry units: Zones where investment on agricultural projects is high or very high from local governments and there are low or medium insecurity levels, can have safeguards, or community properties. Zones where investment in agricultural projects is high or very high from local governments and medium governability can show that the land property is constituted by various proprietaries with one single deed.

Where investment in agricultural projects is low or medium from local governments and there is a high governability, it is very likely that the property is

composed by various proprietaries with various deeds. Considering the results obtained, there are 2 cases that approve the hypothesis which would be a and b, in contrast there's case c that would reject the hypothesis. This would indicate that the relation of local governments in regards to the land property in organizational hybrids is limited. It is only evidenced under certain circumstances such as low or medium insecurity and it is also shown when there is a high or medium governability from local governments.

Analysis of the influence given by the insecurity and the local government dynamic upon the direction of production in agroindustry productive units: Zones where there are high or very high investments from local governments in agro can show that productive units are led by a producers association. Zones where there are high or very high investments from local governments in agro can show that productive units are led by an association or de jure business association through a representative. Zones where there are high investments from local governments in agro show that the production direction is made by the proprietary.

In conclusion, there are two cases that approve the hypothesis, cases a and b and in the other hand, there is one that rejects the hypothesis, case c, therefore, it can be concluded the same as in the previous case. Local governments' relation to the direction of organizational hybrids is limited under certain circumstances, such as high investments in agro and under certain types of direction as producers associations and de jure business associations.

Analysis of the influence given by insecurity and the local government dynamic upon the hiring methods in production on agroindustry productive units: Zones where insecurity levels are high regardless of the investment level in agricultural projects by local governments show leasing in their production.

Zones where there is a high agricultural investment by local governments doesn't show sharecropping in contrast to zones with medium agricultural investment, medium and low governability does show this type of hiring. In conclusion, this analysis rejects the hypothesis raised since there are two cases that demonstrate so.

Analysis of the influence given by the insecurity and the dynamic of local government upon the organization ways of workers in productive and agroindustry units: Zones where there is a high insecurity and high investment by local governments on agricultural projects don't show workers association.

Zones where there is a low and medium governability and medium investment by local governments on agricultural projects do show workers associations. Zones where there is a medium insecurity, high governability and low investment on agricultural projects show associations in production. In conclusion, this analysis rejects the hypothesis proposed because there 3 cases evidenced that reject it and none of them approves it.

Analysis of the influence given by the insecurity and the local government dynamic upon the commercialization ways in productive and agroindustry units: Zones where there are low insecurity levels and very high investment levels on agriculture by local governments, there are commercialization by cooperatives.

Zones where there are low insecurity levels and high investment on agriculture by local governments show commercialization by trade entities. Zones where there is high and very high investment in agriculture by local governments and medium insecurity levels, there are no other type of commercialization other than the traditional ones. In contrast, there are other commercialization types when there are high insecurity levels and low investment on productive projects.

In conclusion, there are two cases that would support the hypothesis raised, cases a and b and one that would reject it. Therefore, it can be said that the impact of local governments on commercializing organizational hybrids is limited. Only when there are high investment levels by local governments and low security levels there is commercialization through cooperatives or gremial entities.

CONCLUSION

There is evidence of a relation among local governments and the presence of organizational hybrids in agriculture in areas such as property, direction and commercialization. As long as the assigned amounts for investing in productive projects are high or very high (>2% out of the total budget).

However, there's a general inefficiency from local governments when it comes to supporting the formation of organizational hybrids in agriculture. Only when local governments provide great investments in agriculture with the presence of cooperatives and with low insecurity levels, there was a product commercialization that benefits the organization hybrids.

The effect of governability (local council support) in the formation of organizational hybrids is very low according to the government's support willingness (reflected on the assigned budget) while security in the zone constitutes an important aspect when it comes to the presence of organizational hybrids.

REFERENCES

- Abate, G.T., G.N. Francesconi and K. Getnet, 2014. Impact of agricultural cooperatives on small holders technical efficiency: Empirical evidence from Ethiopia. *Annl. Public Cooperative Econ.*, 85: 257-286.
- Gutierrez, J.D., 2014. Smallholders' agricultural cooperatives in Colombia: Vehicles for rural development?. *Desarrollo Soc.*, 73: 219-271.
- Herrera, E.W., L.E. Orozco, P.C. Forero, O. Pardo and V. Andonova, 2011. The relationship between perceptions of insecurity, social capital and subjective well-being: Empirical evidences from areas of rural conflict in Colombia. *J. Soc. Econ.*, 40: 88-96.
- Machado, A., 2000. Organizations of the agricultural sector an institutional analysis (No. LC-0390). Colombian Institute for the Development of Science and Technology Francisco Jose de Caldas, Colombia.
- Nadalini, L.B. and D. Zylbersztajn, 2003. Tomatoes and courts: Strategies of the agro-industry facing weak contract enforcement. Master Thesis, University of Sao Paulo, Sao Paulo, Brazil.
- Perico, R.M.E., 1998. [Colombia in Transition; From Crisis to Coexistence: A Vision From the Rural]. Vol. 9, TM Publishers, Bogota, Colombia, ISBN:958-601-802-4, Pages: 195 (In Spanish).
- Pineda, C.F., W.E. Herrera, V. Andonova, O.L.E. Collazos and O. Pardo, 2014. Violence insecurity and hybrid organisational forms: A study in conflict-Ridden Zones in Colombia. *J. Dev. Stud.*, 50: 789-802.
- Verhofstadt, E. and M. Maertens, 2014. Can agricultural cooperatives reduce poverty? Heterogeneous impact of cooperative membership on farmer's welfare in Rwanda. *Appl. Econ. Perspect. Policy*, 37: 86-106.
- Wilches, R.S., 2014. Insertion of local agricultural cooperatives into global value chains. Case Citrus Prod. Syst. Argentine Province Corrientes, 82: 97-126.