

# The influence of trust in the Nicaraguan Learning Alliance on capacity development of members and other influenced groups



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RESEARCH  
PROGRAM ON  
Integrated Systems  
for the Humid  
Tropics

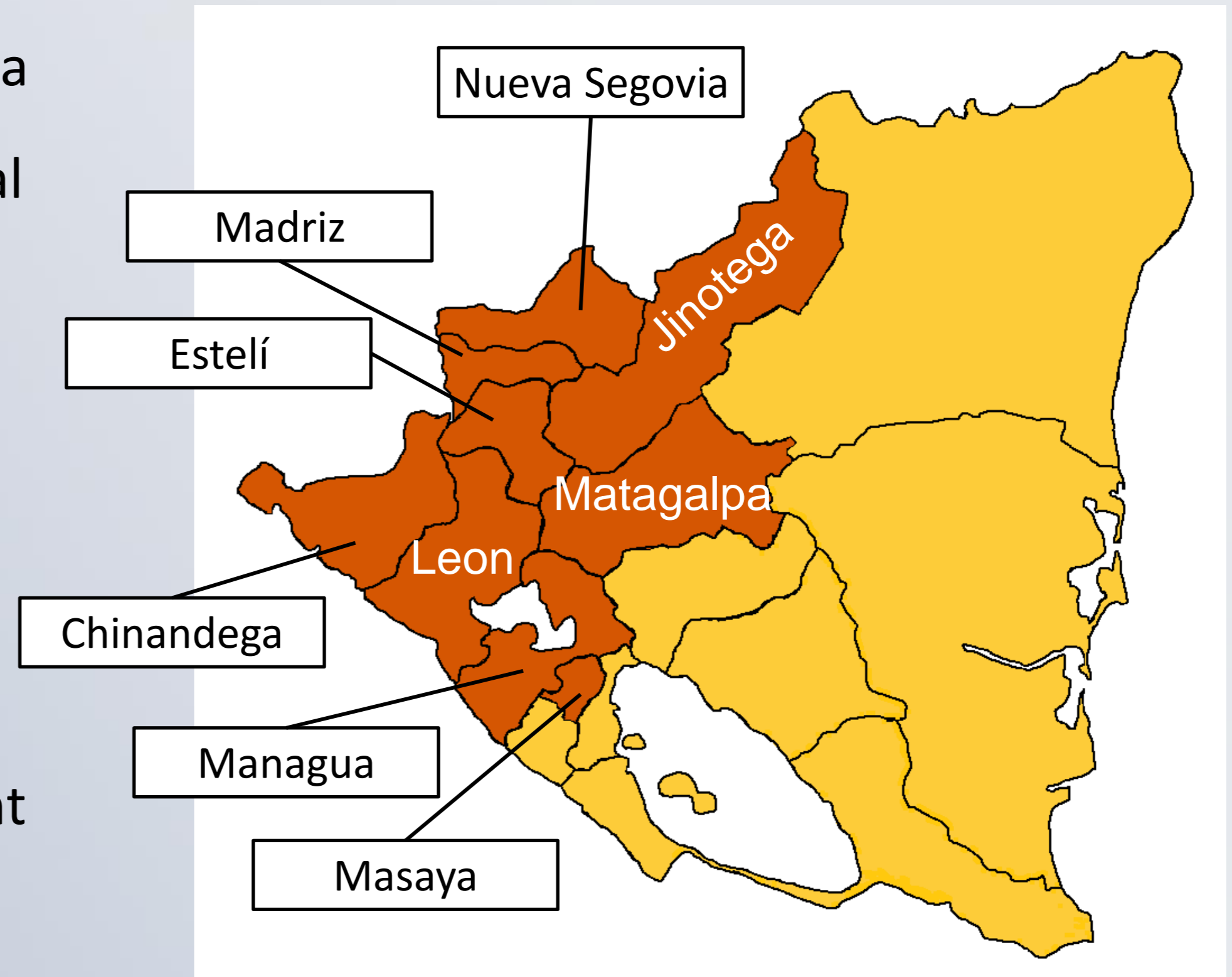


1. Introduction
2. Nicaraguan Learning Alliance
3. Literature review and objectives
4. Conceptual framework and hypothesis
5. Data collection and methods
6. Data analysis
7. Discussion and Conclusion



# 1. Introduction

- 2<sup>nd</sup> poorest country of Latin America
- 22% of GDP comes from agricultural production
- 28% people working in agricultural sector
- 4,124 agricultural cooperatives
- NGO, Government and private sector is focusing on agricultural sector and agricultural development



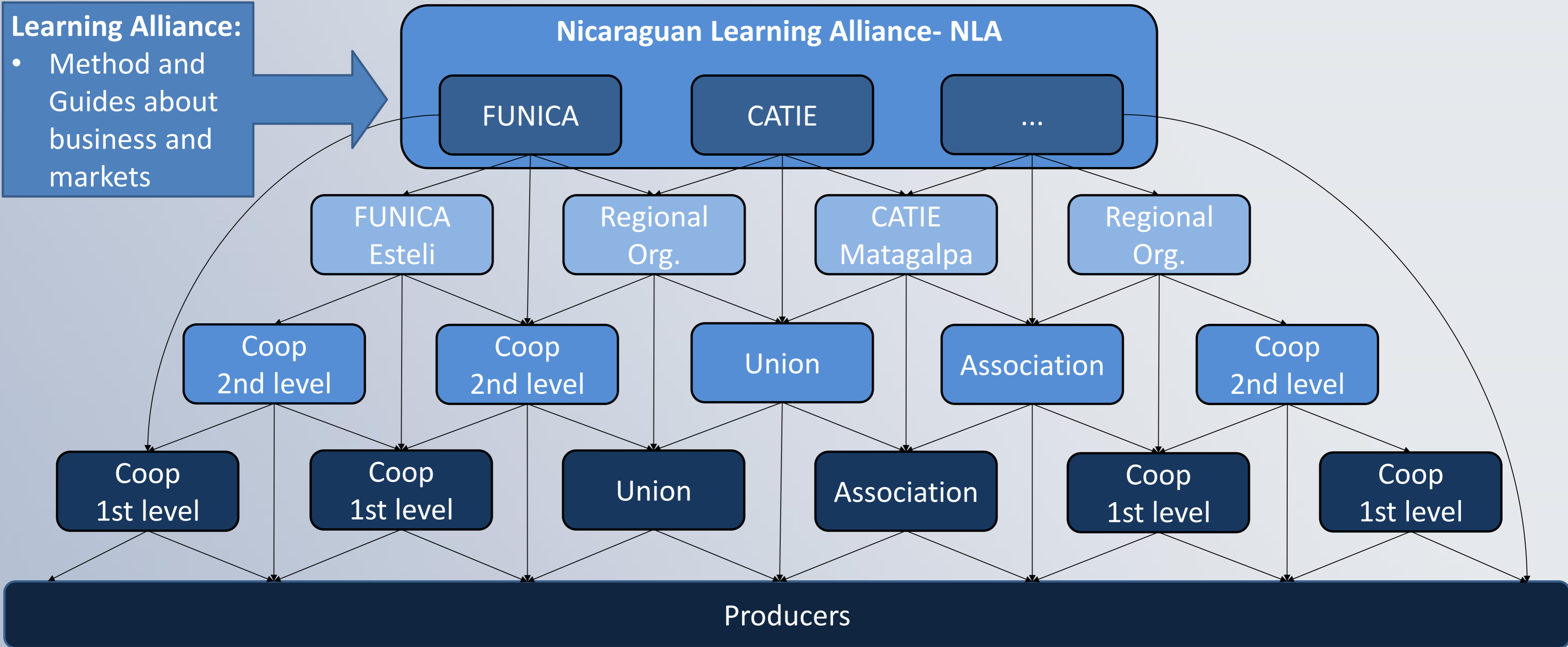
(Source: Laforteza and Consorzio 2009).



## 2. Nicaraguan Learning Alliance

### Learning Alliance:

- Method and Guides about business and markets



(Source: own data base)

# 3. Literature review and research objectives

## Literature review

### Innovation platforms = Learning alliances

- “social learning” - interactive process between different stakeholders
- “innovation systems” - changes of a process

(Source: Homann-Kee Tui et al. 2013; Lundy and Gottret 2005; Pali and Swaans 2013)

### Trust

- Expected outcome of a certain event or action
- Complicated and multifaceted concept

(Source: Laeequddin et al. 2010)

### Capacity development

(Source: Bolger 2000, Hall 2007, Horton et al. 2003, Watson 2010)

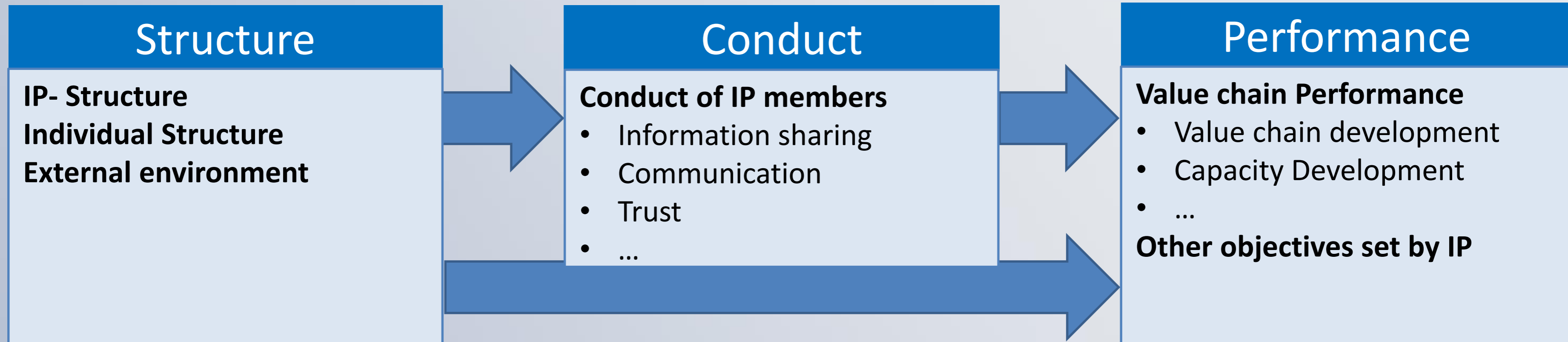
- Dependent of principles, dimensions, actors, levels, environment and strategies
- In the agricultural content often set as training activities and workshops

## Objectives

- **Monitor and evaluate** the impact of innovation platform on value chains
- **Analysis** of relationships between platform organization and conduct, and selected outcomes
- **Refine and test** conceptual framework for monitoring and evaluation of platforms

# 4. Conceptual framework and research hypotheses

**Based on:** New institutional economics, new industrial organization and marketing concept



## Research hypotheses

1. **Structure** of the platform influences **conduct** of its participants, which in turn influences its **performance**
2. The **more trust** there is among actors in a platform the **better the performance of the platform**
3. **Members** of the Learning Alliance have had **better capacity development** opportunities than non-members

# 5. Data collection and methods

## Focus Group Discussions

3 Non-members  
3 NLA members

## Key Informants Interviews

13 Non-members  
7 NLA members

## Individual Questionnaire

52 Non-members  
38 NLA members  
53 Likert scale statements

## Method of Data analysis

- Descriptive analysis
- Factor analysis
- Multiple linear regression analysis



## 6. Data analysis- descriptive statistics

	Variable	Description (90 respondents)
Organization	Memberships	70 participate in two or more organizations
	Activities	85 service providers; 74 producers; 69 traders; 57 financial organizations; 50 processors; 3 research institutes
	Most important source of funding	<b>37 NGO</b> ; 25 operation-generated cash; 10 membership fees; 7 government

No statistically significant difference between members and non-members (all levels)

Cooperatives influenced by the NLA agreed more on:

- Information of NLA is useful
- Gained knowledge and skills applicable in the last six years from NLA

(Source: Own data collection)





# 6.1 Data analysis- regression analysis

Dependent Variable: Factor: Innovation						
	Independent Variables	Coefficients			t	Sig.
		Unstd.		Std.		
		B	Std. Error	Beta		
	(Constant)	-1.709	.907		-1.883	.064
Structure	Years working for the organization	.044	.013	.294	3.381	.001
	Connection with NLA	.249	.177	.124	1.405	.164
	Position of the Organization inside the network	-.131	.065	-.178	-2.010	.048
Conduct	1. We usually share information about production with other stakeholders.	.172	.117	.130	1.467	.147
	11. The NLA/ our organization exchange information about their on-going activities with us.	.208	.123	.167	1.690	.095
	13. We plan our activities together with the NLA/ our organization according to our production potential and customer demand	-.260	.115	-.224	-2.265	.026
	14. Our viewpoints are taken into account by the NLA/ our organization when they plan their activities.	.028	.142	.022	.201	.842
	15. Joint planning of activities with the NLA/ our organization has improved in the last six years.	.447	.126	.378	3.541	.001
	10. We prefer to have long term relationships.	-.174	.125	-.127	-1.387	.169
	Factor: Trustful relationships	.252	.096	.248	2.613	.011
	Factor: Trustful Contracts	.230	.091	.231	2.532	.013

**Model summary:**

R square: 0.480

Adjusted R square: 0.404

**ANOVA:**

Sig.: 0.000

**VIF values:**

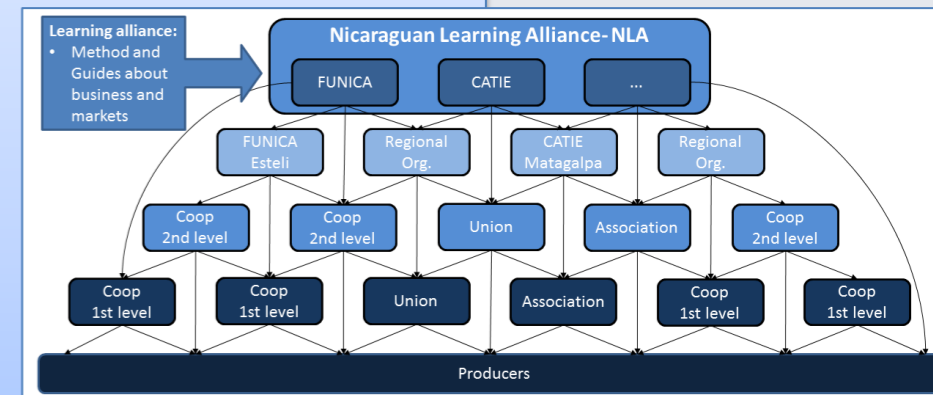
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(Source: Field 2009)

# 7. Discussion and conclusion

NLA

- Judging by the way it works, NLA does not fit the definition of a learning alliance
- “social learning” should be an interactive process between different stakeholders
- Large demand for, and variety of offers in the sector of capacity development
- Government is not open for cooperation with NGO’s or private sector
- NLA is successful with their cascading capacity development method
- NLA is **not** more successful than other actors in capacity development activities



Conceptual framework

- Conceptual framework was not directly designed for NLA
- Conceptual framework based on Likert scale statements
  - No economic indicators to strengthen data and results
- Influence of structure on trust is very poor
- General influence between structure, conduct and performance is nonetheless visible
- Trust and capacity development are important topics in the NLA training content

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# Questions?

# Comments?

# Suggestions?



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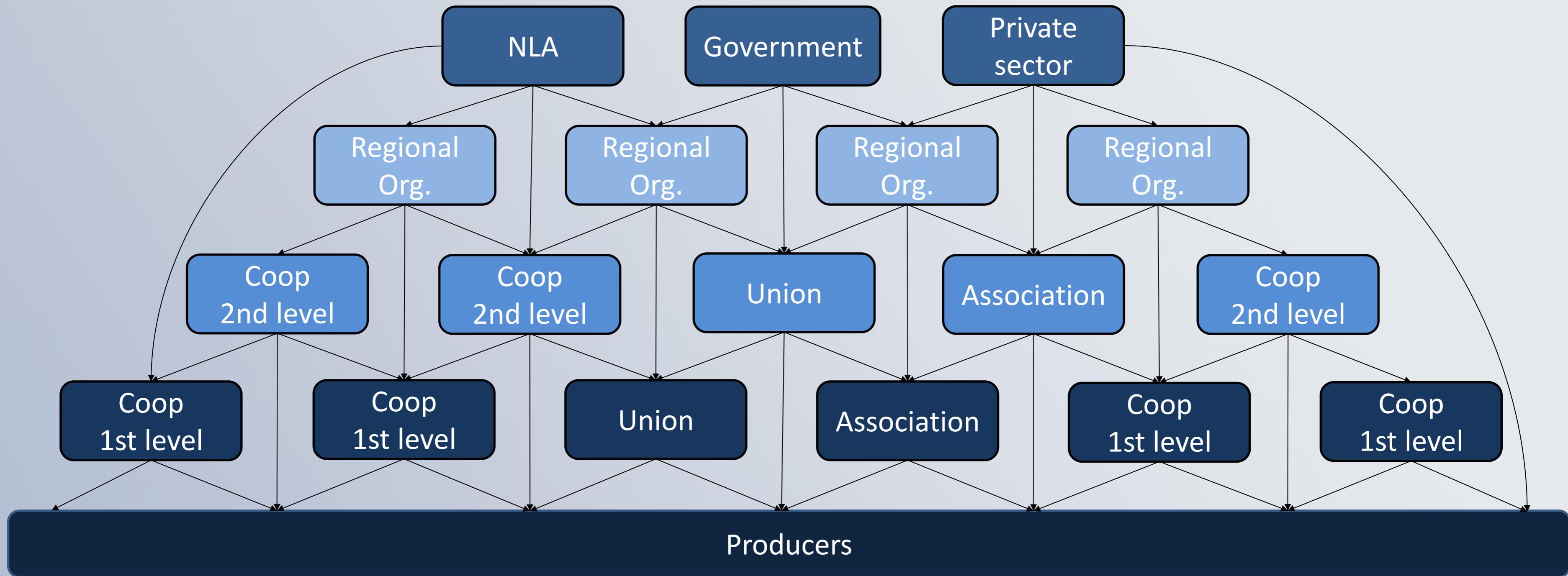


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# Nicaraguan agricultural institutional context



(Source: own data base)

# Theoretical bases for the conceptual framework

## New institutional economics

- Recognizing markets as complex realities
- Market actors try to cut transaction costs

## New industrial organization

- Overall logic of the SCP model (Structure-Conduct-Performance)

## Marketing concepts

- Variables for each SCP-section adapted to the context of stakeholders

## Conceptual framework:

Monitor and evaluate the impact of innovation platform on value chains



# Descriptive statistics of interviewees

	Variable	Description (90 respondents)
Interviewee	Gender	<b>67 men</b> ; 23 women
	Level of education	<b>56 university degrees</b> ; 12 tech. certificate; 10 postgrad; 8 secondary school; 3 primary school; 1 PhD
	Position of respondent	<b>23 presidents</b> ; 17 managers; 12 technicians; 10 tech. coordinators; 6 executive directors; 4 administrators; 18 others
Organization	Most important crop	<b>41 coffee</b> ; 33 basic grains; 16 others
	Memberships	70 participate in two or more organizations
	Activities	85 service providers; 74 producers; 69 traders; 57 financial organizations; 50 processors; 3 research institutes
	Most important source of funding	<b>37 NGO</b> ; 25 operation-generated cash; 10 membership fees; 7 government
	Position of the organization inside the network	52 No NLA- member/ No connection; 38 NLA- member/ Connection

(Source: Own data collection)

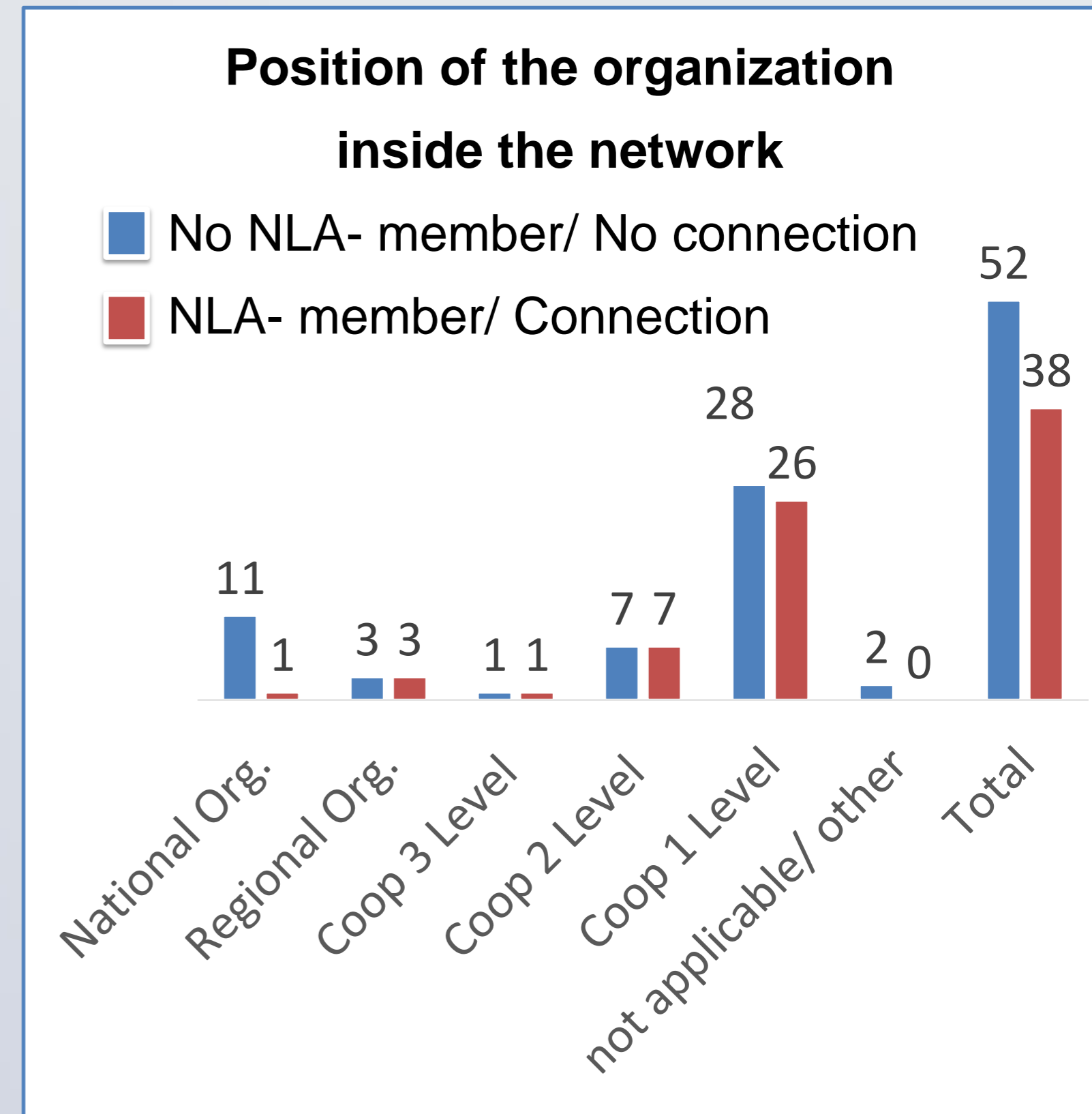




# More descriptive statistics of interviewees

90 respondents

- Average age is 44 years and worked 9 years for current organization
- 26 are focusing on one product
- 57 cooperatives, 14 associations, 8 NGOs, 5 private companies, 3 government, 2 public institutes
- 27 organizations have between 100 and 499 members, 26 org. have less than 100, largest org. represents 50,000 farmers



(Source: Own data collection)



# Appreciation of information sharing

**Table 4: Appreciation of information sharing by cooperatives of second level**

Level	Cooperative of second level	
Element	Conduct- Information sharing	
Statement	2. The information we get from the NLA/ our organization partner is useful.*	
NLA-Connection	No Member/ No Connection	Member/ Connection
Mean	4.29	4.86
Standard Deviation	.49	.38

**\*Scale: 1= strongly disagree; 2= disagree; 3= undecided; 4= agree; 5= strongly agree**

**Means are statistically significantly different at a 5% level**



# Capacity development at 2nd level coops

Appreciation of capacity development by cooperatives of second level		
Level	Cooperative second Level	
Element	Performance- Capacity development	
Statement	6. In the past six years, we have gained knowledge and skills applicable in my activities from NLA stakeholders.*	
NLA-Connection	No Member/ No Connection	Member/ Connection
Mean*	2.40	4.43
Standard Deviation	1.52	.53

\* Scale: 1= strongly disagree; 2= disagree; 3= undecided; 4= agree; 5= strongly agree

Means are statistically significantly different at a 1% level

(Source: Own data collection and analysis)



# Capacity development at 1st level coops

Appreciation of capacity development by cooperatives of first level		
Level	Cooperative first Level	
Element	Performance- Capacity development	
Statement	6. In the past six years, we have gained knowledge and skills applicable in my activities from NLA stakeholders.*	
NLA-Connection	No Member/ No Connection	Member/ Connection
Mean*	3.50	4.42
Standard Deviation	1.73	.58

\* Scale: 1= strongly disagree; 2= disagree; 3= undecided; 4= agree; 5= strongly agree

Means are statistically significantly different at a 5% level



# Information sharing by NLA members

Evaluation of information received from NLA members		
Element	Conduct- Information sharing:	
Statement	3. The information we get from the NLA is reliable.*	
NLA-member	Mean*	Standard Deviation
FUNICA	4.50	.52
CATIE	4.57	.53
CRS	4.27	.47
FENACOOOP	3.33*	.58

\* Scale: 1= strongly disagree; 2= disagree; 3= undecided; 4= agree; 5= strongly agree  
Means are statistically significantly different at a 5% level

(Source: Own data collection and analysis)



# Trust in NLA products by NLA members

Appreciation of trust on products provided by the NLA		
Element	Conduct- Trust	
Statement	8. Our trust on products provided by the NLA/ our organization has increased.*	
NLA-member	Mean	Standard Deviation
FUNICA	4.21	.70
CATIE	4.43	.53
CRS	4.00	.63
FENACOOOP	2.67	.58

\* Scale: 1= strongly disagree; 2= disagree; 3= undecided; 4= agree; 5= strongly agree

Means are statistically significantly different at a 1% level

(Source: Own data collection and analysis)



# Success of NLA by NLA members

NLA- members- NLA is known to be successful		
Element	Conduct- Trust	
Statement	13. The NLA is known to be successful at the things it tries to do.*	
NLA-member	Mean	Standard Deviation
FUNICA	4.57	.51
CATIE	4.29	.49
CRS	4.18	.60
FENACOOOP	3.33	.58

\* Scale: 1= strongly disagree; 2= disagree; 3= undecided; 4= agree; 5= strongly agree

Means are statistically significantly different at a 5% level



# Lobbying by NLA members

Communication of NLA- members with other organized groups		
Element	Performance- Advocacy:	
Statement	2. Representatives of the NLA communicate their achievement in other organized groups.*	
NLA-member	Mean	Standard Deviation
FUNICA	4.29	.61
CATIE	4.43	.53
CRS	4.00	.63
FENACOOOP	3.00	0.00

\* Scale: 1= strongly disagree; 2= disagree; 3= undecided; 4= agree; 5= strongly agree

Means are statistically significantly different at a 5% level

(Source: Own data collection and analysis)





# Factor analysis of trust component

Factor	Trust- Statement	Factor loadings		
Trustful relationships	4. The NLA/ our organization always keep their promises.	.824		
	2. The NLA/ our organization always give us correct information.	.715		
	5. The NLA/ our organization actions and behaviors are very consistent.	.655		
	3. The NLA/ our organization always try to inform us if problem occurs.	.617		
Trustful communication frequency	1. Trust is important for the activities with The NLA/ our organization.		.840	
	6. The frequency of contact has a positive influence on the trust.		.836	
Trustful contracts	9. We only develop relationship with business partners who are fair to us.			.878
	8. We only maintain relationship with our business partners with clearly written terms and conditions.			.799

Cronbach's alpha: 0.79 (0.7 - 0.8);

Kaiser-Meyer-Olkin (KMO): 0.669 (>0.600);

Bartlett's test of Sphericity: 0.000 (<0.5);

Eigenvalues: >1.0;

Factor loading: >0.564



# Factor analysis of capacity development component

Factor	Capacity development- Statement	Factor loadings	
Investment and business development	1. In the past 6 years, we have had enough capital for doing new investments.	.844	
	9. Annual income from business activities has been increasing in the past 6 years.	.840	
	10. We have changed to or entered another value chain in the last 6 years.	.711	
Innovation	5. We have developed new products in the last 6 years.		.757
	12. Our knowledge about our activity has improved in the past 6 years.		.728
	4. In the past 6 years, we have applied new techniques or machinery into our production, production process or management.		.699

Cronbach's alpha: 0.800 (0.7 - 0.8);

Kaiser-Meyer-Olkin (KMO): 0.746 (>0.600);

Bartlett's test of Sphericity: 0.000 (<0.5);

Eigenvalues: >1.0;

Factor loading: >0.564

(Source: Field 2009/ Stevens 2002)



# Regression of variables impacting trust

Dependent Variable: Factor: Trust and business relationship

Model	Coefficients			t	Sig.
	Unstd.		Std.		
	B	Std. Error	Beta		
(Constant)	.293	.990		.296	.768
Level of education	-.302	.123	-.281	-2.464	.016
Years working for the organization	.025	.014	.162	1.752	.084
Percentage of male Producers which are members of your organization co influenced by it	.015	.005	.288	2.919	.005
Position of the Organization inside the network	-.197	.088	-.260	-2.230	.029
Connection with NLA?	-.279	.211	-.138	-1.321	.191
Did you ever leave a group/ IP/ Cooperative?	-.349	.216	-.160	-1.612	.112
Are you in the producers business?	.824	.384	.294	2.146	.036
Are you in the trading business?	-.689	.337	-.273	-2.047	.045
Are you in the funding agency business?	1.411	.665	.212	2.123	.037
Are active as a financial organization?	.668	.246	.314	2.710	.009
The most important source of funding is operation generated cash.	-.525	.238	-.235	-2.204	.031
The most important source of funding is the government.	-.579	.429	-.135	-1.349	.182
The most important source of funding are membership fees.	-.908	.316	-.290	-2.870	.005
The most important source of funding are Credits by the private sector.	-.418	.300	-.139	-1.396	.167
3. Have you ever shared business/production information with others?	.687	.405	.174	1.698	.094
The most important channel of communication is the mobile phone.	-.839	.465	-.398	-1.805	.076
The most important channel of communication is the computer.	.139	.469	.066	.296	.768
The most important channel of communication are meetings.	-.174	.478	-.074	-.363	.717

**Model summary:**

R square: 0.488

Adjusted R square: 0.350

**ANOVA:**

Sig.: 0.000

**VIF values:**

< 5



# Regression of variables impacting innovation

Dependent Variable: Factor: Innovation

Model (ONLY Structure variables)	Coefficients		Beta	t	Sig.
	Unstd.				
	B	Std. Error			
(Constant)	-1.120	.483		-2.317	.023
Years working for the organization	.060	.015	.408	4.066	.000
What is the position of your partner in the network?	-.105	.068	-.153	-1.545	.127
Did you ever leave a group/ IP/ Cooperative?	-.480	.210	-.224	-2.285	.025
3. Have you ever shared business/production information with others?	1.170	.376	.314	3.112	.003

**Model summary:** R square: 0.282

Adjusted R square: 0.243

**ANOVA:** Sig.: 0.000

**VIF values:** < 5