

Experiential Knowledge, Recombination and Public-Private Institutions or You have to Walk Before you Can Run

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Message

- **Solving the SME Problem is Solving the Development Problem for Middle-Income Countries**
- **Integration in GVCs offers remarkable opportunities:** not only easier market access, but notably knowledge flows, technological and learning spillovers and capabilities improvements.
- However **GVCs are only an opportunity, insufficient per se, that needs to be exploited.**
- Local firms/SMEs need to be exposed to modern practices and technologies, but often do not have the capabilities to link into and to benefit from them.
- It is **not frontier research and knowledge** that matters most, but experiential knowledge and local adaptation and learning.
- MNCs and chain leaders may make this knowledge available, but non-market, **private-public institutions** may provide the relevant knowledge and training and act as **social and knowledge bridges.**
- **Key vehicle for Knowledge Recombination**

Introduction

- Although SMEs make up the vast majority of firms in Latin America, their participation in export markets and integration in global value chains (GVCs) is low.
- Increased GVC participation has the potential to:
 - Not only foster access to international markets, with improved earnings and wages
 - But generate knowledge transfer and foster SMEs' technological and organizational learning and upgrading.
- After two decades of increased economic openness in LAC, the expected benefits of open markets have been small for SMEs.
- Example: Mexico and McKinsey report – declining productivity with NAFTA
- **Certain types of mechanisms, institutions and policies can improve both SME participation in GVCs and SME competitive capabilities over time.**

Evolution of SME Support Programs

Some **recent policy reforms** recognize the relevance of **knowledge transfer** and **capabilities creation** for SMEs, and the need to link SMEs into different **learning networks** (public and private). Beyond traditional credit programs.

1. Cluster development programs
 2. Value chain integration programs
 3. Move beyond “linkage-enhancing” programs and acknowledge the need for experiential knowledge and private-public intermediary institutions.
- **Problems:** Self selection of strong firms. Over focus on collective resources as function of scale. Too mechanical, incentives based.

Experiential Knowledge, Networks and Institutions for SMEs

- SMEs in the region lack the material and knowledge resources to fill the large productivity gaps.
- Two main solutions in literature:
 1. MNCs and Global Buyers
 2. Innovation systems – need to have strong R&D institutions, closeness matters.
- Problem 1 – Knowledge not easily transferable, even within MNCs – experiential ambiguity of standard practices. Not bought off the shelf either.
- Problem 2 – Converse of Knowledge theory of MNC – lead firms tell “what” to do, not “how” and “why”. They have limited interest and capabilities to train many, more backward firms. Aim is not to adapt.
- Problem 3 – SMEs have large gaps in capabilities to take advantage of pioneering technology and systems. And Latin America can’t build frontier R&D fast enough.
- Possible solution:
 - **SMEs especially need access to a variety of applied and experiential knowledge that helps firms convert their capabilities from where they were to where they need to be.**
 - **Certain constellations of public-private institutions can best facilitate this process.**

Beyond promoting linkages: The Role of Institutions as Resources for Knowledge Creation and Diffusion

- **Locally embedded public and private organizations** may be better positioned than MNCs or global buyers for knowledge creation and diffusion.
- **Recombination** of a diversity of applied, experiential knowledge via the constellation of evolving non-market institutions such as schools, business associations, and government supported centers for training and extension.
- The public-private institutions vital for SME upgrading trigger both direct tutelage and social learning among the actors.

But we see limits to Developing Public-Private Institutions for Collective Learning based on voluntary or market incentives

- Examples: **Fresh produce suppliers in Chile and Mexico in Chile, Salmon and Dairy farmers in Nicaragua (Perez-Aleman, Pietrobelli, IDB, McDermott & Avendano)**
- Local producers had severe difficulties implementing standards specified by MNCs. With the help of foreign agencies and governments, local producers:
 - Established key product and process standards and a system of local monitoring.
 - Established common organizational resources, from cooperatives to training centers, to help firms understand directly the how and why of the standards, and how to improve gradually their own practices.
- The organizations became necessarily embedded into the industry or region so they can draw on, integrate and diffuse to experiential and applied knowledge gathered from the firms themselves.
- **BUT: 1) Membership can become exclusive;**
- **2) Balkanized Industrial Districts**

Constraints: Balkanization & Governance

- Balkanization – the very ties and local institutions that promote cooperation limit inward and outward flows of knowledge and new relationships
 - Experiential knowledge embedded in these relationships
- Governance – private actors quickly become gate keepers and oligopolists
 - Need rules on inclusive membership from diverse districts and active rights and responsibilities.

Clusters, Networks, and Upgrading

- Much of the research on networks and development view embeddedness in terms of a society's endowments of economic and social resources & assumes homogeneity of organizations and institutions.
 - Innovative societies – those with dense social networks & associationalism; historically given.
- Recently, network and institutional scholars stress variation due to structure & composition of networks (Granovetter, Lin, Locke, Powell):
 - Some organizations facilitate access to new knowledge better than others, especially via horizontal ties
 - GSIs and other collective organizations can structure types of knowledge.

Role of Government and Biz Associations

- Groups and associations can promote world views & close ties within a community that can easily insulate/filter its members from info and relationships with other communities.
 - A society with many org's & assoc's can be fragmented or balkanized. This is a barrier to learning and broader collaboration. (Berger, Ostrom, Safford)
- Public policy can reinforce or change this.
 - Governments can create institutions to relieve these constraints.
 - E.g., GSIs (for R&D, training, etc) that promote horizontal relationships across communities.

Policy reshapes Networks...& Upgrading

- A firm's access to diverse knowledge resources, in turn broad based upgrading, can be constrained by your local organizational network.
- It depends on a firm being tied not just to any or many organizations, but particularly those that act as social and knowledge bridges between previously isolated, even antagonistic producer communities.
- Govts can create new GSIs with certain governance principles that anchor this network characteristic.
- These are PPIs – Public-Private Institutions – underpinned by rules of inclusion and participatory governance for a variety of public and private actors (e.g., sectoral associations).

Potential Solutions – Non-market institutions

(eg, McDermott & Corredoira 2010,2014; McDermott, Corredoira & Kruse 2009)

- Public-private institutions that:
 - Act as social and knowledge bridges b/n previously isolated producer communities.
 - Work with firms from a variety of communities
 - Anchor multiplex networks
 - Provide basic services for applied experiments
 - Create forums for sharing tacit knowledge and building common strategies
- Might need special governance structure to be sustained.
- Then firms can learn faster from the MNCs.
- **Examples – Argentine wine/grape Sector and Autoparts Sector**

Research Design

- Two “natural experiments” – wine and autos in Argentina during the 1990s and early 2000s.
- EXAMPLE: The transformation of Argentine wine industry in 1990s. Why is Mza the pioneer and not S.Juan? What types of networks and institutions help firms upgrade?
- Used qualitative and quantitative methods.
- Launched a survey in 2004-05 to distinguish impact of different types of networks and institutions on firm-level upgrading.
- Yielded survey data base on a) firm level product and process upgrading capabilities, b) demographics, c) inter-firm networks, d) institutional networks.

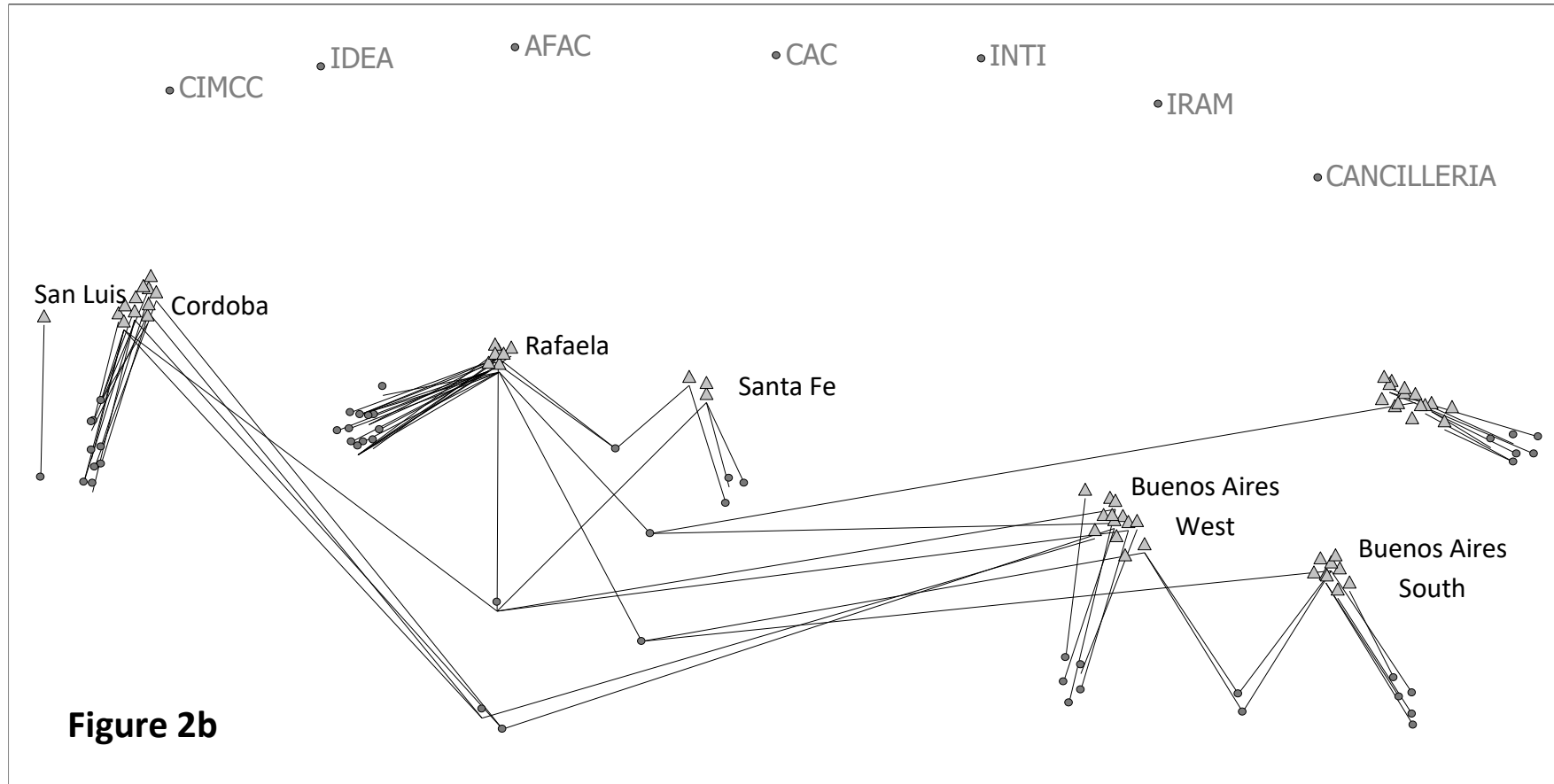
Process Innovation in Suppliers

Variable	Effect	Significance
Ties to Associations	Positive	P<0.001
Ties to GSIs	Positive	P<0.05
Ties to MNCs	Negative	0/p<0.10
Ties to other Firms, Banks, Schools	Negative	0
Ties to Top Bridging MNCs		
Ties to Top Bridging Associations		
Ties to Top Bridging GSIs		
Ties to Top Bridging Assns *MNCs		
Ties to Top Bridging GSIs*MNCs		

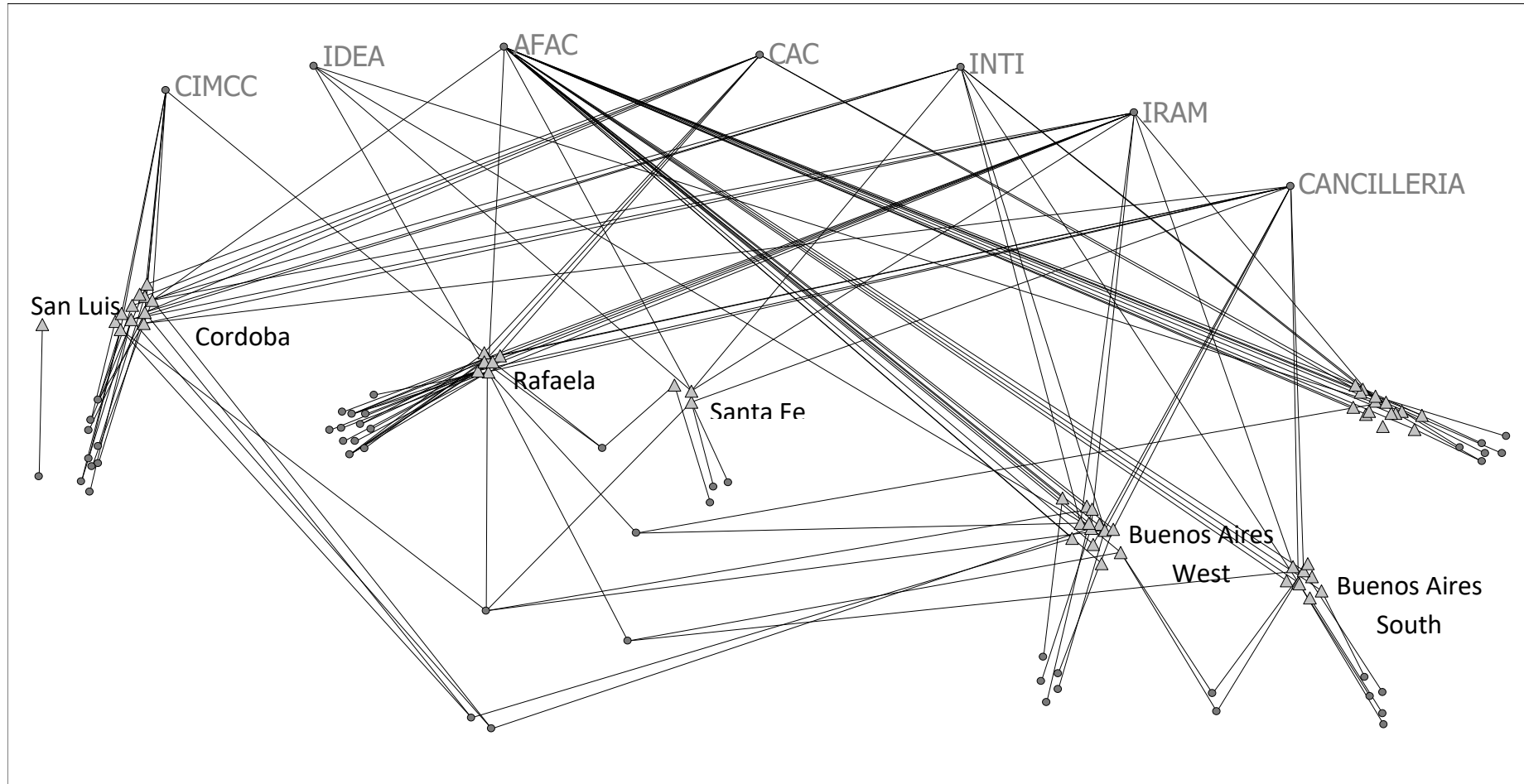
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Ties to Top Bridging MNCs	Negative	0
Ties to Top Bridging Associations	Positive	P<0.01
Ties to Top Bridging GSIs	Positive	P<0.05
Ties to Top Bridging Assns *MNCs	Positive	0
Ties to Top Bridging GSIs*MNCs	Positive	P<0.05

Industrial Districts without Bridging Institutions



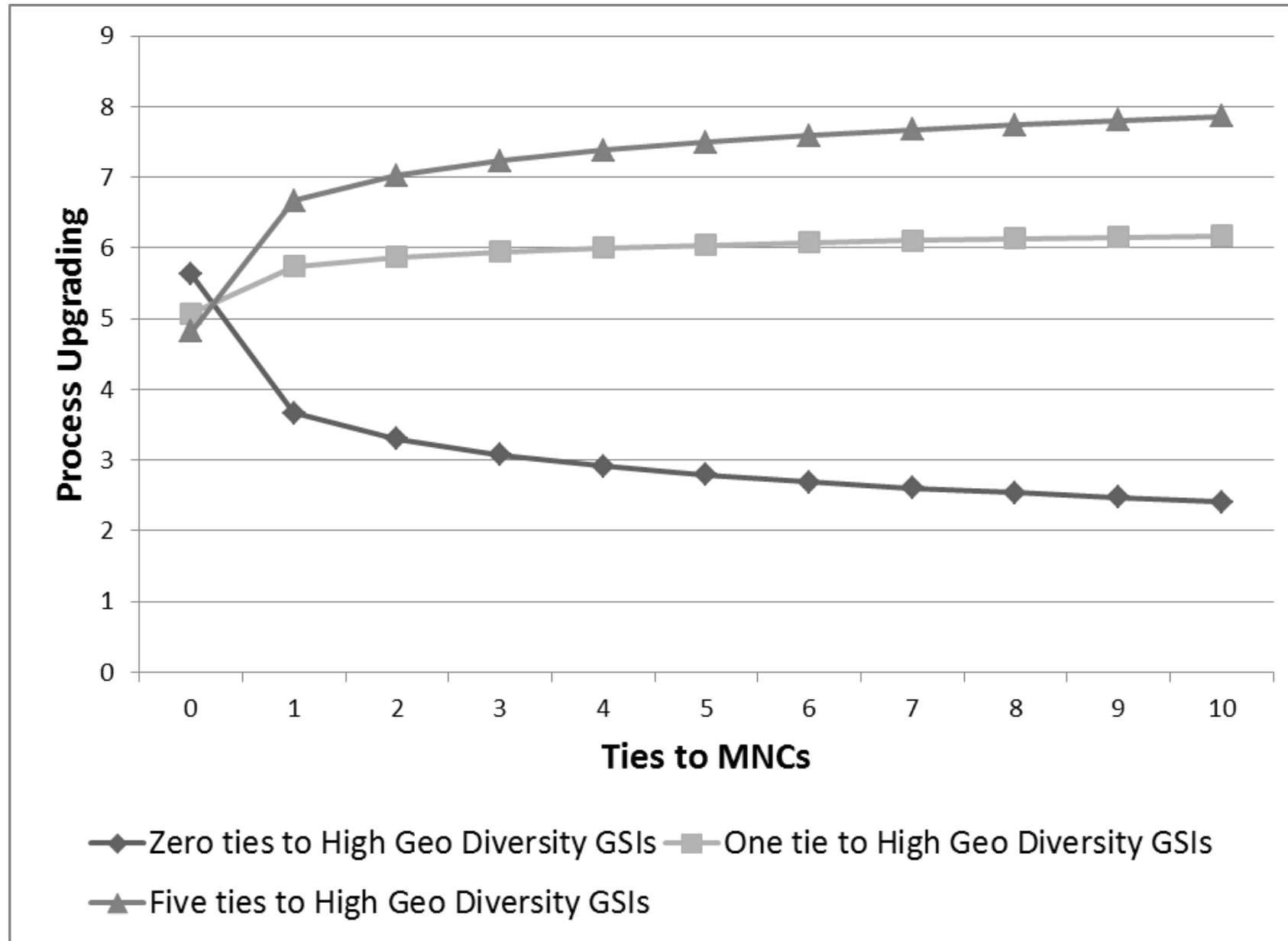
With the Bridging Institutions



Autoparts

- Associations -- Top Bridging: AFAC, CAC (Cam Arg Commercial), IDEA
- GSIs -- Top Bridging: INTI, Cancilleria, IRAM
- Field work suggests different mechanisms for accessing diverse knowledge
 - Associations – contacts, forum for knowledge and info exchange, and some services
 - GSIs – Technical services (R&D, standards, training) and International market knowledge
 - BUT with very limited resources
- **NB. These were NOT constructed to be bridging institutions; and they have relatively FEW resources!!**
- **The Interaction b/n Top Bridging GSIs and MNCs**
 - INTI is giving basic but real training, helping firms combine old and new practices
 - This is recombination and adaptation
- Associations may be allowing Suppliers to gain both old and new.
 - MNCs are involved in AFAC, plus AFAC information services
 - Suppliers are also meeting one another from other industrial districts

The Interaction Effects – Recombining local experiential and advanced knowledge

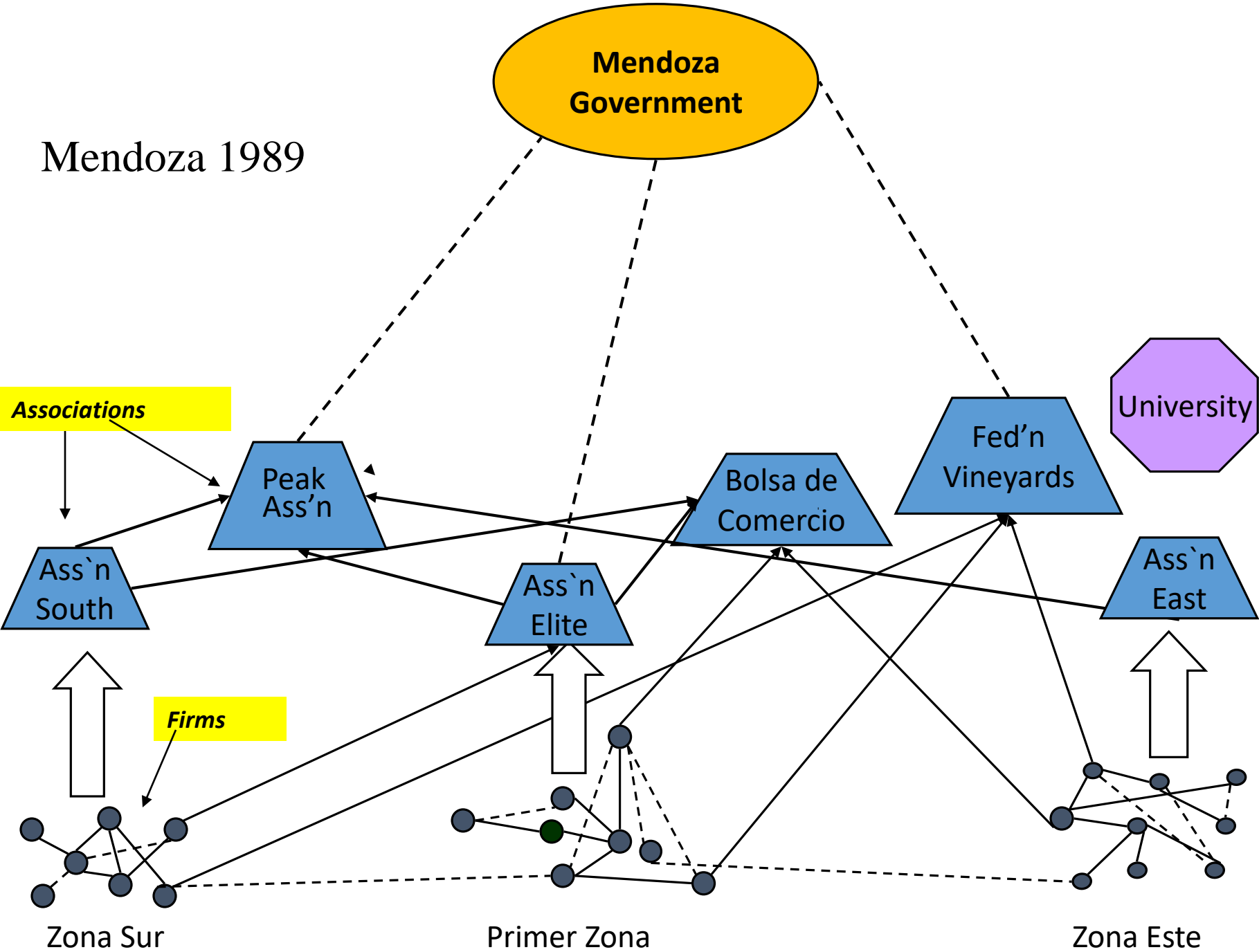


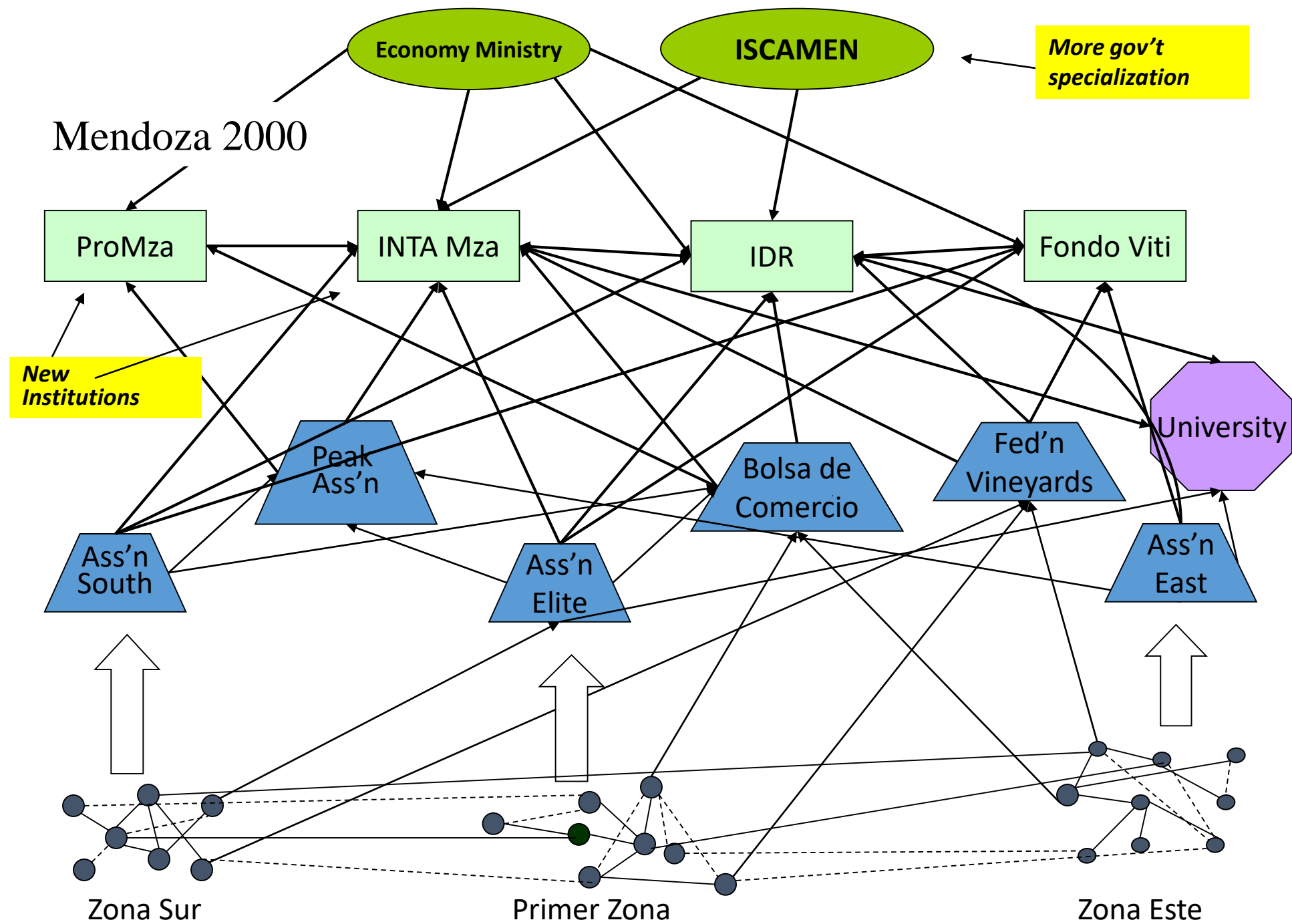
Mendoza's Public-Private Institutions

- Examples – INTA, Promendoza, IDR, IDITS, Fondo Vitivinicola, FTC
- 2 mechanisms:
 - Rule of inclusion - Govt convenes relevant sectoral associations to generate institutional solution to problem;
 - Reps of govt and associations govern institutions, add to resources, and engage in collective problem solving;
- These mechanisms help:
 1. Reshape relationships b/n govt, associations, firms – NEW BRIDGES B/N COMMUNITIES.
 2. The institutions improve knowledge and skills creation;
 3. The actors think strategically, collectively → target new areas for innovation.

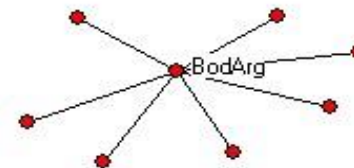
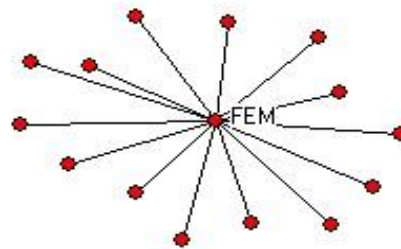
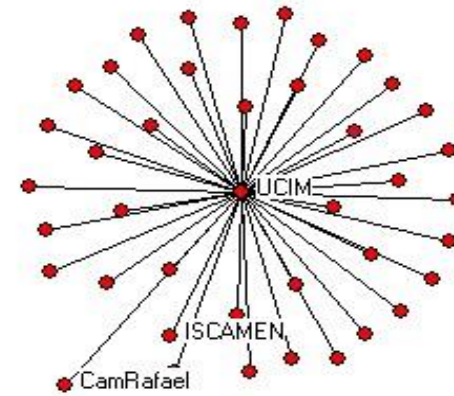
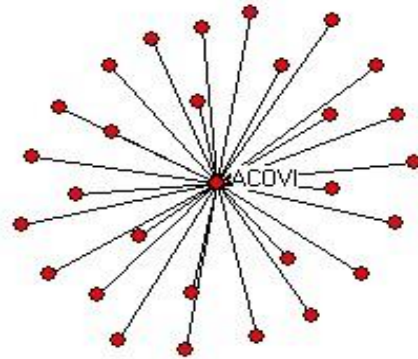
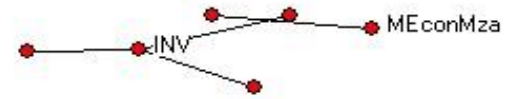
Institution	Year	Governing Members	Activities	Resources	Legal Form
INTA Cuyo	1991	Govts of S Juan & Mza, 9 Agro Ass'ns, 2 Nat'l Univ's	Regional development plan, oversee budgets & activities of EEAs	National & provincial budgets	1 of 15 semi-autonomous Regional Centers; Federal body in Sec. of Agro.
INTA EEAs	1991	Gov't of Mza, Munis. Agro Ass'ns, Nat'l and Prov'l Institutes and Univ's	R&D (inputs, plants, tech), extension training, consulting	Half – nat'l budget (salaries & overhead); Half – services, alliances, gov't Mza, cooperadoras	Part of INTA Cuyo; 4 in Mza, 1 in SJ; Each has 1-4 AERs
Fondo Vitivinicola	1993-94	Gov't Mza, 11 wine/grape Ass'ns	Oversees new wine regulations, promotes wine industry/marketing	Tax on firms from over produc'n of wine	Public, non-state, non-profit entity.
Fondo para la Transformacion y el Crecimiento (FTC)	1993-94	Min. of Economy, Regional advisory councils	Subsidized loans and credit guarantees to SMEs for tech against extreme weather & for grape conversion	Self-financing; initial capital from privatization of gas & oil reserves	Independent legal entity under authority of governor
Instituto Desarrollo Rural (IDR)	1994-95	36 founders – INTA Cuyo, Govt Mza, ISCAMEN, 2 peak ass'ns, various agro sectoral ass'ns	Technical info collection & dissemination; Data base mgmt; R&D, training, consulting	Mza Gov't; services; gradual increase of fees from member ass'ns	Non-profit Foundation; with oversight by Min of Economy
Pro Mendoza	1995-96	Gov't Mza, 3 peak business associations	Export promotion – organize fairs, delegations, strategic information, training	Gov't Mza; Peak ass'ns; services	Non-profit Foundation

Mendoza 1989

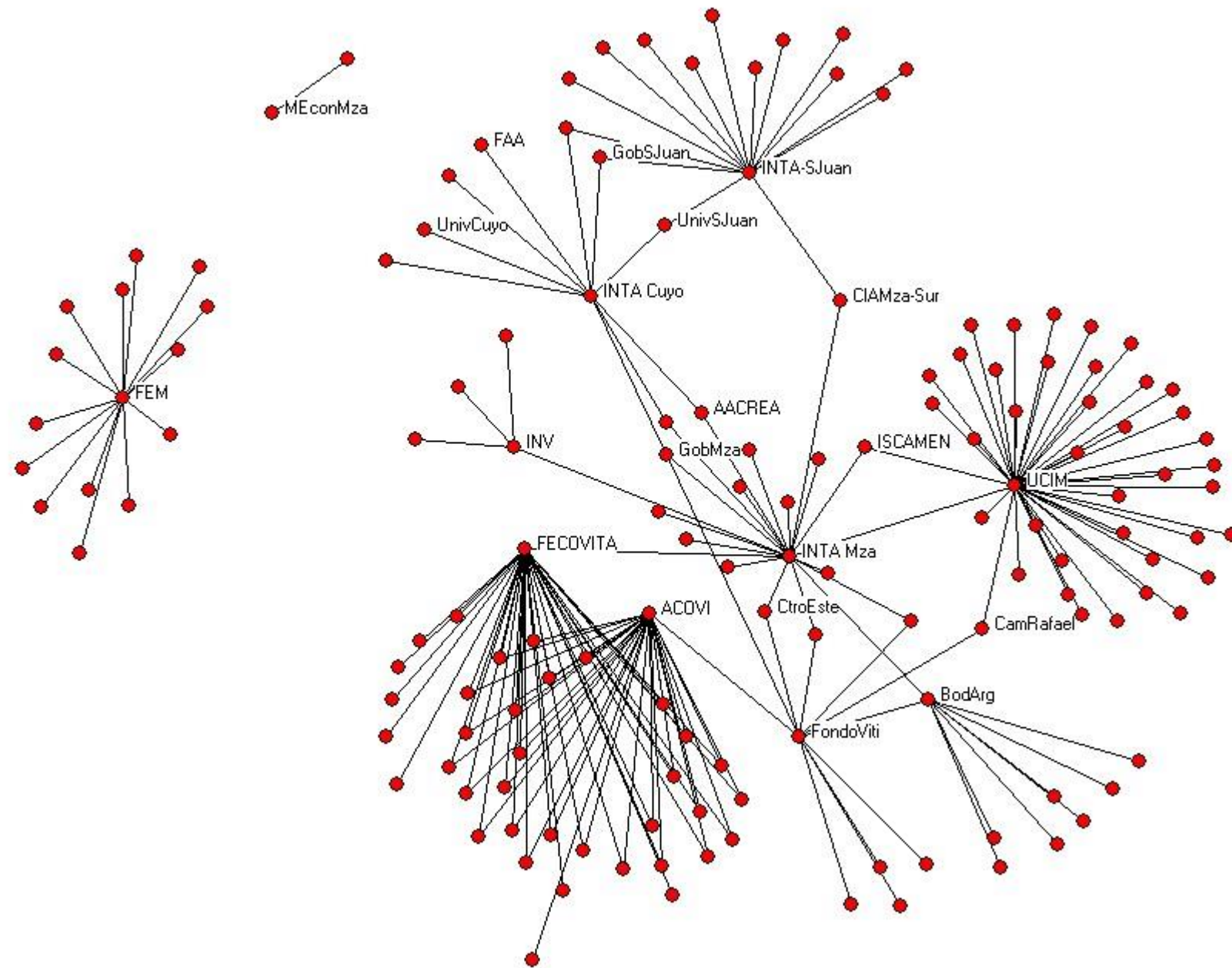




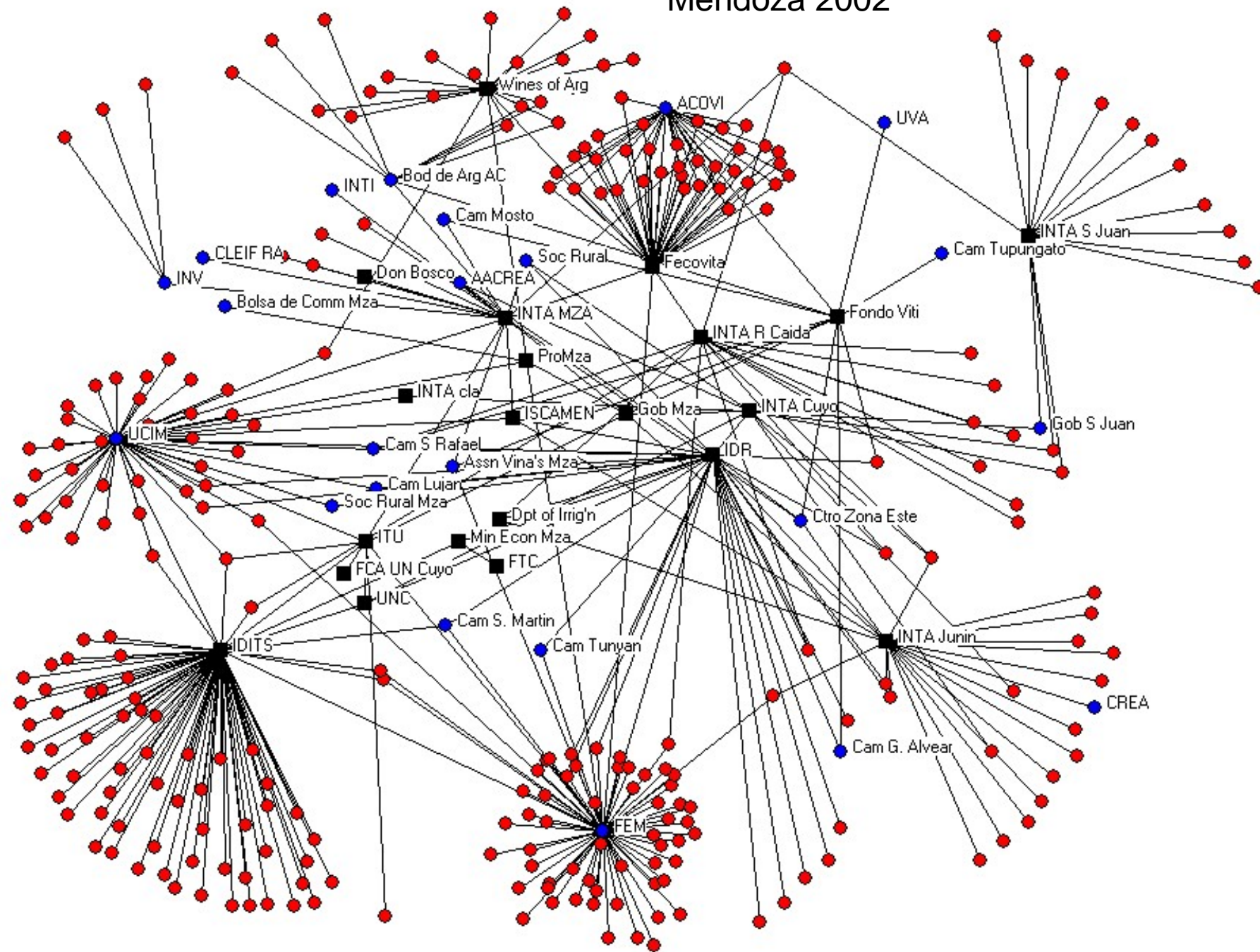
A Simulation – Mza 1988



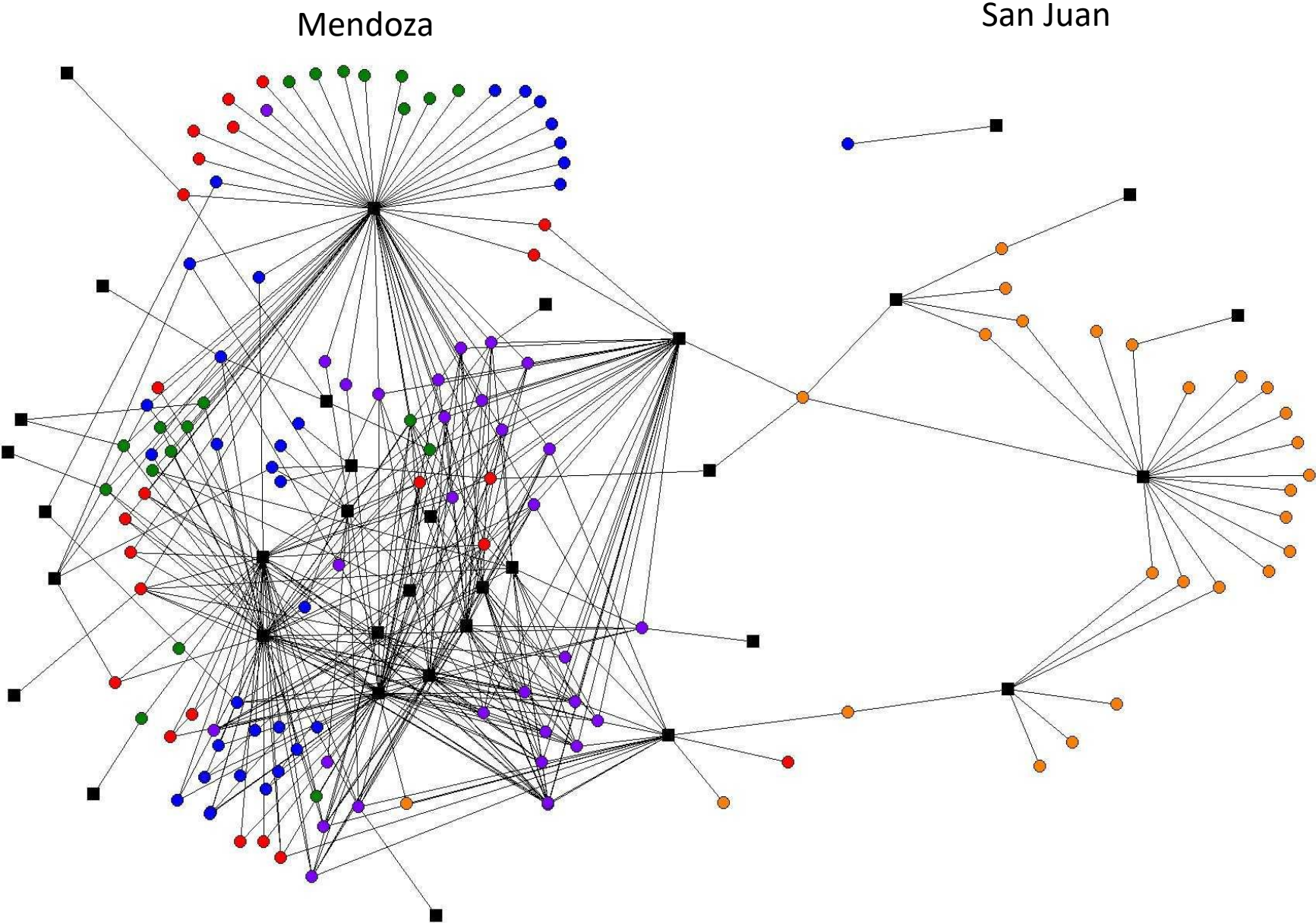
Mendoza 1993 – Some new institutions are created



Mendoza 2002



Different Institutional Communities - 2004



Bridging Support Institutions

1. Need to focus on improving firm product and process capabilities.
2. The results emphasize the importance of accessing ***diverse knowledge resources, especially applied knowledge***, for upgrading.
 - Focus on Experiential knowledge and Adaptation first.
3. Firms access DIVERSITY via the *Associations* and GSIs that act most as ***Social and Knowledge Bridges*** between isolated producer communities.
4. We need non-market institutions to act as these bridges and sources of recombination.
 - Extension, training, forums
 - Suggests that governance rules shapes knowledge flows.
5. This means **politics and policy can shape networks and knowledge diffusion.**

Conclusions

- Building public-private institutions via principles of inclusion and collective problem solving can:
 - Bridge existing structural holes and strengthen new horizontal ties among groups and firms.
 - Improve experiments and knowledge flow for government and firms.
 - Limit problems of powerful gate keepers (knowledge, resources), monocropping, short-term exploitation.
 - Improve institutional governance (e.g., all of the above, including government, have had changes in directors/governors, but continue to grow and adapt).

Networks, Institutions & Experiential Knowledge

- Economic Development is mainly about SMEs
- GVCs and MNCs are good at telling local firms WHAT they need to do. But Not WHY and HOW!!
- The latter is about getting access to a diversity of Applied and Experiential Knowledge. MNCs and local networks are not enough.
- You can construct institutions to get the SMEs this Knowledge and also Reshape the Learning Networks. Often PPIs.
- IOs have important roles to instigate and support this process.

Gracias!

Abbreviated Regression Results – Wine Making

Results from models including all control variables.

VARIABLE	Product Upgrading		
Ties to Other Firms	0.41	***	
Ties to GSIs	1.19	***	
Ties to Ass'ns, Banks, Schools, Coops	Negative or not significant		
Ties to PPIs	3.03	**	
Ties to Old GSIs	-2.04	0	
Ties to Top Geo Diversified Firms	1.53	**	(Most Bridging)
Ties to Top Geo Diversified GSIs	5.44	**	(Most Bridging)
Ties to Most Central Firms	0.22	0	
Ties to Most Central GSIs	3.59	**	
Diversity of Focal Firm's Network	2.9-3.25	0	

Notes: *** = significant @ 0.01 level; ** = significant @ 0.05 level; * = significant @ 0.10 level