



Assessing economic sustainability in local and global value chains: a comparison in the cured ham sector

CONFERENZA STAMPA

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Structure of presentation

- Brief description of the supply chains, distinction between local and global
- Attributes and indicators used to assess the performances
- Results
- Discussion and conclusions

Performance dimensions

Food chain performance can be measured using the following five dimensions:

1. Economic
2. Social
3. Health
4. Environmental
5. Ethical

Performance is debated and conceived differently in the following four spaces of communication (spheres):

- Public, Scientific, Market and Policy

Economic dimension

Many attributes are included in the economic dimension:

Focus in this work is in particular on (selected also with stakeholders) :

- Creation and distribution of added value
- Resilience
- Governance

Dimension / Sphere	Economic
Public	<ul style="list-style-type: none">•Affordability•Creation & distribution of added value•Contribution to economic development
Scientific	<ul style="list-style-type: none">•Contribution to economic development•Technological innovation•Governance
Market	<ul style="list-style-type: none">•Efficiency•Profitability / competitiveness•Connection•Technological innovation•Resilience
Policy	<ul style="list-style-type: none">•Creation & distribution of added value•Contribution to economic development•Efficiency•Resilience•Food waste

Cured ham chains

1. Global Local



2. Regional



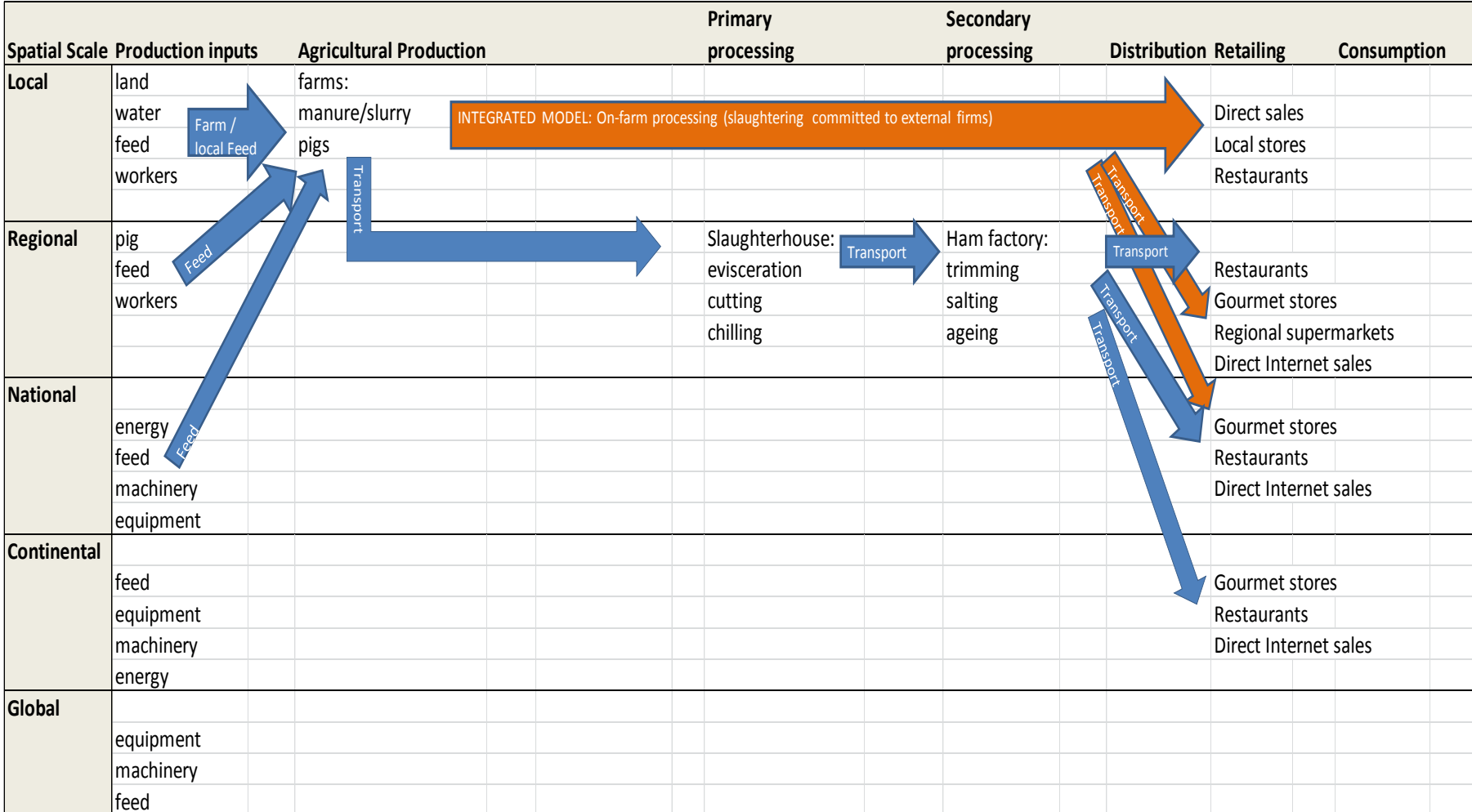
3.



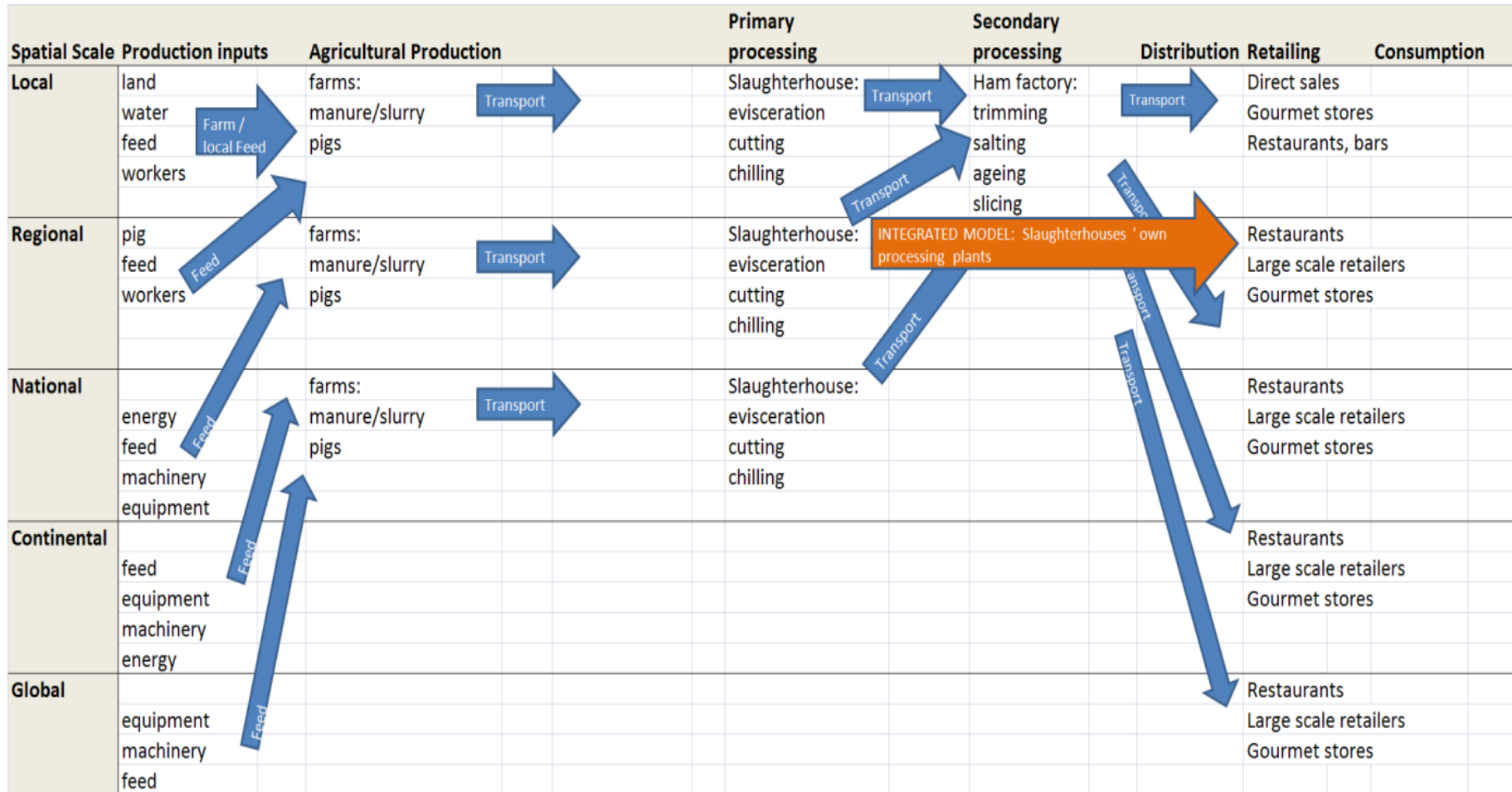
Case study: comparison of three supply chains of cured ham

1. Traditional cured ham with PDO meat of the Cinta Senese pig, a native breed of Tuscany
2. Parma ham protected by a designation of origin (PDO)
3. Generic cured ham produced with fresh hams imported from abroad (NL, DE, BE, FR etc,)

Cinta Senese ham: material and production flow



Parma ham: material and production flow



Generic cured ham: material and production flow

Assessing economic sustainability in local and global value chains

Spatial Scale	Production inputs	Agricultural Production	Primary processing	Secondary processing	Distribution	Retailing	Consumption
Local	land water feed workers					Direct sales Gourmet stores Restaurants, bars	
Regional	pig feed workers					Restaurants Large scale retailers Gourmet stores	
National	energy feed machinery equipment					Restaurants Large scale retailers Gourmet stores	
Continental	feed equipment machinery energy	farms: manure/slurry pigs		Slaughterhouse: evisceration cutting chilling		Restaurants Large scale retailers Gourmet stores	
Global	equipment machinery feed					Restaurants Large scale retailers Gourmet stores	

Value added indicators

Main attribute	Name	Definition
Value added	Value added at farm level	Value added per kg of slaughter weight on pig farms
Value added	Value added at processing industry	Value added per kg of cured ham



Resilience indicators

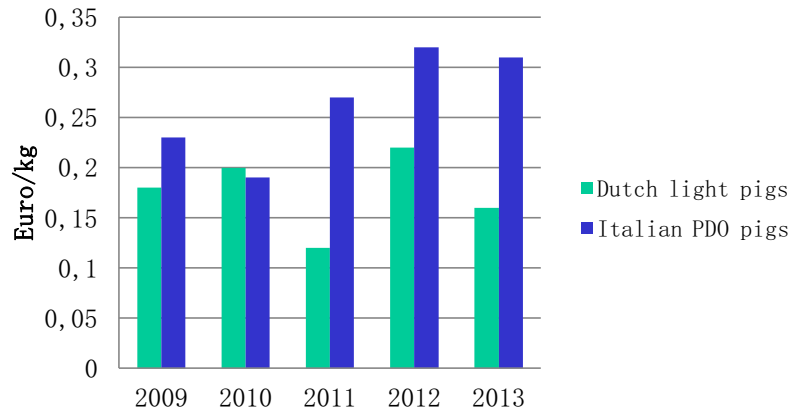
RESILIENCE INDICATORS	VOLATILITY INDICATORS	ANALYTICAL INDICATORS					SYNTHETIC INDICATORS PER PHASE
		Upstream integration	Downstream integration	Diversification	Differentiation	Other	
Pig farming	Feed prices index (V. 1) Live pigs price index (V. 2)	Farmers upstream integration by ownership (A. 1) Farmers upstream integration by contractual arrangements (A. 2)	Farmers downstream integration (A. 3)	Farmers product diversification (A. 4)		Farm-level resistance against price-volatility (A. 5) Use of antibiotics (A. 6)	Farm-level risk-spreading (S. 1) Adaptation capacity of farmers through downstream actors cooperation, integration and diversification strategies (S. 2)
Slaughtering	Live pigs price index (V. 2) Fresh ham price index (V. 3)	Slaughterhouses / processors upstream integration (A. 7)	Slaughterhouses downstream integration (A. 8)	Slaughterhouses product diversification (A. 9)			Adaptation capacity of slaughtering firms through integration and diversification strategies (S. 3)
Ham processing	Fresh ham price index (V. 3) Cured ham price index (V. 4)	Slaughterhouses / processors upstream integration (A. 7)	...	Processors product diversification (A. 10) Processors market diversification for cured ham (A. 11) Processors geographical market diversification for cured ham (A. 12)	Product differentiation for cured ham (A. 13)		Adaptation capacity of ham processing firms through integration and diversification strategies (S. 4)

Chain governance indicators

Main attribute	Name	Definition
Chain Governance	Trust based internal relationships	Level of trust-based relations between chain actors, based on (1) absence of conflicts, (2) trust among chain partners, (3) continuity of chain relations
Chain Governance	Trust based external relationships	Level of trust-based external relationships based on chain partners' capacity to mobilise support from (1) social movements), (2) citizens and (3) policy actors
Chain Governance	Self governance capacity	Self-governance capacity in terms of creation of distinctiveness

Added value

Value added per kg liveweight

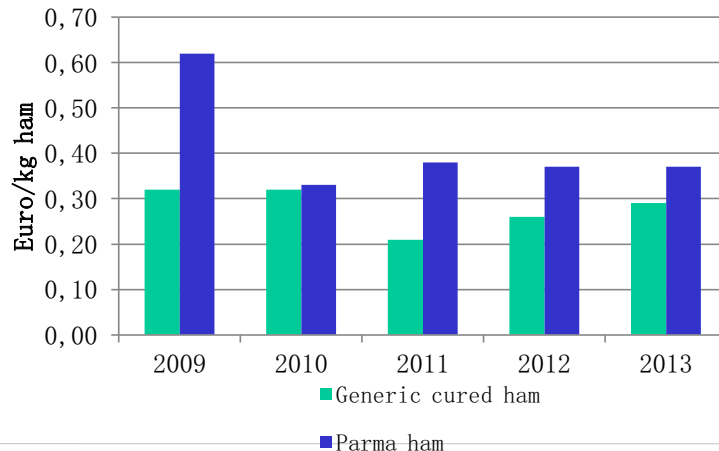


Higher added value both at farm and at processing level in local and PDO chains compared to global chain

For Cinta senese pigs: average 1,69 €/kg, with a peak of 2,46 €/kg

But also the scale matters ...

Different value creation logics in the 3 chains, each one has its own economic rationale



For Cinta senese hams: average 27,9 €/kg (range 19 – 39 €/kg)

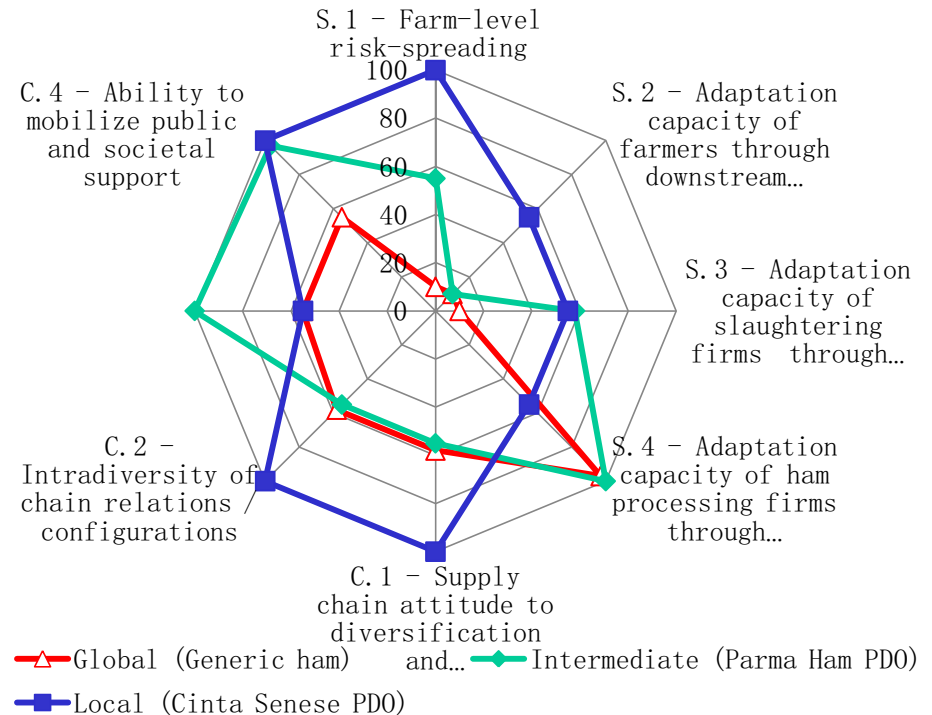
Resilience

Resilience is a multidimensional attribute, linked to many other attributes

Analysis based on synthetic, qualitative indicators

Local and Regional chains perform better than the Global one

- ▶ Global and Regional chains are interwoven: many big firms operate simultaneously on the two chains, with potential negative effects on the regional one → resilience rationality goes beyond supply chain boundaries
- ▶ Long term performance of Local chain may be compromised



Chain governance

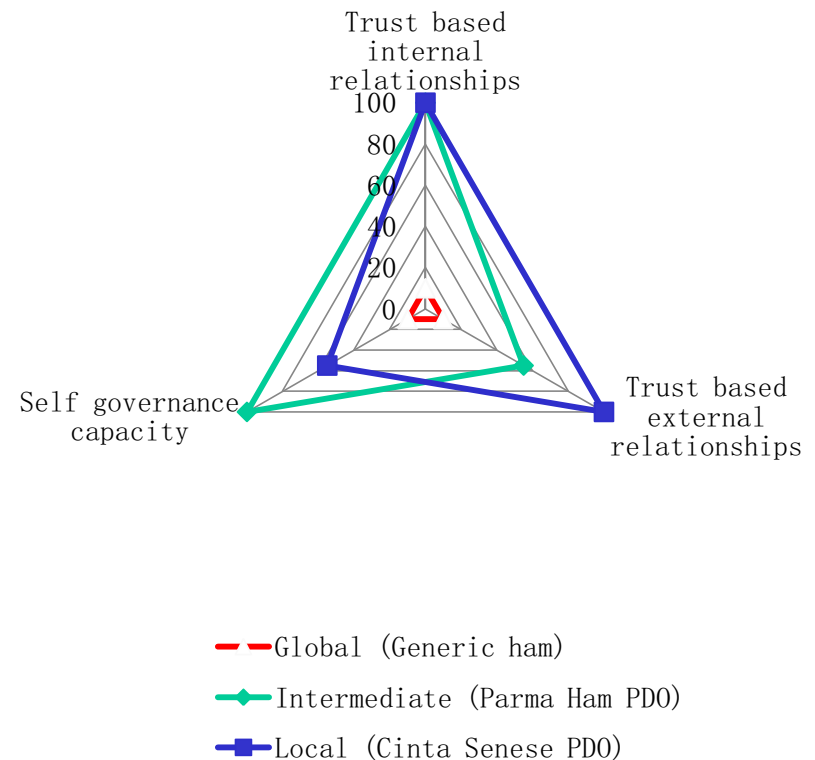
Key role of self-governance
 → capacity of a chain to adopt appropriate policy and strategies for manage different issues:

i) to create, maintain and increase distinctiveness on the product and on the producers along time

ii) to mobilize institutional support from local public Institutions;

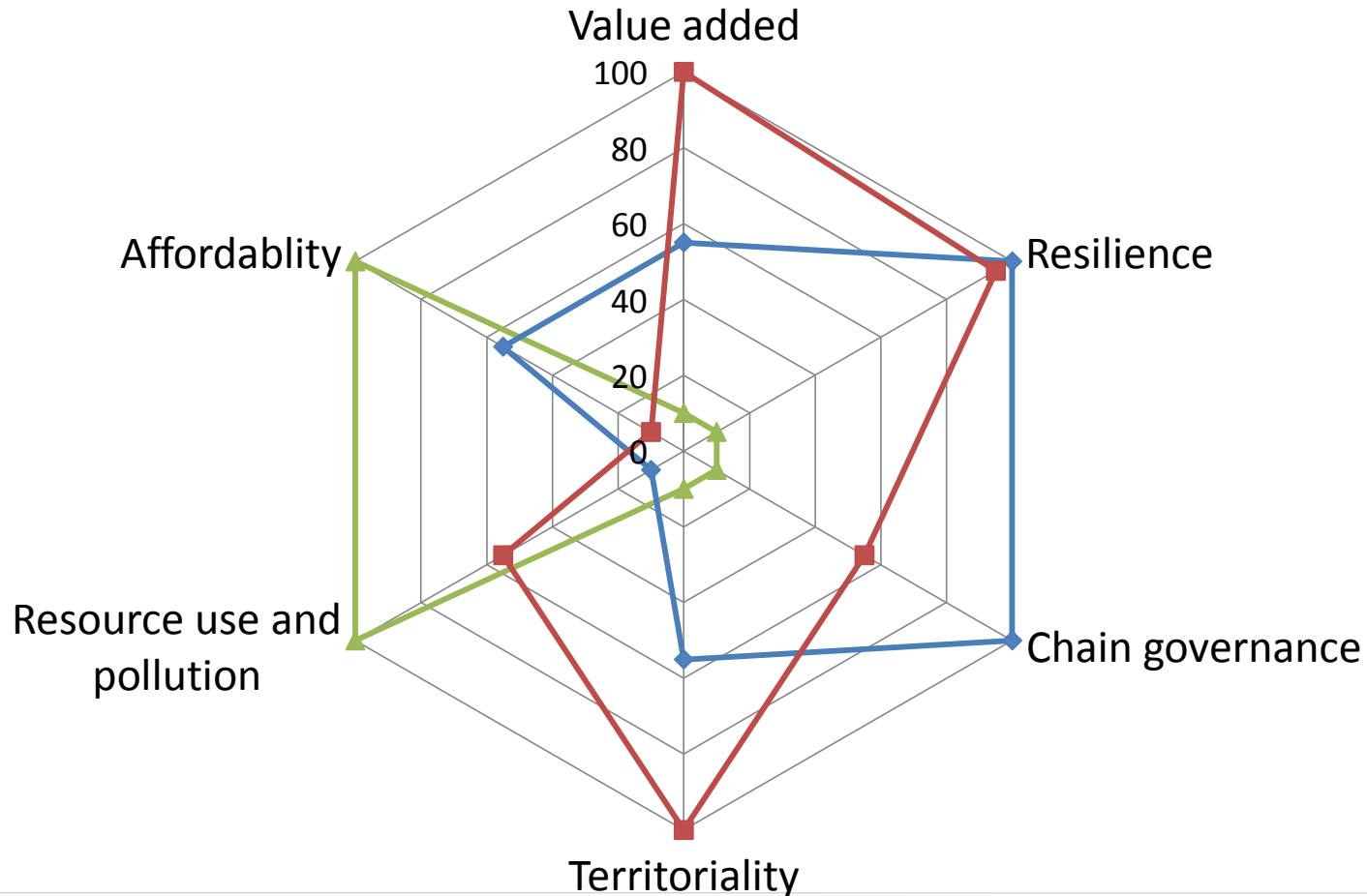
iii) to develop collaborative relationships among economic agents

iv) to protect the local producers from unfair competitors



Overall evaluation of attributes for local, regional and global supply chain

Assessing economic sustainability in local and global value chains



—▲— Global (Generic ham) —◆— Intermediate (Parma Ham PDO) —■— Local (Cinta Senese PDO)



Discussion

The selected attributes seem to be appropriate to compare local with global chains in the case of cured ham

Fine-tuned indicators ask for long-time observation and recording

Articulation between supply chain and single enterprise level

Resilience is obtained by transferring risks and losses to the weak firms/sectors of the chains (e.g. Parma ham: processors → farmers)

Local/global chains interact at different levels

Resilience of Parma ham is based also on Generic ham (main competitor) → which long term effects on quality, prices, etc.?

Parma ham enterprises try to enter Cinta Senese ham

Beyond supply chain: need for integration of territorial levels of analysis



Conclusions

In this study there is evidence that local food chains are able to generate more added value and more resilience than global chains

Key to achieve these results is the opportunity to use self-governance mechanisms creating (1) product distinctiveness (2) institutional support from local bodies (3) collaborative relationships among economic agents (4) protection against unfair competition

Production regulation under Regulation 1151/2012 may further enforce product distinctiveness and strengthens link with territory

Extra value added and resilience are not be considered for granted, but is the result of complex strategies of local economic agents





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Thank you for your attention
Grazie per l'attenzione

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