



Organizational Upgrading in the Peruvian Alpaca Fiber Value Chain

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I. Theoretical framework and key concepts

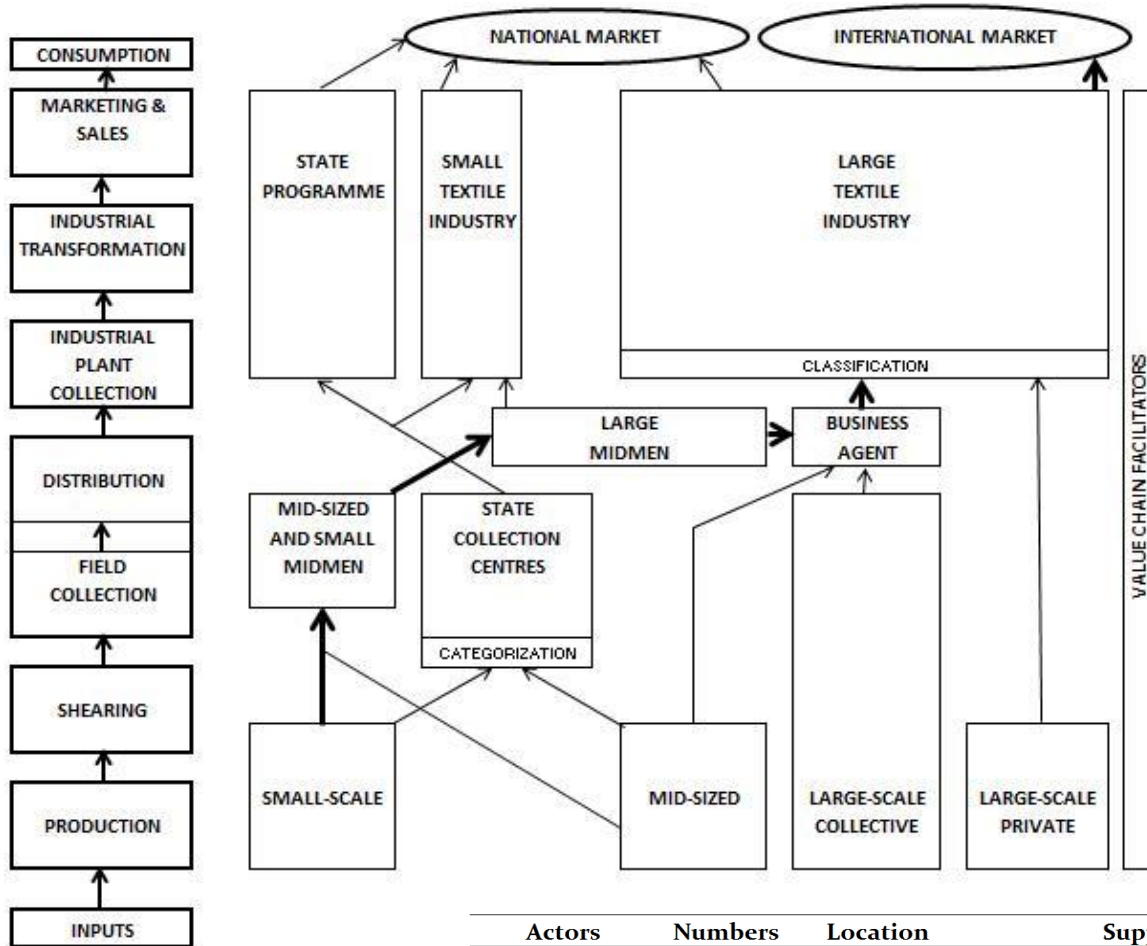
- How does standardization foster organizational upgrading in the AFC?
- GVC framework (Gereffi et al, 2005) – actors, institutions and interactions
- **Governance** (chain coordination)
 - 1) Market; 2) Modular; 3) Relational; 4) Captive, and; 5) Hierarchical (Gereffi et al, 2005)Quasi-hierarchical (Humphrey and Schmitz, 2002)
- **Upgrading** (opportunities for actors to climb the value-addition ladder)
 - 1) Product; 2) Process; 3) Functional, and; 4) Inter-sectoral
- Firm-centered and production-oriented

II. Industry background

- Fine animal fibers 1.5% of global output
- Mohair (56%), angora (21%), cashmere (12%) and alpaca (10%)
- Peru has 85% of the world's alpaca population (3.7 million)
- Provides 80% of global fiber output (3.8 metric tons in 2010)
- Production areas between 3000 and 5200 masl
- Seasonal activity: October-March (rainy months)



III. Structural configuration of the AFC before PTN standardization



- Fragmented supply, concentrated demand and middlemen
- Over 50% of raw fiber over 27µ (Bustinza, 2001)
- Health, nutrition and reproduction mgmt. differ greatly
- Michell and Incaptops: 85% raw purchases/90% exports
- Until 2002, two standards: 1) Private, and; 2) *Tui-adulto*
- Private std. based on breed, color and width (20-30% >)
- T-A std. based on weight (“sweep” purchases) (\$2-2.8/lb)
- 10% more for white *suri*.
- Classification solely conducted by *maestras clasificadoras*

Actors	Numbers	Location	Supply	Output	Quality	When	For whom
Small-scale	160000	C+S Andes	Raw Fiber (85%)	2-5 quintales	Low (25.5u+)	Year-round	Middlemen
Mid-sized	NA	S Andes	Raw Fiber (10%)	10-35 quintales	Mid-low (25.5u-)	Sept-Apr	Middlemen
Large	8	S Andes	Raw Fiber (5%)	250-2000 quintales	Mid-high (23u)	Sept-Apr	Business Agents
Middlemen	15000	C+S Andes	Raw Fiber	90% in Juliaca	Varied	Year-round	Business Agents
STIs	32	Arequipa	Interm. goods (90%)	95% national	Medium-low	Year-round	National customers
LTIs	2	Arequipa	Interm. (80) and final (20) goods	90% intl.	High	Year-round	Intl. customers
Regional govts.	10	C+S Peru	Services	NA	NA	Year-round	Small-scale producers
NGOs	NA	C+S Peru	Services	NA	NA	Year-round	Small-scale producers

IV. Alpaca Fiber Peruvian Technical Norms (PTN)

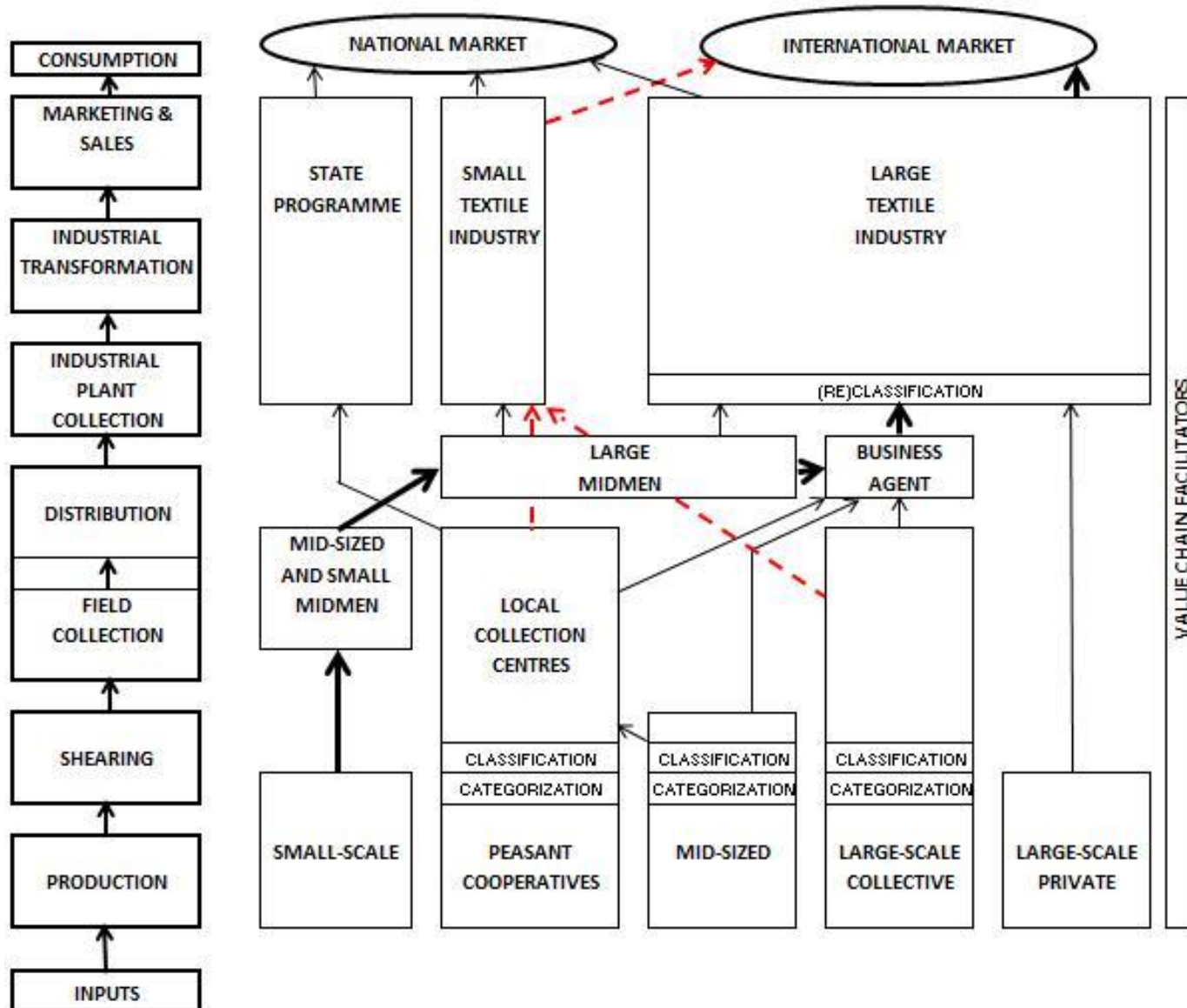
- Rationale: increasing international demand (China) and intense competition from MCA
- 2001: IPAC + CONACS = SNARF (public open bids)
- Creation of peasant-run Large Collection Centers (LCCs)
- PTNs: Six norms related to breed, length, width and fleece quality proportions
- Two PTNs (field): 1) PTN 231-300-2004 (categ. - fleeces), and;

Categorization	Fibre Content		Length (mm)	Color	Min. content Baby (%)
	Superior qual. cont (%)	Inferior qual. cont (%)			
Extra Fine	70 or more	30 or less	65	Full	20
Fine	55 to 69	45 to 31	70	Full	15
Semi Fine	40 to 55	60 to 45	70	Full-white haired	5
Thick	Less than 40	More than 60	70 or less	Full-white haired	

2) PTN 231-301-2004 (classif. - fiber)

Class	Diameter (microns - μ)	Length (mm)	Humidity (max. %)	Mineral solids (max. %)	Grease (max. %)
Baby Alpaca (BA)	Up to 23	65	8	6	4
Alpaca Fleece (AF)	23.1 - 26.5	70	8	6	4
Alpaca Medium Fleece (MF)	26.6 - 29	70	8	6	4
Huarizo	29.1 - 31.5	70	8	6	4
Thick (G)	31.6 plus	70	8	6	4
Mixed Pieces (MP)	/	20 - 50	8	6	4

V. Structural configuration of the AFC after PTN standardization



- 2004: LTIs quit, “reclassification fees”
- STIs filled the demand gap
- Active support from chain facilitators
- PTN adoption rates 10-20% (actively discouraged by middlemen)
- Peasant cooperatives, learning by organizing LCCs
- Vertical integration with STIs – Access intl. markets
- LCC demand for shearers and *maestras clasificadoras*
- 2004-2008: Booming prices (30-60% over T-A)
- 2009: 46 LCCs in Arequipa and Puno
- STI intermediate goods from 5-10% to 20% (prod-proc. upgr.)
- 2008-2009: Global Financial Crisis (domestic overstock)
- MYPERU-Agrobanco state program (US\$9.5 million)
- Compulsory LCC creation-formalization for access to funds
- 2012: 80+ LCCs nationwide. PTN or credit-driven replication?
- Since 2004: quality below 23u from 10% to 20-25% nationally

V. Structural configuration of the AFC after PTN standardization (cont.)

- Continued dominance of LTIs (Price-setting power and *de facto* duopoly-duopsony)
- 2008-2014: Chain facilitators implement measures to overcome “reclassification fees”
- Technical training and skills certification by the state for mechanical shearers and *maestras clasificadoras* (especially after market recovery in 2011)
- 2014: 50% of LCCs financially and politically supported by local govts.
- Easy access to public funds: mismanagement/corruption (70% crowded by 22 LCCs managed by SPAR) and partial/late payments for individual members (20-30%)
- Possibility of LCC regression to hands-off captivity by LTIs

VI. Discussion (and conclusions)

- Four GVC firm-centered and production-oriented upgrading modes
- Standards compliance and enforcement does not guarantee socio-economic improvement (Bingen, 2006; Minten, 2012; Neilson, 2008; Tran et al, 2013) nor climbing the value addition ladder (Ponte et al, 2014)
- Informal, asymmetric and uncoordinated chains (survival replaces competition rationale)
- No incentives to produce better, cheaper and faster if buyer-power problem persists
- Organizational upgrading is trade-enabling (better terms of chain engagement through agglomeration/same skills, higher rents)
- Positive externalities of standardization
 - 1) Vertical integration with STIs and access to international markets
 - 2) Formalization and process upgrading for fiber service providers
- Limitations
 - 1) Geographical fragmentation and network effects
 - 2) Rural-to-urban youth migration
 - 3) Demand cap for STIs
 - 4) Financial dependence on state funds: from PTN to credit-driven LCC replication (unsustainable)
 - 5) Corruption

