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Internationalization of subcontracting SMEs: how do they learn? The case of space industry in France

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Research context

Internationalization of SMEs:

- Dominance of studies on consumer products, high-tech firms, manufacturing firms;
- scant research on subcontracting SMEs

Subcontracting SMEs:

- Difficult to define;
- weak involvement in international activity

Globalization of industries:

- Global value chain (GVC) research, but essentially MNEs' perspective
- International development of SMEs through multi-tier GVC

Internationalization of Subcontracting SMEs

Globalization and knowledge
Knowledge connectivity

Process of knowledge acquisition during internationalization

References: Kim, J. U., & Aguilera, 2015; Kim & Hemmert, 2016 ; Mudambi, 2008; Johanson & Mattsson, 2015; Cano-Kollmann et al., 2016; L'Usinne Nouvelle, 2016;

Research problem and research question

Literature review

Subcontracting relationship and its impact on knowledge

Contractor possesses competences but needs to augment its capacity

Knowledge is confined to strict conditions of contractors' calls for proposals and to matrix of conformity.
Subcontracting firm does not posses it.
Difficult to transfer knowledge to other business contexts

Contractor does not possess competences and needs to call upon for external expertise

Knowledge is developed by the firm or co-constructed through collaborative projects with contractors.
Subcontracting firm usually disposes of knowledge.
Possibility to transfer knowledge to other business contexts

Uppsala model

Knowledge acquisition during internationalization process

Firm's inherent knowledge
Experiential – learning by doing
Vicarious – learning within networks
Grafting – learning through Additional competences
Search for Information – use of external resources

Research problem:
Strong Embeddedness in local industrial network

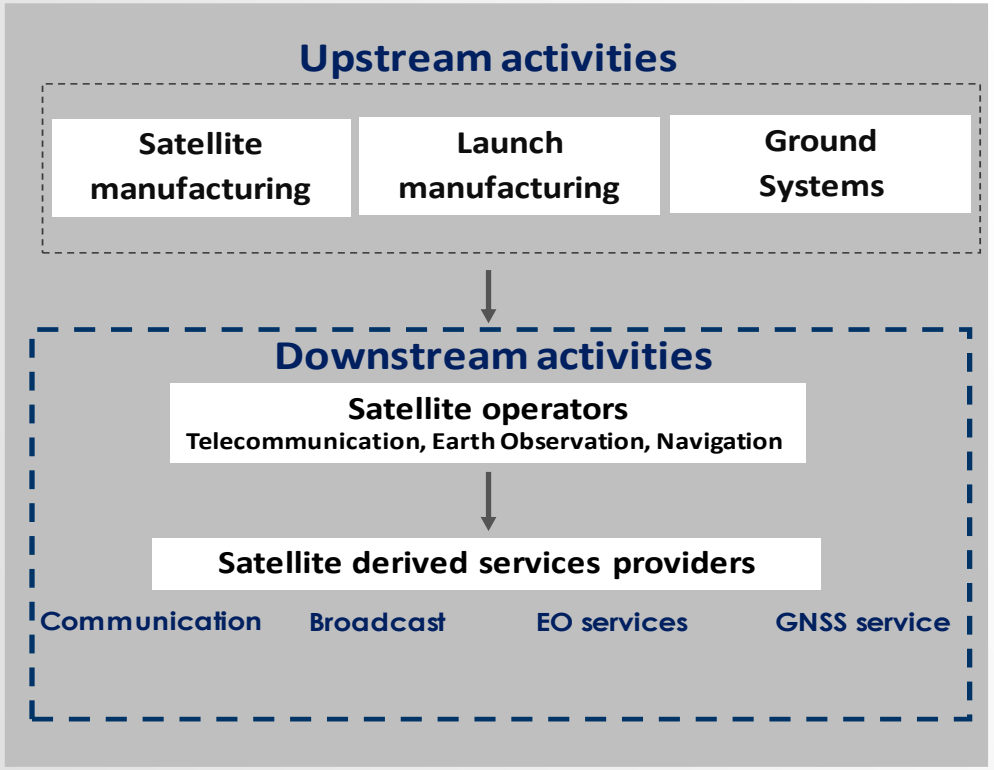
Institutional logics perspective
Different values, believes, habits logics
Existing in organizational field
Multiplicity of logics
Adherence of rejection of logics

Research question:
How does the local institutional environment and its logics influence the process of learning of subcontracting SMEs?

References: Johanson & Vahlne 1977, 2009, 2013; Huber, 1991; Furlan et al., 2007; Castelli et al., 2011; Giovannetti et al., 2015; Friedland & Alford, 1991; Thornton, et al.2012; Greenwood et al., 2012

Empirical ground

What is Space Industry?



Why Space Industry?

Dynamic of change in global space industry:

Number of Space Agencies: 40 in 2000 et 72 in 2018

Concentration of Space industry in Toulouse:

25% of European and 50% of French workforce

Technological and market mutations:

Burst in nano-satellites (205% in 2017)

Concentration of institutional actors in Toulouse:

CNES, Aeorospace Cluster, Nano - satellites center

Choice of segment:

Secondary data:
Reports, specialized articles and books
Space Business & Law conferences

Primary data:
15 open-ended interviews
(institutions, industry, SMEs)

Increasing globalization and strong competition

Infrastructures
satellite manufacturing

References: The Business of Space, Brennen & Vecchi, 2011; 7; ESPI reports, 2015, Le nouvel Age Spatial, Pasco, 2017; Dos Sanos Paulino, 2011; 2014;

Empirical ground

Selection of SMEs

Secondary data:

Analysis of space date bases:
ESA SMEs
Aerospace Valley Cluster
Toulouse Chamber of Commerce and Industry

Primary data:

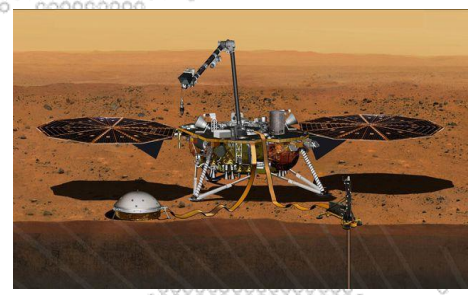
Non-participant observations:
Toulouse Space Show, SMEs Days ADS, Space Tech Bremen
15 open-ended interviews with SMEs

Independent SME, 70 % of activity in the space
International operations

Selection of three SMEs

A
Activity:
Coatings for rockets and satellites
Space: 90%
Established: 1988
Employees: 29
T/O: NC and 90 % export

B
Activity:
Test of radiation and radiation software
Space: 85 %
Established: 1994
Employees: 50
T/O: 6 MN and 60 % export



C
Activity:
Mechanical embedded systems, tests
Space: 85 %
Established: 1994
Employees: 70
T/O: 8MN and 10 % export

Empirical study

Methodology

Research question:

How does the local institutional environment and its logics influence the process of learning of subcontracting SMEs?

Research method:
Qualitative research and Multiple Case study

Method of analysis:
Contextualized explanation

Conduct of the multiple case study

1. Collection of data:
6 semi-structered interviews in French (2007 – 2017) around 3 themes :

General activity and international development

Knowledge acquisition

Firms' relations with local institutional environment

2. Triangulation:
Interviews: 2 individuals, registered and written and validated
Secondary data: Web sites, commercial leaflets, newsletters, historical data about the industry
Context related primary data: open-ended interviews with institutions and industrials

3. Coding and analysis:
Manual organisation of data

Application of conceptually clustered matrix (learning and Institutional Logics)

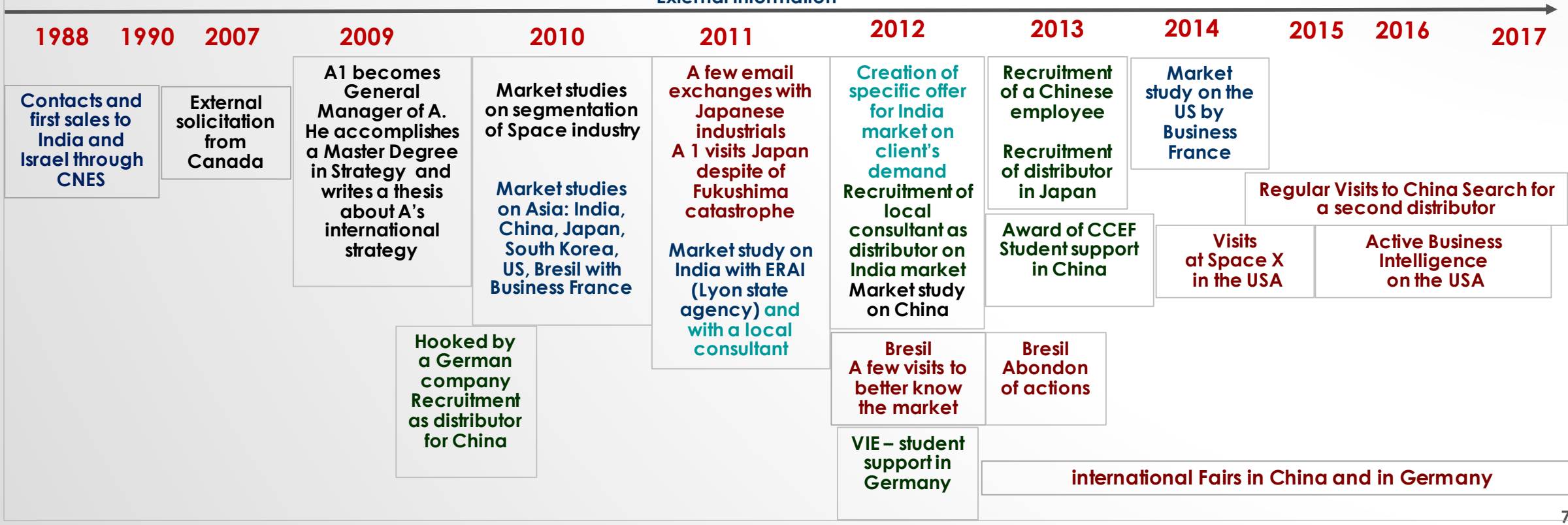
References: Gavard-Perret et al., 2013, Flick, 2012; Ghauri, 2004; Welch et al., 2011; Stake, 2013)

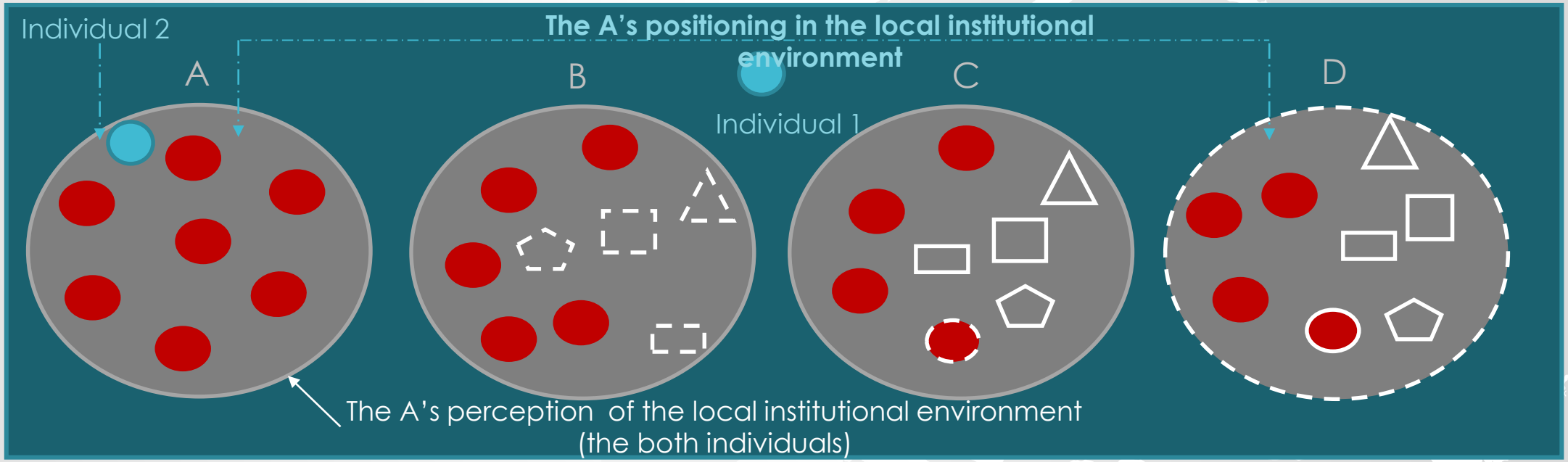
Results (only for the A)

Activity:
Coatings for rockets and satellites - **Space:** 90%
Established in 1988 - **Employees:** 29
T/O: NC , **35 %** export started already in 1988
India, West EU countries, Canada Israel, China, Japan, South Korea, new EU countries
USA regular visits no sales, Brazil regular visits but abandonment

Knowledge acquisition

Inherent
Experiential
Vicarious
Additional
External Information





A: local environment is stuck in time and in place, one dominant logic (driven by the state) exists, all actors follow the same logic

B: new actors emerge and also new logics (driven by the commercial market), two logics start to coexist

C: new actors reinforce their position; two logics coexist; some of traditional actors start to change

B: new actors are well established and start to change the rules of the game; some traditional actors continue to change, other remain the same

Discussion and Contributions

Knowledge acquisition, institutional local environment and its logics

Impact of context on firms creation : **state as dominant logic in the space industry** – creation of supply-chain

Capacity of knowledge acquisition and of knowledge transfer because specialist subcontractor (Baudry, 2013)

Valuable partners and share of knowledge (CNES) in the case of specialist subcontractor (Powell, 1990)

Legitimacy (CNES) and availability of acquired knowledge (Kim & Hemmert, 2016)

Mobilization of different knowledge resources (Huber, 1991), however:

A long period of **"learning at home"** with the use of inherent knowledge and external sources of information (institutional actors) before undertaking an international activity – complex environment (the emergence of new logics in the space industry), capacity of managing of possibly conflicting logics (state or market driven) – extension of Uppsala model

Experiential learning or collective approaches on international market prevail - weak consideration of logics and rejection of logics dominating home market and firm's adherence to emergent logic (commercial logic) on international markets

Exploiting of activities (local market) and **exploring of activities** (international markets) – signs of rejection or reduced affiliation to the logic dominating local environment and perception of two logics as antithetical (Thornton, 2012)

Limits and possible future research

- Research carried out for only one SME, it will be enlarged to two others;
- Importance of context – context approach helps to explain but limits the results to the industry under study
- No generality possible but transferability possible to other knowledge intensive industries

- Cross-country research carried out in the same industry
- Research on interactions between the evolution of the industry and the intensity of internationalization (international start-up)
- Research on micro-processes going with internationalization (product development) in complex institutional environments.

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THANK YOU!