The “augmented market” mixing energy, transports and digitals

Forum Innovation VI
1-3 Octobre 2014
Crise, innovation et transition
Université de Paris Ouest, Nanterre

Richard LE GOFF
Richard.le-goff@ensta-paristech.fr

Jonathan BAINEE
jonathan.bainee@ensta-paristech.fr
1. Understanding the concept of « augmented market »?

2. Situating the concept of « augmented market »

3. Measuring the « augmented market »
Understanding the concept of augmented market

-> Few stylized facts:

-> Troubling strategies of firms: Yesterday VS nowadays

-> Intra-sectoral « decompartmentalization » of the levels of value chains;

-> Horizontal decompartmentalization between digital-energy-transports sectors;

An « augmented market » might be seen as...

1. A new strategy compared to integration & vertical quasi-integration that usually occur within these industries

2. A new paradigm compared to focusing to the core business
Understanding the concept of augmented market

-> A definition:

An « augmented market » is a structure of competition resulting from a strategy aiming at the creation of a market ...

-> Growth type

Organic

External

-> Integration type

Horizontal

Vertical

... through the networking of two or more autonomous markets (by their structures and stakeholders)...

-> Especially in the field of the digital, energy & transports

... pooling – usually or not - a same physical or intangible basis...

-> Infrastructure, information, knowledge

... at distinct levels of their proper value chains ;

Two main properties of an augmented market »

1. Subadditivity of production functions \( \forall n, \forall Q : C(Q) \leq nC(Q/n) \)

2. Presence of (indirect) network effects, since the utility of the « augmented product » is given be the number of users at each side of the market
Situating the concept of augmented market

-> An « augmented market » differs from :

A “multi-sided market” (Weyl, 2010)

= The value of a product is positively correlated with the amount of an other good from a different industry, which forms the other side of the same market (Wauthy, 2008).

-> Preexisting & autonomous markets

A bundle (Moati & ali., 2006)

= Commercial offer articulating goods & services that have their own market but contribute to an homogeneous functionality.

-> Heterogeneous functionalities

Industrial convergence (Zhou, 2003)

= Industrial integration between 2 or more industries

-> A variation (not included in Pennings & Puranam (2001))

...as well as « conglomerate », « vertical/horizontal integration or quasi-integration...
Measuring the concept of augmented market

\[ WAR_i = \frac{\sum_{j \neq i} r_{ij} e_j}{\sum_{j \neq i} e_j} \]

\[ WARN_i = \frac{\sum_{j \neq i} r_{ij} \lambda_{ij}}{\sum_{j \neq i} e_j \lambda_{ij}} \]

Identifying firms boundaries dynamically can be done by understanding “corporate coherence”, thanks to combinatorial statistics on activity portfolio of diversified firms (Teece & alii, 1994):

The aim will be to identify inter-industrial relatedness through the analyse of inter-relations between activities within firms, considering:

- The number of workers (Teece & alii., 1994),
- Sales revenue (Bryce & Winter, 2009),

After obtaining a “coherence degree” and “outliers”, we should explain & describe the basic logic of the augmentation of the market...

- Existing method: resource-based approach (Robins & Wiersema, 1995)
- Proposition: functionnal approach (in the field of Gallouj & Weinstein, 1997)
Bibliography (abstract)


Thank you for your attention…and your questions!