“Determinants of Innovation: an Overview of European Agri-food SMEs”

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BACKGROUND

• Types of innovation:
  – Based on the innovation objective, academics classify innovation in different types. Innovation researchers have offered several taxonomies
    • The first Schumpeter, attempted to define types of innovation
    • Many studies focused on the distinction between innovation in product and in process (Abernathy and Utterback, 1978; Kotabe and Murray, 1990; Light, 1998)
    • The most applied today is the classification in innovation in **product**, **process**, **market** and **business model**;

• There is distinction between types of innovation because their process of generation and their adoption is different (Abernathy and Utterback, 1978; Daft, 1978; Tornatzky and Fleischer, 1990);

• Studies highlights that innovation types are associated: the introduction of new product determines a change in process and in the administrative system (Abernathy 1975; Hayes, Wheelwright 1979 a, 1979 b; Kim et al. 1992).
In the food sector

• In many cases the literature tends to focus on determinants of both process and product innovation;
• Determinants of innovation in market and business model innovation have been often neglected in studies;
• Lack of studies regards possible associations between innovation types in the food SMEs.
OBJECTIVES OF THE STUDY

• Investigates on the following aspects with focus on the food SMEs:
  – Existence of association between the different types of innovation (new product, process, market and business model)
  – Determinants of each type of innovation
METHODOLOGY

• Data were acquired through a web-survey developed for the EU funded project NetGrow (www.netgrow.eu). Food and drink SMEs in six EU countries were surveyed. Usable surveys for data analysis were 381;

• Two types of Analysis:
  1. Classification tree to investigate the association between types of innovation (in product, in process, in market and business model);
  2. Classification tree for each type of innovation to investigate individually determinants of innovation types.
RESULTS: Association between types of innovation

Highlights:
- The existence of associations between variables and the level of importance is determined by Chi-square test
- Factors associated to innovation in product in order of importance are: innovation in market, (91% of SMEs that innovate in market also innovate in product)
RESULTS: Determinants of innovation in products

Highlights:

- **Innovation strategy:**
  - 74% of defender and analyzer introduced new products
  - 93% of prospector introduced new products

- **Vertical collaboration:**
  - 81% of Def. & Anal. with collaboration introduced new products
  - 51% of Def. & Anal with no collaboration introduces new products

- **Size:**
  - 70% of Def. & Anal with collaboration and Micro size introduced new product
  - 89% of Def. & Anal with collaboration and small, medium sized introduced new product
RESULTS: Determinants of innovation in process

Highlights:

• Innovation strategy
• Horizontal collaboration (competitors and research institution)
RESULTS: Determinants of innovation in market

Highlights:

- Innovation strategy
- Horizontal collaboration (competitors and research institution)
RESULTS: Determinants of innovation in Business model

Highlights:
• 42% Horizontal collaboration (competitors and research institution)
• Size → 67% Medium Sized innovate in business model
Discussion & Conclusion 1/2

- The majority of SMEs innovate in products (282 of 381) \( \rightarrow \)

Findings from the literature highlights in the food sector innovation is process oriented (Triguero et al., 2013; Alfranca et al., 2002; Capitano et al., 2010; Galizzi et al., 1996; Grunter et al., 1997)

- Association between types of innovation in the food SMEs

- 60% of food SMEs innovate both in products and markets. Strong association between innovation in product and market; not in line with findings from other sectors \( \rightarrow \) innovation in product-process (Abernathy and Utterback, 1978; Daft, 1978; Tornatzky and Fleischer, 1990);
Determinants of types of innovation:

- Strategy is the most important determinant for 3 types of innovation: in product, process and market.
- Synergy with suppliers and customers tends to support product innovation.
- Collaboration with competitors and research institutions encouraged SMEs to undertake market, process and business model innovations.
- Size is relevant for innovation in Business model; medium size firm introduced innovation in business model.
THANK YOU FOR THE ATTENTION

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