AIEAA
ASSOCIAZIONE ITALIANA DI ECONOMIA AGRARIA E APPLICATA

"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 Schumpter, 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);

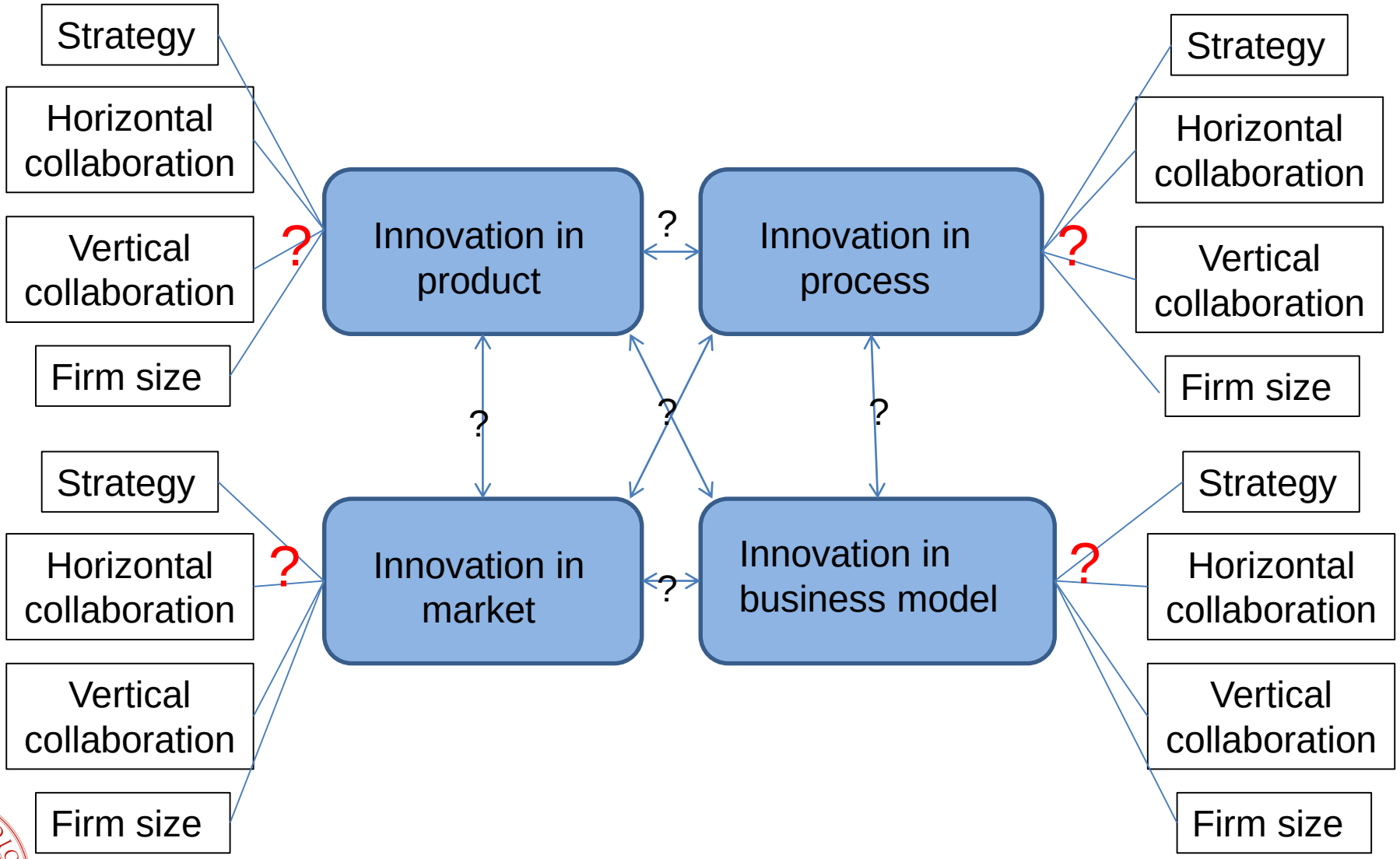
- Studies highlights that innovation types are associated: the introduction of new product determines a change in process and in the administrative system (Abernathy 1975; Hayes, Wheelwright 1979 a, 1979 b; Kim et al. 1992).

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


Strategy
Horizontal collaboration
Vertical collaboration
Firm size
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Innovation in product
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Innovation in process
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Innovation in market
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Innovation in business model
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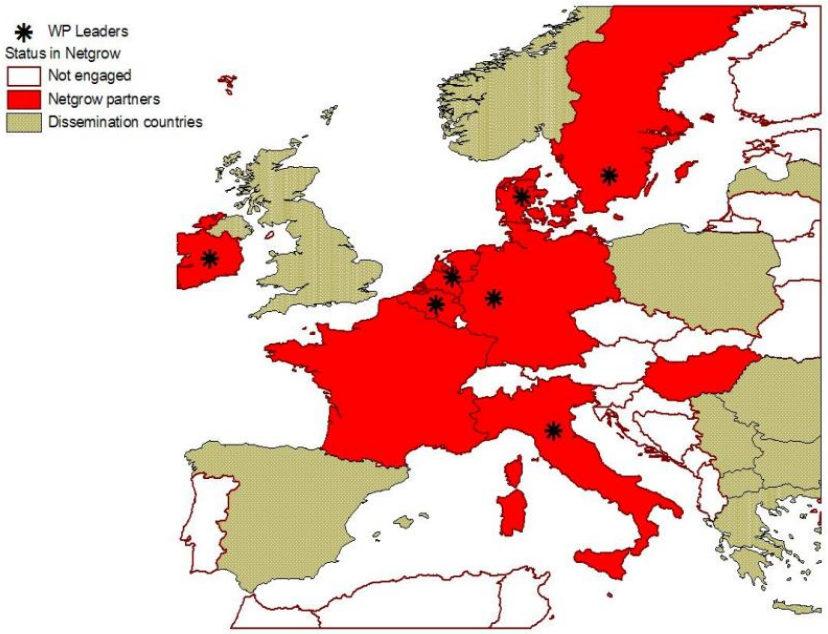
Strategy
Horizontal collaboration
Vertical collaboration
Firm size

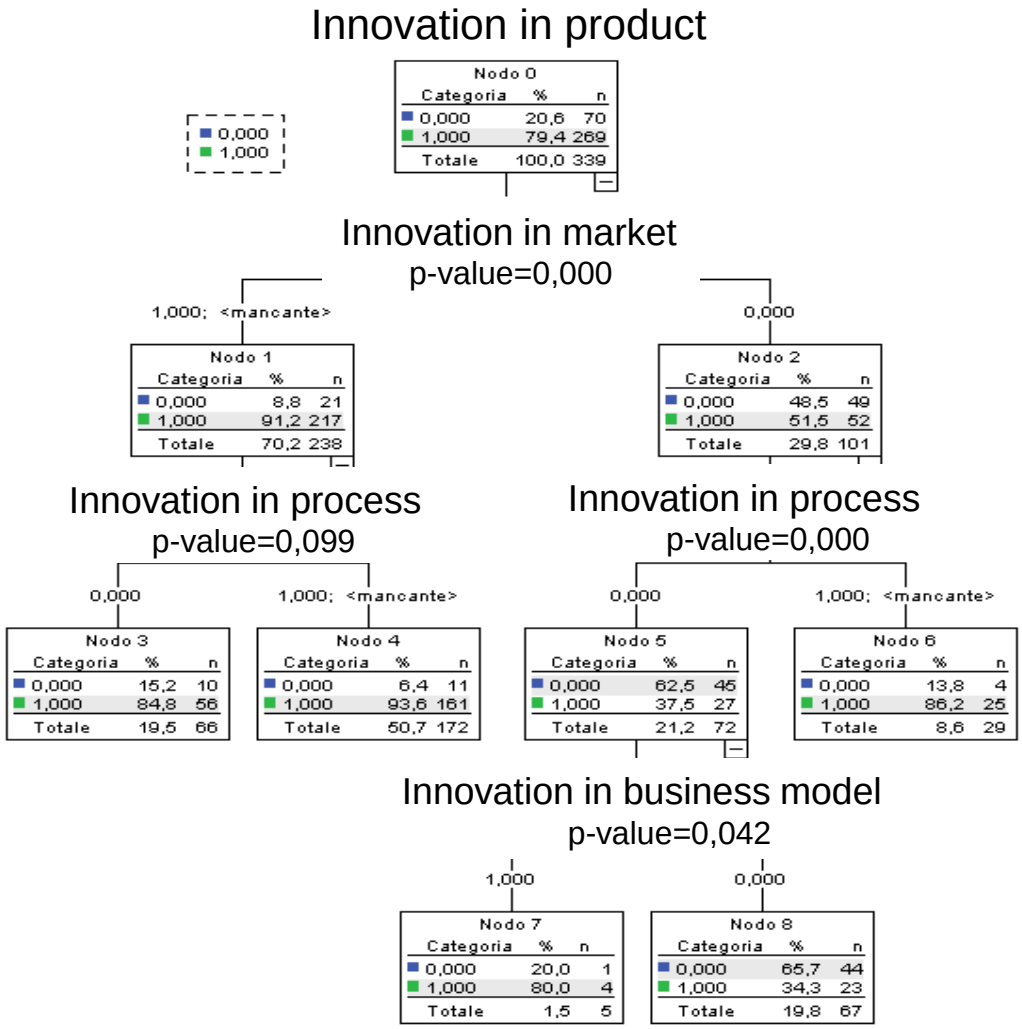
METHODOLOGY

- 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.

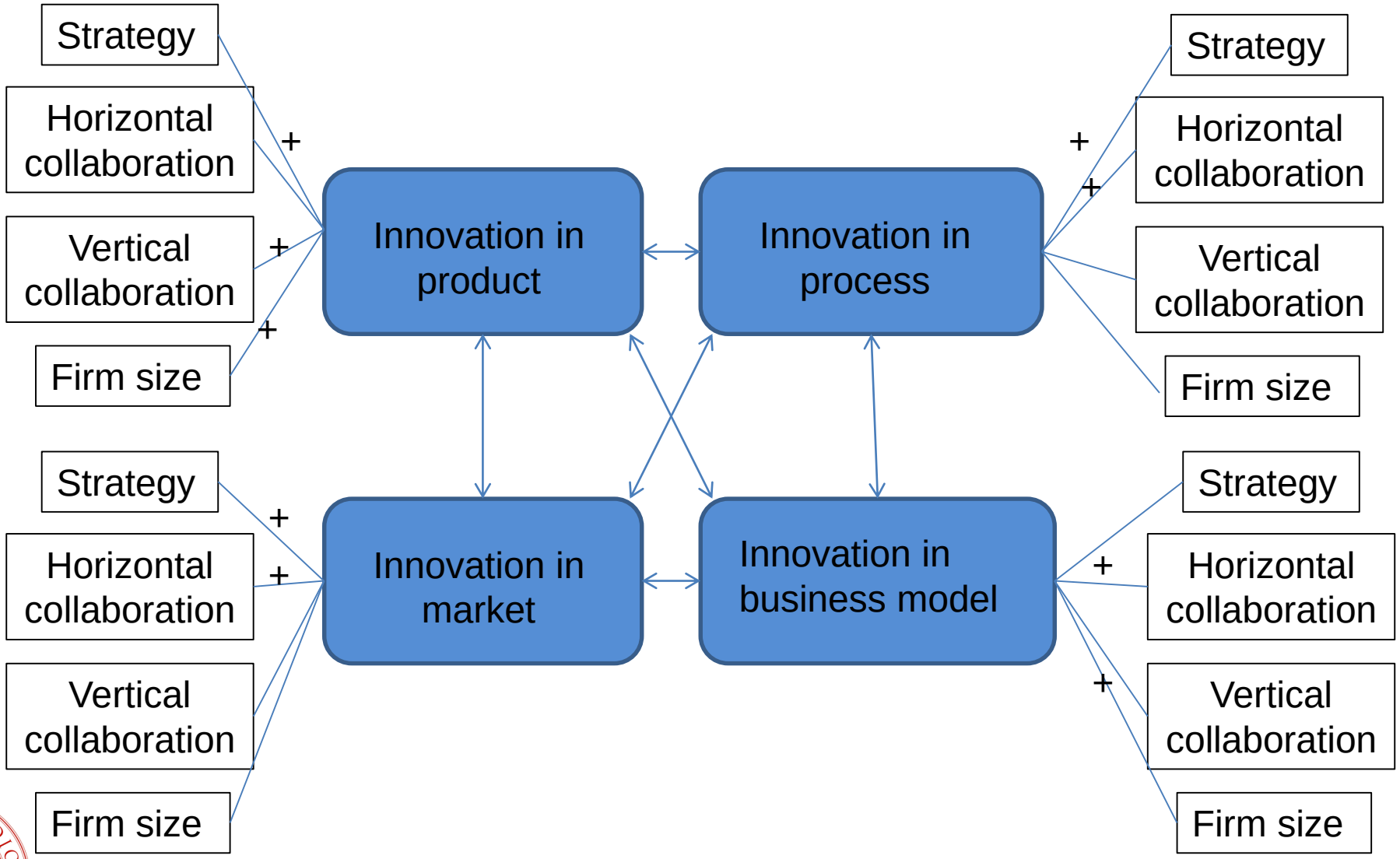
RESULTS: Association between types of innovation



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)
Innovation in process
Innovation in model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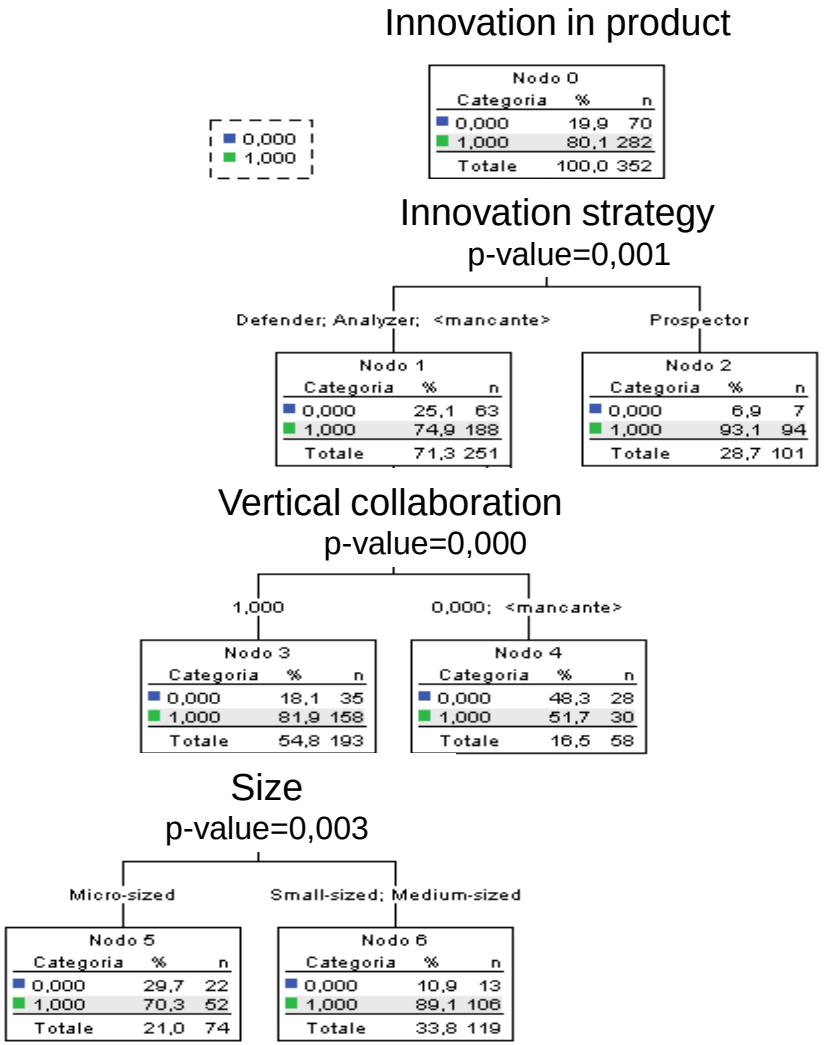
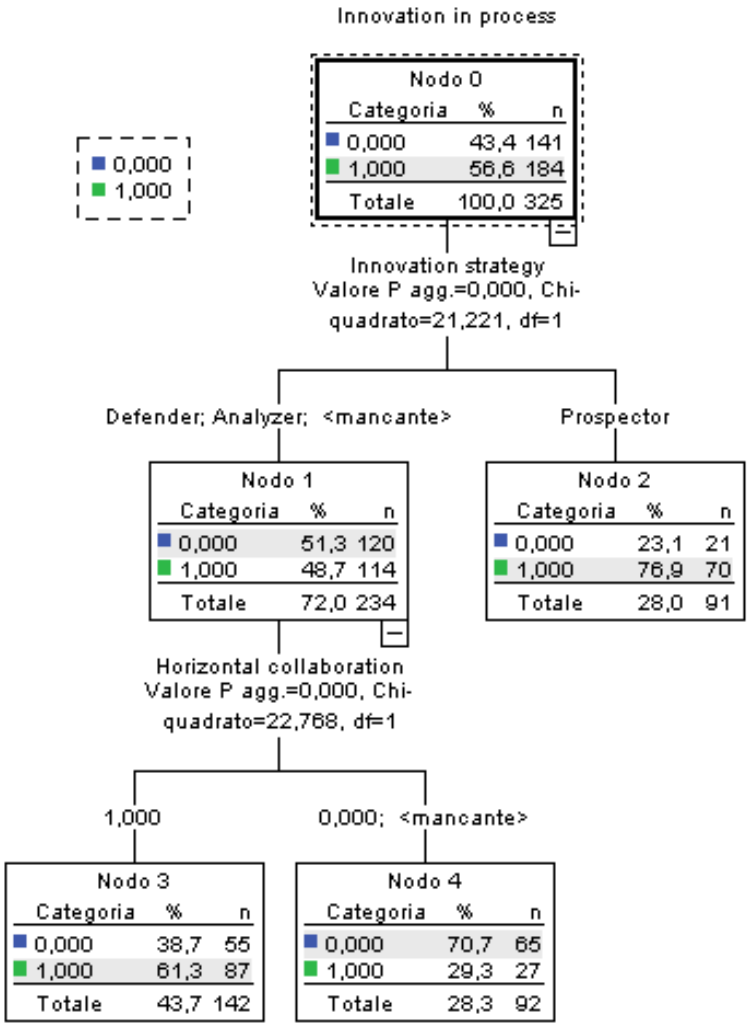
RESULTS: Determinants of innovation in products



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

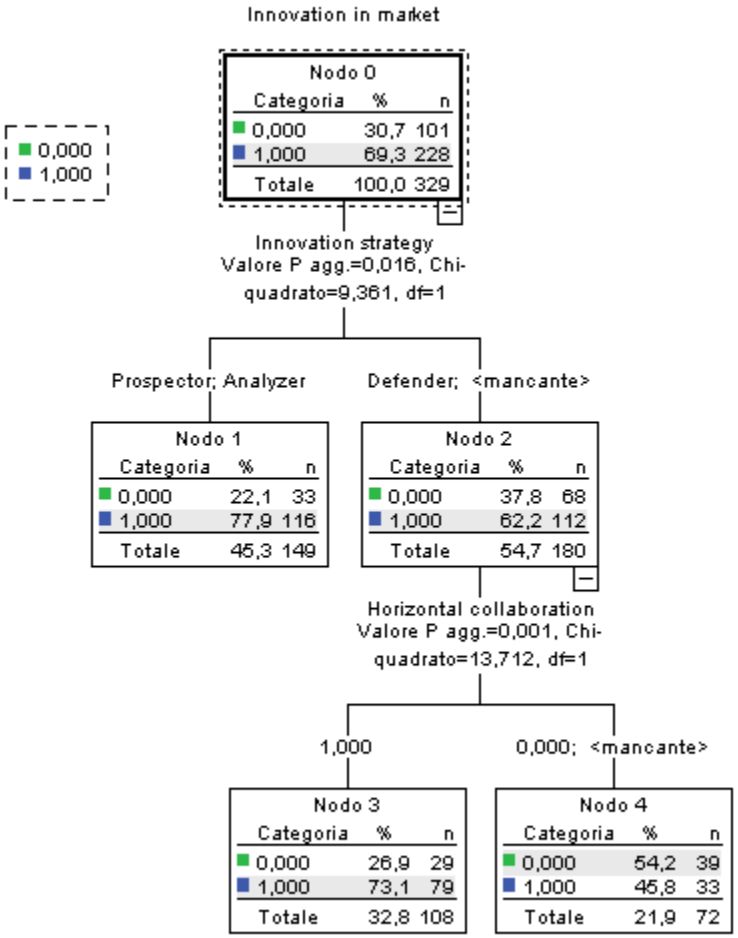
RESULTS: Determinants of innovation in process



Highlights:

- Innovation strategy
- Horizontal collaboration (competitors and research institution)

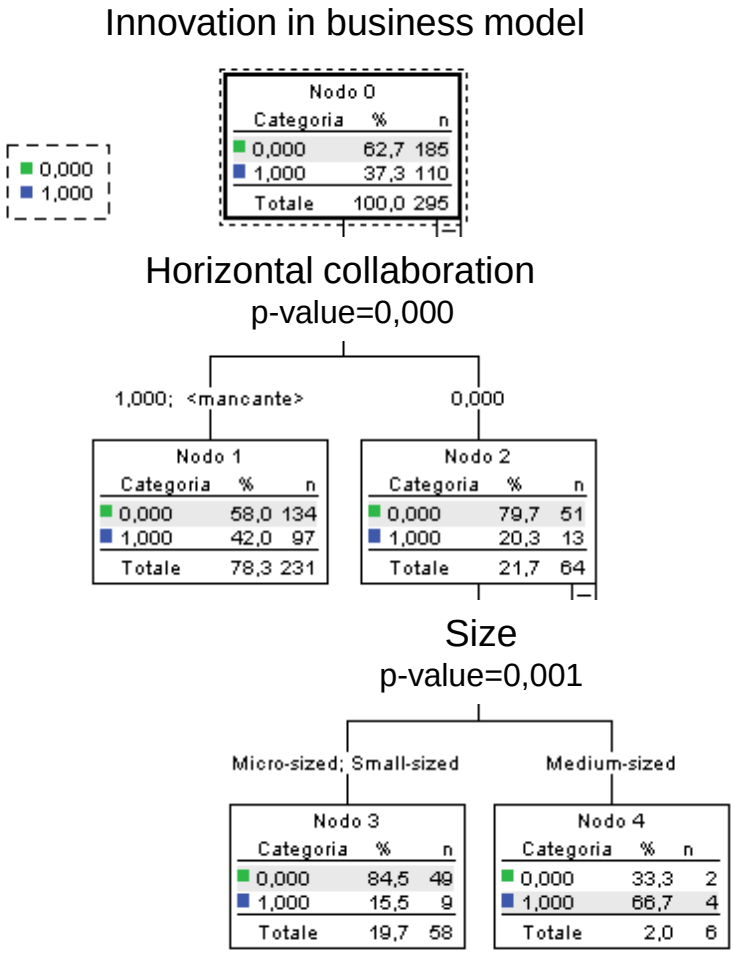
RESULTS: Determinants of innovation in market



Highlights:

- Innovation strategy
- Horizontal collaboration (competitors and research insitution)

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 0f 381) → 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→ innovation in product-process *(Abernathy and Utterback, 1978; Daft, 1978; Tornatzky and Fleischer, 1990);*

Discussion & Conclusion 2/2

- 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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