
Drivers and barriers for innovation in Chinese and Dutch seed and food companies

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Introduction

- Objective

- This study aims to investigate the drivers and barriers for innovation in Chinese and Dutch seed and food companies.



- Why?

- Challenge of “how to feed the world in the future”
- Innovation is the sustainable solution
- Innovation is a complex process

Agri-food industry in China and the Netherlands

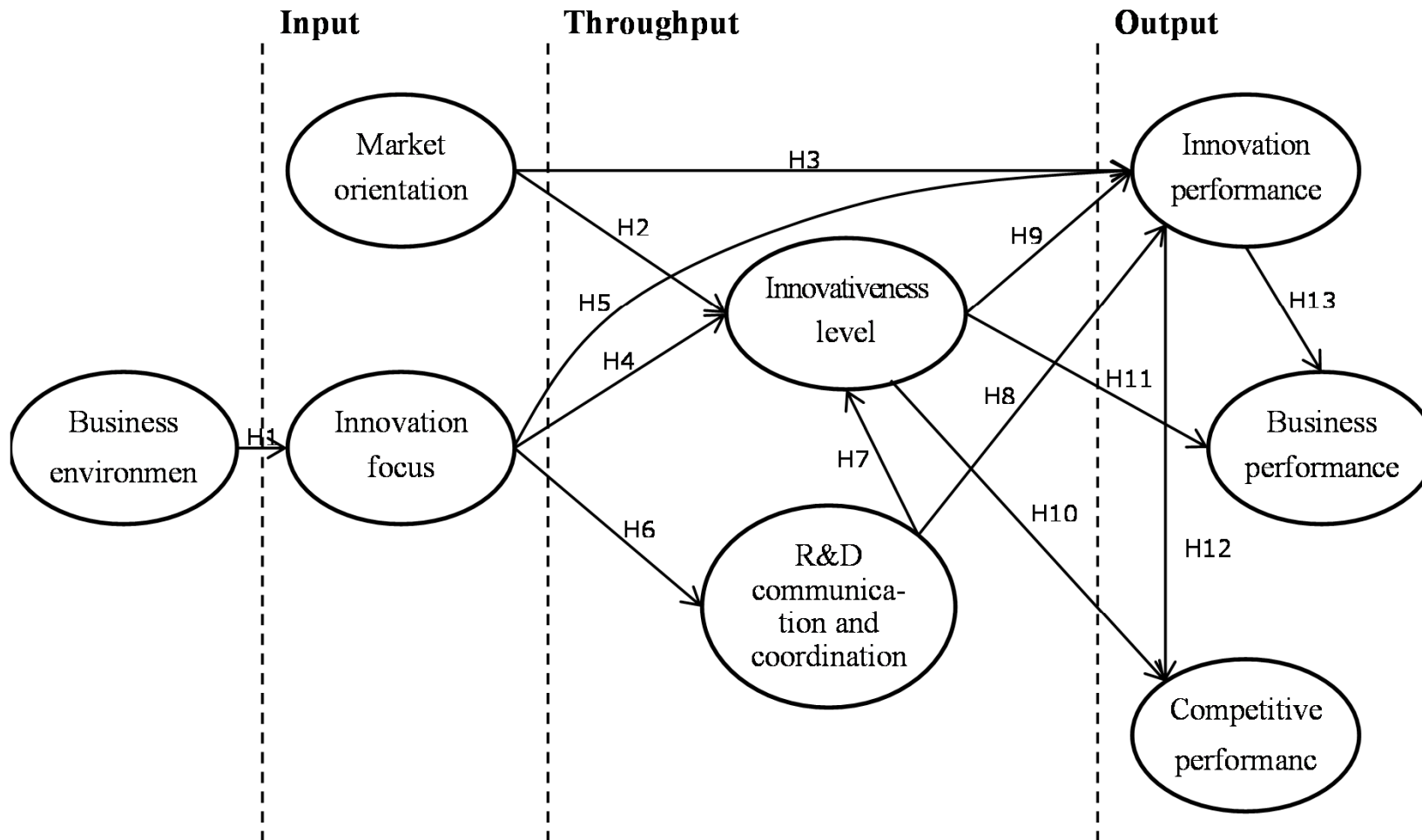
- In China

- agri-food sector represents 9.6% of China's GDP.
- labor productivity in agri-food sector was only 1/12 of the American's (Wei 2008).

- In the Netherlands

- agri-food sector represents 10% of the Netherlands' GDP
- In food & beverage industry, the innovation performance is relatively strong compared to other industries in the Netherlands and the seed industry is with strong position in the world.

Conceptual model to describe drivers and barriers in innovation process



Innovation input-throughput-output model

(Omta et al., 1994; Brouwer and Kleinknecht, 1999 ; Keizer et al., 2002; Lööf and Heshmati, 2002; Kemp et al., 2003; Luuk and Theo, 2004; Fortuin et al., 2007; Heckl and Moormann, 2010; Schwarz et al., 2012)

Methodology

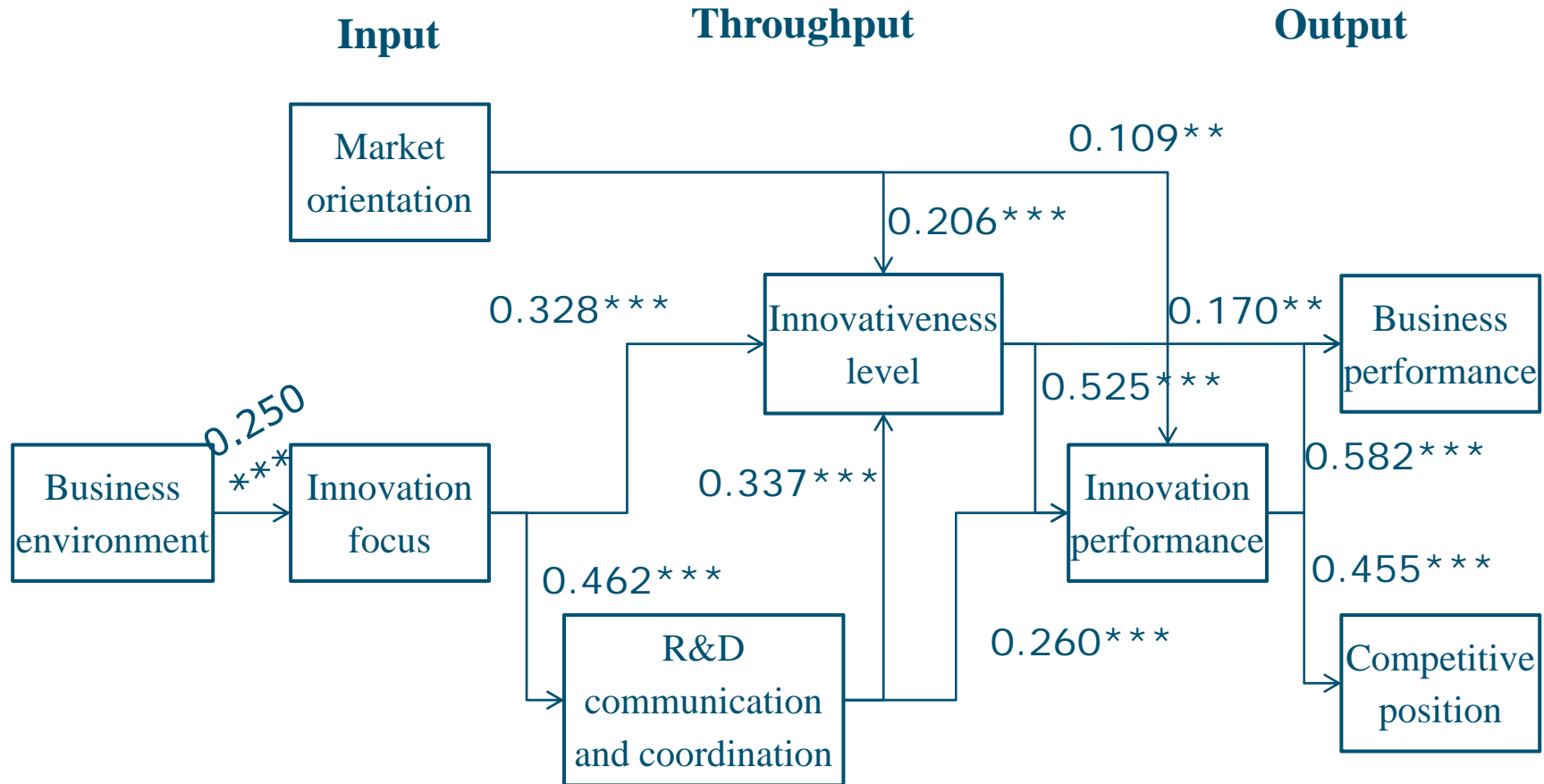
- Literature review
- Wageningen Innovation Assessment toolkit
- Survey in 70 Dutch and 67 Chinese seed and food companies
- Used SPSS and PLS for data processing and analysis



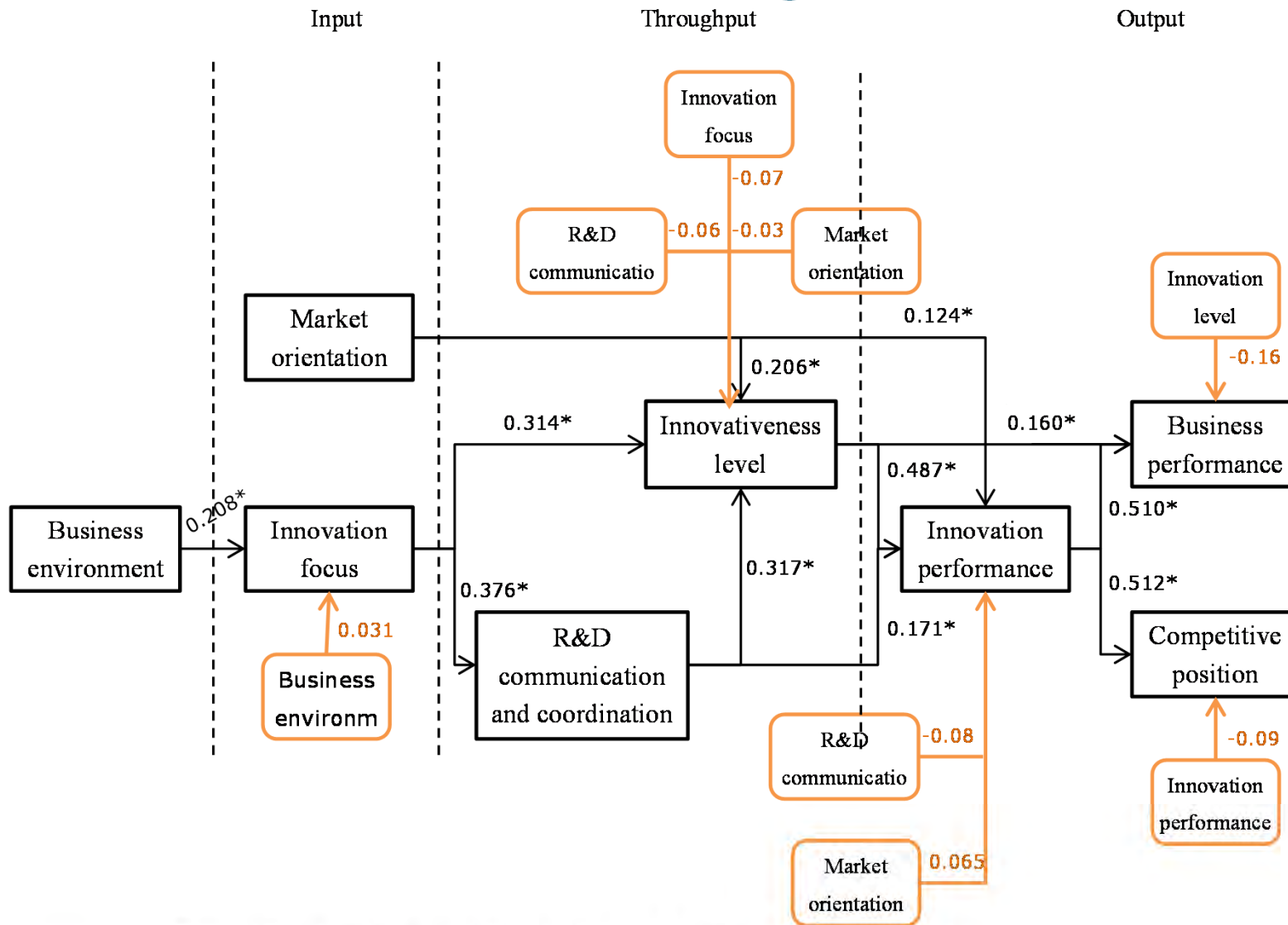
Results (1): descriptive result

- In general, Chinese companies marked higher than Dutch companies did → culture difference.
- Business environment → competitive is intensive in both countries.
- Innovation strategy and input → innovation is highly valued in both countries.
- Innovation throughput → communication to gain information from the market is highly scored in two countries, but the Chinese ones with closer communication between different functional units.
- Innovation output → Chinese companies are significantly doing better than Dutch companies do, incremental innovations and the growing market would be the reasons.

Result(2): Structural model



Result(3): Moderating effect



Path coefficients are significant at 5 % level * Path coefficients are significant at 1 % level



Conclusions

- No difference was found regarding the innovation process between Chinese and Dutch companies.
- *Business environment*: weak threats of new entrants are perceived but it drives innovation focus.
- *Innovation strategy and input*: innovation focus has no directly effect on business performance, but market orientation does
- *Innovation throughput*: innovativeness level and R&D communication and internal coordination are essential for innovation performance.
- *Innovation output*: innovation performance positively related to business performance and competitive strength.



Questions?

Thanks!