

## Chapter 4

# E–Business in Agribusiness: Investigating the E–Readiness of Australian Horticulture Firms

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### ABSTRACT

*This paper explores the e-readiness of firms in the Australian horticulture supply chain. The paper draws from the perceived e-readiness model (PERM) and relies on data collected from a survey of firms in the horticulture sector in Australia. The results indicate that while horticulture firms demonstrate relative organizational preparation for the conduct of e-business, the value network within which they operate does not appear to encourage and support their endeavour. In particular, government and industry associations do not appear to play supportive roles in encouraging the use of e-business among members of the horticulture supply chain. This paper highlights factors that are likely to facilitate or inhibit e-business in agribusiness, an area lacking in research globally. Practitioners such as governments, horticulture associations, growers and growers' associations, and digital marketplace operators, through understanding the e-readiness factors affecting e-business, can make effective decisions to develop their support, capabilities and offerings respectively.*

### INTRODUCTION

The volume and value of transactions on the Internet are still on the rise and are predicted to continue unabated for the foreseeable future. Likewise, national and international institutions are investing in policy and regulatory frameworks

as well as infrastructure and services to facilitate the conduct of e-business (UNCTAD, 2010). The World Economic Forum monitors and reports the progress of nations in terms of their conducive environment for e-business, and citizens', governments' and businesses' preparation to and actual use of e-business (Dutta & Mia, 2010). However,

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the adoption and infusion of e-business into the different sectors of an economy and among different countries remain uneven.

Particularly, the use of e-business by primary industries is an area that is largely under-researched (Bryceson, 2006; European Commission, 2008; Ng, 2005). One of these primary industries is Horticulture. Horticulture comprises fruits, vegetables, nuts, nursery, extractive crops, cut flowers and turf growing. In addition to growers, the horticulture supply chain includes production, harvesting, post-harvest, logistics and marketing service providers and industry associations. In Australia, horticulture is an AU\$9 billion industry, with an export value of more than 800 million, comprising 30,000 enterprises and employing more than 80,000 people (Horticulture Associated Limited, 2009). Horticulture in Australia is the second-largest and fastest growing industry in Agriculture. In social terms, the industry forms the livelihood of many communities and economies in rural and regional Australia. Australia considers the application of digital technologies to enhance the competitiveness of agriculture as a key national priority.

Past innovations in transport communication technologies such as the telegraph and telephone have had significant impacts on the conduct of agribusiness. For example, the meteoric rise of the European trading houses and the Chicago commodity exchange has been partly attributed to the telegraph technology (Clasen & Muller, 2006). Agriculture is also one of the early adopters of electronic trading (such as the Egg Clearing House and the electronic cotton trading mechanism) long before the Internet (Montealegre et al., 2004). Applications of Internet and mobile based decision support systems in the production end of the agribusiness value chain are pervasive (Antonopoulou et al., 2009; Wang et al., 2006). Nevertheless, some reports consider agribusiness as an inefficient industry (Clasen & Muller, 2006). The industry is largely comprised of small farmers. Most have been characterized by investing more

on the production end and less on the marketing and distribution end of the agribusiness supply chain (Taragola, 2010; Xiaoping et al., 2009; Samuel et al., 1996). The majority tend to work *in* the business rather than *on* the business. Because of uneven adoption of technologies along the supply chain, transaction costs tend to be higher (Mueller, 2001).

Horticulture could benefit from the use of e-commerce practices (Taragola, 2010; Xiaoping et al., 2009; Clasen & Muller, 2006). During the “irrational exuberance” period of e-business, a number of dot-com companies established e-markets catering for the needs of agribusinesses. However most of these businesses were unable to attract a critical mass of agribusiness (Ng, 2005). Some of the business models were not reflective of the realities of agribusiness trading and technological sophistication (Stricker et al., 2003). This begs a question in regards to the e-readiness of horticulture agribusinesses. E-readiness, however defined, of countries and organizations has attracted a lot of research and practitioner interest (Molla & Licker, 2005b). The World Economic Forum’s Global Information Technology Report provides valuable e-readiness benchmarking data at a national level (Dutta & Mia, 2010). There is, however, a need for second generation e-readiness studies (European Commission, 2008; Choucri et al., 2003) that go beyond national level assessments to look at specific sectors and e-business domains.

The objective of this paper is therefore to address the gaps identified above and investigate the e-readiness of horticulture agribusinesses. Specific questions addressed are (1) what framework can be used to assess e-readiness in agribusiness in Australia? (2) to what extent agribusinesses are prepared to exploit the potential of e-business in Australia? (3) to what extent do factors such as firm size, export orientation and supply chain positions influence the e-readiness of agribusiness? (4) how does e-readiness influence the adoption of e-business practices? To answer these questions,

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