Chapter 14
ICTs in Agribusinesses: Opportunities for Extranet Services to Provide Information to Farmers

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ABSTRACT
This chapter critiques the level of adoption of ICTs among the farming community in Ireland and compares this with adoption by the general population. It was found that although computer access and internet use among Irish households have been increasing rapidly in recent years, farm households have been lagging behind in adoption of these technologies. Broadband access has been particularly problematic in rural areas, where farm households are located. The development of a novel extranet service by a large agribusiness is also evaluated in this chapter; this service allows dairy farmer clients to access all information relevant to their accounts with this agribusiness through a secure website. A structured survey of clients was carried out, and respondents were stratified on the basis of their usage of this extranet service. It was found that three factors are constraining adoption and use of ICTs among Irish farmers: low levels of computer skills; lack of awareness of the potential of ICTs to contribute to the farm business; and thirdly, access to Broadband in rural areas. These are fundamental problems that constrain adoption of ICT.

INTRODUCTION
Ireland is a small, trade-dependent economy in the extreme West of the European Union. It experienced rapid economic expansion from 1995 to 2007, when annual GDP growth averaged 6%, but economic activity dropped sharply in 2008 and Ireland entered into a recession for the first time in well over a decade with the onset of the world financial crisis and subsequent severe slowdown in property and construction markets. Agriculture, once the most important sector of the Irish economy, is now dwarfed by industry and services. Nonetheless, agriculture remains very important
to the Irish economy; the agri-food sector is one of Ireland’s most important indigenous industries and is particularly central to the economic and social vitality of rural communities.

There is increasing acceptance that information and knowledge are central to socio-economic development. However, there is a perception that rural areas, and farming families in particular, are lagging behind in adopting and using ICTs. The objectives of this chapter are to critique the level of adoption of ICTs among the farming community in Ireland and compare this with adoption by the general population. It also reviews and evaluates the experience of one large agribusiness that has developed a novel extranet service. This is a dedicated secure site whose main purpose is to allow farmers to access all information relevant to their business with this company. The objective of this research was to explore the effectiveness of the extranet project in providing information to its farmers and to determine how this could be improved.

**Agriculture in the Irish Economy**

The agri-food sector in Ireland accounts for over 6% of Gross Value Added, almost 8% of total employment, and 10% of exports (Department of Agriculture, Fisheries and Food, 2010a). While agriculture is of major importance to economic welfare and development in Ireland it is particularly central to the economic and social vitality of rural communities because of the dispersed nature and composition of the agri-food sector in Ireland.

The land area of Ireland is 6.9 million hectares of which 4.2 million hectares (60.9%) is used for agriculture and a further 737,000 hectares (10.7%) for forestry (Department of Agriculture, Fisheries and Food, 2010b). About 80% of the agricultural area in Ireland is devoted to grassland, 11% to rough grazing (mainly hill and mountain pastures) and 10% to crop production (ibid). Beef and milk production currently account for 66% of agricultural output at producer prices (CSO, 2010), both of these are grassland based farm enterprises. Data from CSO’s Farm Structures Survey show that in 2007 (the most recent year for which data are available) there were 128,200 individual farm holdings, with an average farm size of 32.3 hectares (Department of Agriculture, Fisheries and Food, 2010a).

**Information and Communication Technology Policy in Ireland**

It is now recognised that information and knowledge are at the very heart of socio-economic development (O’Donnell et al, 2003). ICT and broadband are enabling tools and infrastructures for accessing, developing, using and sharing information and knowledge (ibid). A study conducted by Chambers Ireland (2007), involving Irish businesses, showed that Information and Communication Technology (ICT) tools and e-business solutions had become crucial for increasing efficiencies across all sectors of business in Ireland.

Both the EU and Irish Government policy has focused on promoting adoption and use of ICT in the home, in education and in the workplace. In March 2000, in Lisbon, the European Union (EU) set itself the ambitious target of becoming the world’s “most competitive and dynamic knowledge based economy” within ten years (European Commission, 2007). It recognised that attaining this goal depended on making the best possible use of ICT. The Lisbon Strategy placed greater emphasis on the knowledge-based society within existing policy processes and launched the eEurope 2002 Action Plan as a roadmap to modernise the European economy (ibid). The i2010 strategy was launched by the European Commission in June 2005 and is in place until 2010. It builds on the eEurope initiative, which came to an end in 2005 (ibid).

Irish Government policy on ICT was built around two Action Plans. In January 1999, the Government launched the first plan for implementing the information society in Ireland. This set out a series of initiatives which included development of telecommunications infrastructure
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