Chapter 1
Who Would Like to Develop ICT Standards?
Insights From Community Survey on ICT Usage

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ABSTRACT

Policy makers are promoting standardization activities because standardization can stimulate productivity and growth. To support these policies, a dedicated module of the community survey on ICT usage was designed to investigate the perception of Luxembourgish firms towards ICT standardization. Behaviours and intention of ICT standardization is investigated in two stages. A contingency analysis describes ICT standardization behaviours across industries and size classes. Second, a multivariate analysis identifies the features of firms interested in any area of ICT standardization. The econometric analysis shows that the typical firm that would like to develop ICT standards is active in the service industry, uses standards, is a government supplier, experiences moderate competition, and it is not a leader in its market. Interestingly, large and small firms are equally interested in ICT standardization. Specific policies aiming to provide resources to SMEs that would like but are not active in standardization are particularly advisable.

INTRODUCTION

Standardization, or the process of developing the standards, is recognized by policy makers as a useful tool to foster innovation, competitiveness and growth (e.g. CEN-CENELEC, 2012; EU 2008). the potential impact of standardization is particularly important in the field of Information and Communication Technology (ICT) as standards are necessary allow different items to operate together in a larger system (i.e. interoperability) (Varian 2003).

Despite the growingly recognised importance of standards, not many firms are participating in standardization activities. For example, previous research conducted in Luxembourg show that about 2% of all firms with at least ten employees in 2010 are engaged in formal standardization processes (Riillo 2014). Other countries with longer standardization tradition are reporting figures not particularly high (e.g. 11% for Nederland (Blind, Vries, and Mangelsdorf 2012). To better understand the standardization phenomenon, a dedicated module about ICT standardization was designed in collaboration with the "Agence pour la Normalisation et l'Économie de la Connaissance" (ANEC, GIE) and included in the Community survey on ICT usage 2013 for Luxembourg. Policy makers aiming to promote a larger participation in the standardization may be interested to better understand the features of firms more likely to participate in ICT standardization. Firms interested in ICT standardization today should have higher chances to engage in ICT standardization tomorrow compared to firms that are not interested. The current research explores the features of firms not currently engaged in standardisation but that are interested in ICT standardization. Based on the ICT standardization module, firms can be grouped into three categories: (1 those engaged in standardization in any ICT domain, (2 interested but not currently engaged, and (3 not interested.

The research focuses on features of interested firms because they are more likely to engage in standardization compared to firms not interested in any domain of ICT standardization. A dedicated analysis of specific ICT domains is provided. ICT domains are: Cloud computing; Data centre; Telecommunications; Software and system engineering; Security technology; Data management; Electronic signature; E-archiving (ILNAS/ANEC 2012).

This research contributes to ICT standardization research in the following ways. First, it explores both firms' behaviour and perception of ICT standardization on a representative sample of the economy. Second, it describes the features of firms interested in specific domains of ICT standardization on representative sample, at the best of my knowledge.

DATA

The quantitative analysis in this paper is based on a dedicated module in the 2013 wave of the Community survey on ICT usage for Luxembourg (ICT usage 2013). The ICT survey is the official data source for ICT related activities in European Union and Luxembourg. The survey is conducted by the Luxembourgish national statistical office (STATEC). It is representative of the Luxembourgish business economy, including manufacturing and services. The participation to the survey is compulsory. The survey 2013 covers construction industry but does not include financial activities. The ICT usage survey is based on online procedure. The survey is administrated rather on-line or by written questionnaires. Selected firms receive a letter by mail communicating password and login for survey website. Alternatively, the firms can fill and send the questionnaire by mail. The survey collects information on firms' characteristics (e.g. size), perceived market conditions (e.g. competition) and firms' use of ICT. The survey consists of two parts: the first part is common to all European Countries; the second part is country-specific. The ICT 2013 for Luxembourg includes a country specific module about ICT standards and standardization. A firm is defined as "engaged" if it is participating in the elaboration of ICT standards in a recognized body (e.g. ISO, CEN CENELEC, ETSI)" or a consortium (e.g. IETF, W3C, OASIS).[1] (A detailed list of acronyms is provided in the Appendix.)

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