Chapter 4

Development of Survey Instrument: Exploratory Survey and Content Validity

Abstract

Chapter 2 described the proposed conceptual model that is used to understand the adoption, usage, and impact of broadband from the consumer perspective. Chapter 3 described the appropriate research approach for testing the hypotheses and to validate the proposed conceptual model. From Chapter 3 it was concluded that the survey research approach is an appropriate method to investigate the issue of broadband diffusion. Further suggestions that were provided in Chapter 3 are before conducting the final data collection a reliable survey instrument should be developed and validated. Validating an instrument is a critical step before testing a conceptual model (Boudreau et al., 2001; Straub et al., 2004). This is due to the rigour of the findings and interpretations in positivist research that are based on the solid validation of the instruments used to gather data (Boudreau et al., 2001; Straub et al., 2004). Therefore, this chapter aims to describe the development of a survey instrument designed to investigate broadband adoption, usage, and impact.
within UK households. By undertaking the following three stages, this led to the development of a reliable instrument: (1) to explain broadband adoption behaviour some initial factors were identified from the literature and then a decision upon how to determine them in an exploratory survey approach needed to be made; (2) content validation was performed on the itemed pools that resulted from the exploratory survey. The purpose of this step was to confirm the representativeness of items to a particular construct domain and, finally, (3) a pre-test and a pilot test were conducted utilising the obtained instrument after content validation was undertaken in order to confirm the reliability of the measures. The next section briefly re-introduces the conceptual model and provides a list of the constructs included in the various stages of the validation process. Following this, an overview of the instrument development process is provided. Then the first stage of the validation process (i.e., the exploratory survey) is presented and discussed. This is followed by the content validation process. The instrument testing process that includes the pre-test and pilot-test is described before presenting the summary of the chapter.

**Conceptual Model**

Although the conceptual model has been described in Chapter 2, a brief account of the constructs is provided in this section. The constructs included in this study were adapted from the model of the adoption of technology in households (MATH) (utilitarian outcomes, hedonic outcomes, and knowledge) (Venkatesh & Browns, 2001), diffusion of innovations (relative advantage) (Rogers, 1995), and the theory of planned behaviour (TPB) (behavioural intention, social influence, facilitating conditions resources, self-efficacy) (Ajzen, 1991; Taylor & Todd, 1995).

The proposed model assumed that the dependent variable, behavioural intention towards broadband adoption is influenced by several independent variables that include the attitudinal (relative advantage, utilitarian outcomes, and hedonic outcomes), normative (primary influence), control factors (knowledge, self-efficacy and facilitating conditions resources), and demographic variables (age, gender, income, education, and occupation). Although a detailed discussion of each construct is not possible within the scope of this chapter, a list of the constructs included at each stage of validation is illustrated in Table 4.1. These constructs were defined (see Table 2.2) and discussed in Chapter 2.

Straub et al. (2004) suggested that if content is adapted from an existing instrument then there is less need to validate it. However, if there are changes made in an instrument then the adapted measures should be subjected to a rigorous validation process (Straub et al., 2004).
Systems Dynamics Approach to Analyzing Spectrum Management Policies for Mobile Broadband Services in India
www.igi-global.com/article/systems-dynamics-approach-analyzing-spectrum/66404?camid=4v1a

The TREND Meter: Monitoring the Energy Consumption of Networked Devices
Luca Chiaraviglio, Roberto Bruschi, Antonio Cianfrani, Olga Maria Jaramillo Ortiz and George Koutitas (2013). *International Journal of Business Data Communications and Networking* (pp. 27-44).
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