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The Demand Side of E-Commerce

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Abstract

This tutorial discusses the demand side factors involved in successful e-commerce. Two cases on consumer acceptance of Internet-based e-shopping and e-banking illustrate the findings.

Objective and Content

Though the supply side of e-commerce is grounded efficiently on high-technology and cutting-edge technological change, insufficient attention has been paid to demand conditions, in particular to consumer acceptance of product and service innovations, perceived usefulness, and willingness to use. In other words, in addition to the solid technological foundation that is established on the supply side, success in e-commerce and the e-firm's economic viability depend crucially on its ability to offer products and services, which meet current and expected changes in demand and customer preferences.

Over the past year, the business results of 'dot.coms', Internet-based business to consumers (B2C) and (to a lesser extent) business to business (B2B) e-commerce were disappointing. The market values (share prices) of such firms fell in parallel. This tutorial aims to discuss the extent to which this phenomenon can be explained by exploring demand considerations and to what extent the economic viability of e-commerce depends on demand-side factors.

As regards the demand side, two issues should be noted:

First, holding demand constant, in the short run e-commerce is in direct competition for market share with 'traditional' buying and selling. Product differentiation would then be of particular importance.

Second, over the long run, it is possible for e-commerce to shift demand and create new markets by introducing products and services specialized to the electronic way of buying and selling, especially over the Internet. Product innovation and market acceptance would then be the crucial considerations.

Illustrative Case Studies

In this tutorial session, two cases are presented to illustrate the above issues

Consumer Acceptance of Internet-based B2C E-Commerce

In this case, demand is held constant: the important consideration is therefore consumer attitudes towards e-shopping over the Internet as compared to traditional over-the-counter shopping. If a theoretically and empirically grounded reference position can be found, it would be possible to explore and interpret the effects of changes in consumer preferences on Internet-based B2C e-commerce, and the implications of demand-side changes for its economic success or failure. Regression analysis of survey data found that in addition to price, the life content of products, transactions security, vendor quality, IT education and Internet usage significantly influence willingness to e-shop over the Internet (Liao and Cheung, 2001). On the basis of the empirical findings, the following emerging issues are examined to assess the viability of Internet-based virtual storefronts.

(i) Along which quality dimension (product differentiation) expansion of Internet-based B2C e-commerce can be pursued most effectively to gain market share at the expense of traditional retailing.

(ii) Whether Internet-based B2C e-commerce can profitably be introduced or developed along similar quality dimensions in technologically and culturally dissimilar countries and locations, and

(iii) Whether unsuccessful endeavors in B2C e-commerce can be explained in terms of failure to address and/or develop the demand side.

Consumer Acceptance of Internet-based E-Retail Banking

In this case, demand is not held constant; rather, Internet-based e-retail banking is introduced as a financial innovation. Since a new market and a new product-service is involved, it becomes even more important to identify and measure consumer attitudes towards the usefulness of and willingness to use virtual banking over the Internet. The following issues are discussed.

(i) Since estimates of the marginal effects of changes in these factors and the substitutability (marginal rates of substitution) between them can be obtained, in what ways would financial institutions be able to exploit this information to predict the market effects of supply-side changes? Is it possible to explain the unsuccessful application of information technology in terms of failure to take the demand side into account?

(ii) What is the order of the quality dimensions along which the expansion of Internet-based e-retail banking can be most effectively pursued to increase the size of the market and to take market share away from traditional bricks-and-mortar branch banking?

Empirical results are used to explain that consumer expectations of accuracy, security, network speed, user-friendliness, user involvement, and convenience represent the most important quality attributes underlying Internet-based e-retail banking, and that willingness to use this product-service depends significantly on the first five of the above factors (Liao and Cheung, in press). An efficient estimation of the desired magnitudes has considerable impact on the assessment of the usefulness and effectiveness of Internet-based e-banking services.

References

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