

DIFFUSION AND ADOPTION OF COMPUTERS: A MARKETING ANALYSIS OF A GOVERNMENT PROGRAM FOR SMALL AND MEDIUM ENTERPRISES IN SINGAPORE

Sanjay S. Mehta, The University of Texas of the Permian Basin
Subhash C. Mehta, National University of Singapore
Patrick Lau Chen Chai, National University of Singapore

Abstract

Introduction

Small and Medium Enterprises (SMEs) lag behind the larger companies in exploiting Information Technology (IT). The Small Enterprise Computerization Program (SECP) was launched in 1987, by the Singapore government, to help SMEs overcome the impediments to their use of IT. There are 60 to 70 thousand SMEs in Singapore. In nearly 3 years of SECP, less than 800 SMEs had responded to the scheme. About 20% of these had already completed implementation, another 30% were actively participating, and the remaining 50% had discontinued their involvement. In this paper, we examined the reasons for such a slow progress.

Research Approach

Interviews were conducted with a dozen CEOs. Issues discussed, included - awareness of SECP and effectiveness of its promotional program, factors prompting SMEs to embark on computerization, capability of the company in supporting its computerization, organizational dynamics assisting or hindering computerization, effectiveness of the various agencies involved in the scheme, etc. Numerous factors were identified that contributed to the poor performance of the scheme (ex: long processing time, shortage of advisors and reliable/competent consultants, resource constraints of SMEs, inadequate management commitment, low computer literacy of staff, etc).

Propositions

A number of propositions were developed in differentiating the participants from the nonparticipants among the SMEs in SECP (Robertson and Gatignon, 1986).

Proposition 1: Greater the degree of compatibility between a firms existing technology and the features of the innovation, higher the probability of adoption.

Proposition 2: Higher the quality of information coming from the organization disseminating the innovation, higher the probability of successful adoption.

Proposition 3: Greater the computer skills of the internal staff, higher the probability of successful adoption.

Proposition 4: Greater the degree of top management support, higher the probability of adoption.

Proposition 5: Greater the effectiveness and accessibility of the change agency, higher the probability of adoption.

Proposition 6: Greater the perception of an advantage of the innovation, higher the probability of adoption.

Proposition 7: Greater the ease of obtaining financial resources, higher the probability of adoption.

Proposition 8: Greater the compatibility of the organizational dynamics and culture with the innovation, higher the probability of adoption.

Proposition 9: Lack of effective informal communications lowers the probability of adoption.

Proposition 10: Interpersonal communication is the most effective aspect of computerization adoption.

Decision Process

The adoption process for innovation stages - Problem Perception (SMEs can recognize the problem, when they are either faced with the problem or when they are told of it); Awareness (publicizing the scheme through the most relevant channel's); Comprehension (comprehend the details of the scheme, the commitments, the costs); Attitude (availability of financial resources, organizational dynamics, top management support); Legitimization (regular seminars can be organized where successful SMEs can share their experiences with others); Trial (the main idea here is to start in a small way); Adoption (any benefits that will enable SMEs to gain a competitive advantage, should be highlighted); Dissonance (post-implementation support is very weak).

Recommendations

Some of the possible recommendations include - full time advisors be employed; financial incentives can be improved; improve the awareness of the scheme; personal visits to eligible SMEs as well as CEOs of such SMEs; close co-operation of other agencies should be solicited; greater attention should be paid to SMEs with dynamic organizational cultures as well as CEOs who are

innovators in such matters; success stories should be disseminated; computerization should be introduced in a gradual manner; training programs should be offered; post-implementation support by advisors should be strengthened.

Reference

Robertson, T. & H. Gatignon (1986), "Competitive Effects on Technology Diffusion" *Journal of Marketing* 50(3) 1-12

Proceedings of the 1995 Academy of Marketing Science
(AMS) Annual Conference

Gomes, R. (Ed.)

2015, XXVIII, 332 p., Hardcover

ISBN: 978-3-319-13146-7