A PROCESS FOR IMPLEMENTING ONLINE AND PHYSICAL BUSINESS BASED ON A STRATEGY INTEGRATION ASPECT

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Abstract: The growth of e-business has been experiencing a tremendous change in recent years. The initial prosperity in e-business has now been replaced by the recent trend in a series of bankruptcies and acquisitions. Business managers begin to consider new business models in terms of the integration of virtual and physical operations to support more and different services to customers. The key to success in e-business lies in how you carry out the integration between online and offline business. However, past research just literally discussed the important relevant issues of clicks-and-bricks strategy and channel management. There was lack of a complete and solid process to effectively guide the implementation of the integration. Therefore, this study proposed a three-step process based on a strategic perspective: (1) strategy integration (2) channel coordination, and (3) synergy realization. The results indicate that the right strategy integration significantly influences synergies realization through the significant channel coordinations.

1 INTRODUCTION

Business over the Internet has undergone a tremendous growth in recent years. In particular, the Internet has fundamentally reshaped the business structure of retailing and offered retailers new opportunities for performing marketing activities. Early predictions were that the new Internet-based retailers would wipe out many existing retailers since they were able to operate in a lower asset, inventory cost, and other expenses than bricks-and-mortar competitors. However, the initial euphoria from e-commerce has now been supplanted by a consequence of the recent wave of bankruptcies and acquisitions. Much of that thinking has been reconsidered and the viability of a pure web-based model is being questioned by many businesses.

Firstly, Internet retailers dealing with physical goods, such as books, toys, or electronics, are facing difficult logistical challenges. Fierce competition in the online market has forced the prices of many products to fall such that many firms are switching to a strategy of providing better service through faster delivery and more customer support. Next, traditional retailers have reached a point where they could no longer ignore the importance of online retailing and the exponential growth of e-tailers. Many traditional retailers are initially hesitant to enter online market, partly for unfamiliarity with the feasibility of technology and uncertainty about the new market, and partly for fear of cannibalizing existing marketing channels (Enders and Jelassi, 2000; Payne and Frow, 2004). Now more traditional retailers are venturing onto the Internet for creating more revenue streams from multiple channels (Saeed et al., 2002; King et al., 2004).

Therefore, either virtual or physical companies are recognizing that success in the new economy will go to a new governance model with clicks-and-bricks strategies that bridge the physical and the virtual worlds. But in forging such strategies, executives are facing a decision that is as difficult as it is crucial since different retailers are evolving toward clicks and/or bricks strategies in different ways (Muthitacharoen et al., 2005). The key to success in the Internet business lies in how you define the clicks-and-bricks strategies (Gulati and Garino, 2000; Li et al., 2004).

By thinking carefully about which aspects of a business to integrate and which to keep distinct, companies can properly tailor their clicks-and-bricks strategies to their own particular market and competitive situation and further base the adopted

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strategies on determining the mix structure of online and physical channel activities for physical implementation, such as order products at online stores and pick-up them at physical stores (Schoenbachler and Gordon, 2002; King, et al., 2004). Furthermore, successful hybrid retailers mainly benefit from synergies of various channel coordinations in their interaction with customers, such as improved service variety (Gorsch, 2001; Steinfield et al., 2002).

Therefore, this study proposes a complete and substantial architecture for effectively implementing clicks-and-bricks business. Basically, this process consists of three steps: strategy integration, channel coordination, and synergy realization. Furthermore, empirical study examines its practical validity.

2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Based on the above overall logic, Figure 1 provides a pictorial depiction of this research framework. The following discusses the theoretical bases and hypotheses development for this framework.

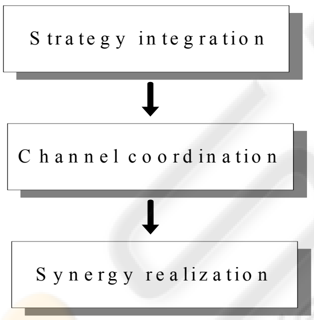

Figure 1: Research framework.

2.1 Strategy Integration and Channel Coordination

2.1.1 Strategy Integration

The source of competitive advantage in business arena is to be able to create new customer value (Porter, 1985). A new locus of value creation lies in the integration of the physical and virtual worlds (Steinfield et al., 2002; Payne and Frow, 2004). The bright line that once distinguished the virtual from the physical is rapidly fading. Companies are recognizing that success in the Internet era will go to those who can execute clicks-and-bricks strategies. Supplementary support is the fundamental of clicks-and-bricks strategies and the important source of value creation in e-business. These supports, for example, contain supplementary goods and services, cross promotion, shared technologies and the like (Amit and Zott, 2001).

There is no single option that best defines a solution for any given company. A study has discussed a three-option classification going from complete separation to full integration of virtual and physical assets for revenue propagation and enterprise governance (Sengupta, 2000). These options are: (1) separate and operate - the physical and online businesses are operated as two separate entities, (2) share and operate - some key services are shared, and some common metrics are used across the two businesses, and (3) joint operation - the physical and online units are integrated and operated jointly.

Moreover, another study proposes a spectrum for defining clicks-and-bricks strategies, as shown in Figure 2 (Gulati and Garino, 2000). They argued that the integration-separation decision is not an either-or choice; rather there is a continual spectrum of the degree of integration. Spin-off and in-house division are literally well-understood for their definitions and strategic partnership and joint venture need to be further elaborated. Physical and online businesses under strategic partnership are separately owned and operated, but both brands can be maintained and promoted in both channels. Keeping separate names while promoting the partnership accomplishes two things. It protects the trust and recognition associated with the original brand of the physical business and at the same time establishes a new brand that fits online expectations. Although physical and online businesses under joint venture appear to be completely separate, however, they are actually tightly integrated in certain respects. Most obvious one is the shared brand.

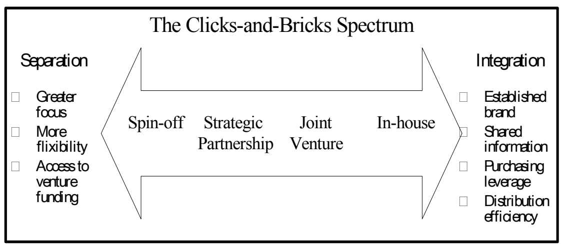

Figure 2: Online and physical integration framework (Adapted from Gulati and Garino, 2000).

2.1.2 Channel Coordination

Marketing channels in retailing can be classified into conventional and electronic channels. Traditional channel is mainly based on the physical stores, such as department store and shopping mall, where the vendors interact with the customers. Electronic channel, as opposed to conventional channel, relies on advanced information and communication technology (ICT) to fulfill channel function. Several characteristics make the Internet an attractive medium for the sale of products to consumers, such as online information access, online transaction and payment, online delivery of digital products, and opportunities for building customization (Holland et al., 2004; Turban et al., 2004).

Today customers are smart, powerful, and highly informed. They are demanding that every contact a company has with them leave them more than satisfied. It is increasingly imperative to coordinate different channels to produce the most positive customer services (Nakayama, 2000; Wiertz et al., 2004; King et al., 2004). More importantly, customer experiences with channels should be well differentiated for their various needs and preferences in order to create long-term relationships with their customers. Accordingly, channels can be classified across the sale cycle, i.e., stages of pre-purchase, actual purchase, and post-purchase (Steinfield et al., 2002; Payne and Frow, 2004). This study thus conducts a comprehensive literature review for define it, as reported in Table1 (Katros, 2000, Gorsch, 2001; Payne and Frow, 2004; King et al., 2004; Turban, et al., 2004).

In addition, similar studies also suggest the need to understand the differences of perceived customer values and purchase intentions in an online shopping in terms of various purchase stages in the sale cycle (Chen and Dubinsky, 2003; Gupta, et al., 2004). Thus, channel coordinations should be further defined based on different purchase stages while it is helpful to provide more insight to capture customer experience in product purchase.

2.1.3 Hypotheses Development

Companies are argued to first tailor clicks-and-bricks strategies to their own particular market and competitive situation and then base it on determining proper online and offline channel activities for the physical implementation (King, et al., 2004). Many studies have highlighted the important linkage between defining integration strategies and choosing channel coordinations in e-business (Schoenbachler and Gordon, 2002; Muller-Lankenau et al., 2006). An understanding of their relationships is important since channel coordinations could be simplified if marketers first understand what drives customer channel choice. While channel coordinations are classified into three purchase stages, we thus propose three hypotheses for these relationships.

Table 1: Classification of channels for purchase stages.

Purchase Stage	Channel coordination
Pre-purchase	• Use same or similar brand names in both channels (Pre-purchase 1) • Use cross-advertisement or promotion in both channels (Pre-purchase 2) • Provide identical products and prices in both channels (Pre-purchase 3) • Provide online information services in physical stores to facilitate access to wider product range (Pre-purchase 4) • Provide rich products information and pre-purchase evaluation process online (Pre-purchase 5)
Actual Purchase	• Order products at online stores and pick-up them at physical stores (Purchase 1) • Provide negotiation and order tracing services online (Purchase 2) • Provide more choices of payment methods from online and physical stores (Purchase 3)
Post-purchase	• Order products at online stores and return for repair or additional service at physical stores (Post-purchase 1) • Offer online help or technical support for products purchased at physical stores (Post-purchase 2) • Collect consumer information at both channels for personalized marketing and marketing research

H1: The choices of strategy integrations are positively related with channel coordinations in pre-purchase stage.

H2: The choices of strategy integrations are positively related with channel coordinations in actual purchase stage.

H3: The choices of strategy integrations are positively related with channel coordinations in post-purchase stage.

2.2 Channel Coordination and Synergy Realization

2.2.1 Synergy Realization

Hybrid retailers that successfully integrate their channels should benefit from improved customer relationship and retention rate. Prior research has discussed synergies from the right channel integration, including improved customer trust, improved customer awareness, consumer risk reduction, and coverage of diverse shopping preferences (Gorsch, 2001). Further research also highlights similar synergies including cost savings, service differentiation, enhanced trust, and market extension (Steinfield et al., 2002; Payne and Frow, 2004). Other research suggests certain performance measures for multi-channel management: improved service variety, improved service efficiency, increased repeat purchase, and enhanced customer profitability (Brown, 2000, Kumar and Reinartz, 2006). Accordingly, this study summarizes the previously relevant studies for defining the synergies, including improved customer trust, improved customer awareness, consumer risk reduction, coverage of diverse shopping preferences, improved service efficiency, increased repeat purchase, and enhanced customer profitability.

2.2.2 Hypotheses Development

The benefit of selecting and implementing the right channel coordination could be primarily attributed to customer satisfaction in the form of enhanced service and better user experience, and in turn leads to higher retention rate and customer profitability (Wiertz et al., 2004; Payne and Frow, 2004). Many studies have discussed that hybrid retailers may benefit from synergies between electronic and physical channels in their interaction with customers (Gorsch, 2001; Steinfield et al., 2002). Accordingly we can argue that there are some linkages between channel coordinations and based on the discussion, the following three hypotheses are hereafter developed for the argument.

H4: Channel coordinations are positively related to synergies realization in pre-purchase stage.

H5: Channel coordinations are positively related to synergies realization in actual purchase stage.

H6: Channel coordinations are positively related to synergies realization in post-purchase stage.

3 RESEARCH DESIGN

The survey instrument contains a four-part questionnaire as indicated in Appendix. The first part uses a nominal scale, while the rest use 7-point Likert scales.

3.1 Basic Information

This part includes organizational attributes, industry type, annual revenue, number of employees, and experience on virtual and physical stores and respondent’s attributes, education, age, working experience, and position.

3.2 Strategy Integration

This part was adapted from the instrument developed by Gulati and Garino (2000) for defining four clicks-and-bricks strategies. There are four constructs, brand, management, operations, and equity. There are three items, four items, three items, and three items for brand, management, operations, and equity individually. As a result, a total of thirteen items is defined for this instrument.

3.3 Channel Coordination

This part was adapted from the definition of channel coordinations based on the three stages in the purchase process, as reported in Table 1 (Katros, 2000, King et al., 2004; Turban, et al., 2004). There are five items, three items, and three items defined for pre-purchase, actual purchase, and post-purchase respectively. As a result, a total of eleven items is defined for this instrument.

3.4 Synergy Realization

This part was adapted and summarized from the studies of Steinfield et al. (2002), Gorsch (2001), Brown (2000), and Kumar and Reinartz, (2006), including improved customer trust, improved customer awareness, consumer risk reduction, coverage of diverse shopping preferences, improved service efficiency, increased repeat purchase, and enhanced customer profitability. As a result, a total of seven items is defined for this instrument.

3.5 Sample Design

Potential sample firms should have both physical and online stores for their business operations. Also, the products offered in the market must be in a physical form rather than a digital form. A total of 500 sample firms are collected from manufacturing and retailing sectors as sample frame in this study. Furthermore, marketing managers are selected as the major respondents. Pretest is executed, including translation, wording, and structure. After that, a total of 500 questionnaires for the sample frame are sent to marketing managers. 90 firms replied, with 3 incomplete responses deleted, resulting in a total sample of 87 firms for a 17.4% response rate.

3.6 Scales Validation

Confirmatory factor analysis (CFA) is used for scale validation. First, a measurement model should be assessed for goodness of fit. Next, convergent validity is assessed by three criteria, factor loading construct reliability, and average variance extracted (Fornell and Larcker, 1981). Finally, discriminant validity is assessed by the measure that AVE for a construct should be larger than the squared correlation between the construct and other constructs. The testing results indicate a goodness of model fit. Convergent and discriminant validities are all in an acceptable level.

4 ANALYSIS AND FINDINGS

4.1 Analysis of Strategy Integration

Cluster analysis concludes three clusters of spin-off, joint venture, and in-house division with 18, 34, and 35 sample firms, as indicated in Table 2. From the percentage distribution, there are a higher proportion of firms adopting in-house division (40.2%) and a smaller proportion of firms adopting spin-off (20.8%). Most firms in manufacturing sector are larger size and have their own or particular brand in the market for a long period of time and therefore, their marketing strategy has been focusing on maintaining and promoting the original brand.

Moreover, even though firms recognize the importance of joint venture with existing online partners to capitalize on the advantages of both channels in promoting the shared brand, they may have difficulty to find appropriate online partners with relevant experience on selling similar products. Thus, there is a high proportion of manufacturing firms (53.8%) adopting in-house division. In addition, spin-off is separately owned and operated. This strategy would not have full effort on promoting the original brand while at the same time it also needs to establish a new brand. However, the promotion of the original brand is well recognized as one of the important marketing activities in both manufacturing and retailing sectors in Taiwan. There is a low proportion of sample firms (20.8%) reported in adopting spin-off.

Table 2: Firm clusters for integration strategies and sectors.

Strategy	Firm size	Manufact.	Retailing	Others
In-House division	35(40.2%)	21(53.8%)	10(24.3%)	4(57.1%)
Joint venture	34(39.0%)	9(23.1%)	22(53.6%)	2(28.5%)
Spin-off	18(20.8%)	9(23.1%)	9(22.1%)	1(14.4%)
Total	87(100%)	39(100%)	41(100%)	7(100%)

4.2 Analysis of Channel Coordination

Hypotheses 1, 2, and 3 are first tested. MANOVA analyzes these hypothetical relationships. Hypotheses 1, 2, and 3 are all accepted. Moreover, univariate *F* test is further examined to understand the differences of channel coordinations at each purchase stage varying across the integration strategies (the results omitted). For pre-purchase stage, pre-purchase 3 is not significant across the three strategies. This channel coordination is commonly recognized as the basic requirement to build initial trust of customers to the Internet business. Thus, this channel coordination behaves no difference among these strategies.

For actual purchase stage, purchase 1 is not significant across the three strategies. The reason behind this is similar to the previous one. For post-purchase stage, post-purchase 1 is not significant across the three strategies. The reason behind this is similar to the previous one. Next, there is a pattern to indicate spin-off strategy with lower degree of impact on channel coordination across the three purchase stages. In contrast, in-house division strategy creates high degree of impact on channel coordination. This is because spin-off strategy operates with two separate entities and effective channel integration would be difficult and sometimes unnecessary.

4.3 Analysis of Synergy Realization

Hypotheses 4, 5, and 6 are first tested. Canonical correlation analysis is used to analyze these hypothetical relationships. The testing results indicate that Hypotheses 4, 5, and 6 are all accepted. Moreover, canonical loadings are further examined to understand the relative impact of channel coordinations on synergy realization. For pre-purchase stage, the results reveal that except pre-purchase 1, the other channel coordinations are important variables in influencing synergy realization, in particular, pre-purchase 5 being the largest one. This is because that promoting the original brand for most companies has been considering as the basic marketing activities regardless the traditional or Internet business. Customers have recognized the legitimacy of the original brand and established their trust on these companies. Thus, the relative effect of using same brand names in both channels on synergy realization would not be important.

For actual purchase stage, all the three channel coordinations have significant impact on synergy realization. Among them, actual purchase 2 is the most influential one. This is because customers perceive this channel coordination as a brand-new service and have more frequent contact with company both online and offline, in contrast to the limitation of past traditional business. For post-purchase stage, all the three channel coordinations are important variables in influencing synergy realization. Among them, post-purchase 3 is the largest one. This is obvious since personalized marketing from collecting detailed information in both channels is considered as an antecedent of customer retention.

Finally, canonical loadings for synergies realization are examined to understand their relative improvement. Some synergies have higher correlations with the predictor canonical variates (channel coordinations), for instance, improved customer trust and customer risk reduction (loadings of 0.786 and 0.745). This is because human being inherently has cognitive limitation for often recognizing subjects by the first impression, particularly in e-commerce environment associated with the characteristics of high uncertainty or risk, building initial trust or reducing risk for customers is thus the first priority of the firm to successfully operate an online business.

5 CONCLUSIONS AND SUGGESTIONS

In general, the results indicate that different strategies have different degrees of impact on channel coordinations and in turn, different synergies realization. The implications are discussed for practitioners and researchers. For practitioners, managerial personnel can base the findings on effectively allocating limited resource to achieve maximal synergies. Moreover, significant synergies are centered on improved customer, consumer risk reduction, and increased repeat purchase. This indicates that establishing customer initial trust and the first impression is the critical success factor in online business. This is extremely helpful for a firm to successfully start a new online business.

For researchers, questions remain to be clarified for this convergence, which models will win, how are channel coordinations operated, and what benefits can be obtained from channel coordinations. This study attempts to develop a new approach by integrating the relevant elements together and base it on defining a clear and solid process to effectively guide the operation of clicks-and-bricks business as well as empirically verifies it with high practical validity. Thus, the proposed model has made an important contribution to the emerging literature on e-commerce.

Finally, although this study has produced some interesting results, it may still have some limitations. First, this study may have the problem of external validity for failing to consider the characteristics of physical and virtual stores such as design of web store, the number of physical stores, geographic location of physical store, and so on. Next, digital products can be sold and delivered simultaneously on Internet network, but are restricted to this research. The findings may have some degrees of limitation on generalization to this kind of products.

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