Fitting the square e-commerce block into a round hole.

Mathew Vine
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ISSN 1038-7448
No.WP 2001/15 (September 2001)
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Mathew Vine is currently enrolled as a Master by Research student with the School of Marketing and can be contacted as follows:

Email: mathew.vine@rmit.edu.au  
Phone: 03 9925 1385
Abstract

This paper investigates the degree of e-commerce service fit with the firm and the market and considers its importance as a success factor in the development of new e-commerce services. In 1991, de Brentani published an article combining the contributions of new product development and new service development literature, in determining success factors in the development of new business services. However, at this time little has been researched with respect to what factors contribute to the successful development of e-commerce services, where there are thought to be many additional considerations. de Brentani’s study identified 17 factors contributing to the successful development of e-commerce services, and the purpose of this paper will be to examine four of these relating to the fit of the e-commerce service; the market, and the firm in detail, also this paper will address supplementary factors in this area and will consider these in the on-line arena.

Keywords: e-commerce, success factors, e-marketing, Internet, Internet marketing, new service development, new product development, marketing synergy, marketing, product fit, synergy, performance measures, services marketing, services.
Background

“Every business today competes in two worlds: a physical world of resources that managers can see and touch and a virtual world made of information. The latter has given rise to electronic commerce.”

(Rayport and Sviokla, 1995, p.75)

Uncertainty around stock market valuation of technology stocks and the fall of the NASDAQ in early 2000, combined with the crash in value of numerous dotcom businesses, implies that what drove the failure and success of these initiatives was largely unknown by many directly involved in, and affected by these situations. Initial expectations about what would lead to success in development of services for the World Wide Web (WWW) were challenged, and businesses had to rethink their entire electronic business strategy. Even now, some seven years after the unofficial launch of the WWW in the form that we currently know it, the commercial world is only just coming to terms with some of the fundamentals of doing business on-line, aside from the increased complexity of manufacturing the good businesses also have to prepare for the additional service elements of getting the offering to the consumer and managing the relationship electronically.

What began as a significant levelling of the playing field, where smaller businesses and start-ups were perceived to have an equal standing with larger players, has emerged to be significantly “less equal” than first thought. In fact there are some indications that the competitive advantages of larger firms in traditional markets (such as brand, technology assets and distribution capability) are of even greater significance in an on-line environment, perhaps even driving up barriers to entry. There are others who argue that, no matter who owns the launched e-commerce enabled website, there are some rules that can be followed in order to develop and administer a successful e-commerce application. The dichotomy of views on this matter has served to accentuate the need for research in the area of e-commerce-enabled new service development for the WWW.

Growing sophistication in the use of the Internet for business ends has seen the contribution of some businesses mature from what can only be described as utilising the Internet as a
brochure or promotional vehicle through to full integration of the website into the fundamental operation of the business, incorporating Customer Relationship Management (CRM) and the ability to offer the sale of businesses goods and services on-line. In the beginning, the phrase e-commerce described an electronic strategy for a business at its inception, but growing sophistication has meant that a distinction has been drawn between e-business and e-commerce. E-commerce is now referred to as the buying and selling over an electronic medium, whereas e-business refers to an all pervasive, all-encompassing electronic business strategy taking in fundamental business and marketing strategic principles. We have seen the global retail e-commerce market grow from a few million dollars in 1995 to an estimated $53 billion in 2000 (Forrester Research, 2001). However, it is difficult to know how much of this business would not have otherwise been obtained in the traditional off-line environment.

To date, there has been a dearth of research into the area of e-commerce due primarily to the newness of the area and the accompanying lack of experience in the area. Much of the research into e-commerce is still considered commercially sensitive, because of its highly strategic nature and the deficiency in reliable advice in the area. There are very few contributions to the development of on-line services, and appropriate management strategies for dealing with these new types of services. It is clear that the on-line economy has come a long way from its early days but it is still a very chaotic environment with significant turbulence and uncertainty. There are some authors that have noted a similarity of e-commerce to services and are drawing parallels in the medium’s behaviour with that of services – “e-retail offerings are service offerings” (Kolesar and Galbraith, 2000, p.432) In fact, many of the characteristics of services, namely heterogeneity, inseparability, perishability and intangibility can be attributed to the e-commerce interaction. Specifically there are a number of service elements that figure prominently in e-commerce, such as the importance of process in delivering products and services to the end consumer. Others have written on the potential for building relationships enhancing the buying process with enriched communications content and improved information search ability. Also contributing to the development of the on-line economy is the Australian government that has endeavoured to position itself at the forefront of electronic service delivery and it endeavours to provide assistance and infrastructure to those businesses without Internet or technology expertise. However, little is known about what constitutes success in on-line environment, and in particular what factors are directly attributable to on-line success. In fact as a contribution to
the body of knowledge, there are a wide range of success factors that require investigation, the basis of which can be drawn from the new product development and new service development literatures. It is also important to note that there are additional elements to those identified in these bodies of literature that are specific to e-commerce, but relate to the particular sub-areas of success factors literature. The concept of synergy and fit is portrayed as having critical impact on the success of newly developed services, and has the potential for meaningful application to the e-commerce perspective. Applied to the elements of the e-commerce service, the firm and the customer, the concept of fit will potentially emerge as a significant contributor to the successful development of e-commerce services.
Introduction

Firms developing e-commerce capabilities for the consumer market are faced with an ever-increasing list of required capabilities in order to effectively and successfully provide the ability to purchase goods on-line. Not only must they have the technological talent to develop the website and purchasing functionality, they also require marketing expertise to target customers to the website to buy, also required is logistical and distribution resources and expertise, as well as the manufacturing or production capability core to the total offering. The literature and specifically the research carried out by de Brentani (1991), identifies a set of variables relating to the issue of fit that can be adapted for the e-commerce situation. This paper will discuss the supporting framework for the de Brentani factors, and posit an adapted consumer market model addressing the fit of e-commerce, considering the firm and the customer (market) suitable for testing those firms with e-commerce capability.

New Service Development and e-Commerce

The literature relating to new product development can effectively be divided into that relating to service products (primarily intangible in nature) and products (primarily tangible in nature). Much of the original literature covering new product development focussed on products that were predominantly tangible in nature. Gradually as services marketing became accepted as a separate field of endeavour, particularly during the 1980’s, the importance of new service development was explored with a number of articles focussed on this area. In particular the impetus for much of the writings on this area of the services field came from the financial services industry, and so many articles were written with this focus. However since these initial writings, other industries have also received attention including health care, telecommunications, information services, educational services, legal services and consulting services (Johne and Storey, 1998). Now with the advent of the Internet, the new breed of e-commerce services has changed the rules of new product development again with valuable guidance available from the existing literature.

Kolesar and Galbraith (2000, p.424) note the similarity of e-commerce with service transactions, “e-retail exhibits more of the properties of service transactions than goods
transactions and …these properties best explain the e-retailer-consumer relationship”. The similarity in characteristics provides strong support for the adaptation of an existing services model of success factors in new service development for e-commerce. The link is strengthened in examining the four attributes emerging from the literature that differentiate services from products; intangibility, heterogeneity, simultaneity and perishability. Table I contains references specifically referring to these service attributes and separate columns are included to indicate the relevance of these areas to e-commerce, as well as the impact on e-commerce services.

Table I – Service Characteristics and e-commerce

<table>
<thead>
<tr>
<th>Characteristics unique to services</th>
<th>Selected sources in services literature</th>
<th>Relevance to e-commerce services</th>
<th>Impact for e-commerce services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intangibility</strong></td>
<td>Storey &amp; Easingwood, 1996; Johne &amp; Storey, 1998; Shostack, 1984; Gummesson, 1991; Freiden, Goldsmith, Takacs &amp; Hofacker, 1998; Parasuraman, Zeithaml &amp; Berry, 1985; de Brentani, 1991; Johns, 1999; Levitt, 1981; Gronroos, 1998; Mathur, Mathur &amp; Gleason, 1998; Judd, 1964; Shostack, 1977; Thomas, 1978; Rathmell, 1966.</td>
<td>The e-commerce service cannot be physically touched, the website and docket are tangible clues on-screen able to be printed out.</td>
<td>Importance of brand, reliability, off-line and on-line presence.</td>
</tr>
<tr>
<td><strong>Perishability</strong></td>
<td>de Brentani &amp; Ragot, 1996; Johne &amp; Storey, C., 1998; Gummesson, 1991; Parasuraman et al, 1985; Rathmell, 1966; Freiden et al, 1998; de Brentani, 1991.</td>
<td>Capacity on the website servers is not able to be stored (ie. unused capacity is lost).</td>
<td>Demand management issues for technology resources.</td>
</tr>
</tbody>
</table>
New services, in this context, are referred to as the development of e-commerce services where a new or existing product is offered over the Internet. Here, the new service refers to the ability to buy or sell the product on-line (e-commerce). Whether the physical product (to be purchased via the e-commerce service) is newly developed, or one that is already being offered by the business is not the issue under consideration. It is the development of e-commerce offerings with which this paper is primarily concerned.

**de Brentani’s model**

de Brentani (1991) recognised the opportunity to add to the existing literature on determining success factors for the development of new business services, by combining the new service development and new product development literature. The research that he has undertaken integrates the two, and determines what factors businesses must look to for ensuring new service success. A total of 17 criteria for measuring new service performance were established falling into four composite measures; namely, sales performance, competitive performance, cost performance and “other booster” (de Brentani, 1989). de Brentani surveyed 184 companies active in new service development, comprising of 12 business service sectors. Responses were received on 121 items using a Likert 7-point scale for a total of 276 projects. The results show that a factor analysis produced 17 independent factors for new service success, accounting for around 60% of the variation. These 17 factors were further classified into 4 broad categories as described in Table II.
**Table II – de Brentani’s Success Factors for New Service Development (NSD)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proficiency of NSD</td>
<td>Detailed/Formal NSD process</td>
</tr>
<tr>
<td></td>
<td>Effectiveness in NSD management</td>
</tr>
<tr>
<td>Project synergy</td>
<td>Overall corporate synergy *</td>
</tr>
<tr>
<td></td>
<td>Service newness to the firm *</td>
</tr>
<tr>
<td></td>
<td>Market newness to the firm *</td>
</tr>
<tr>
<td>Market characteristics</td>
<td>Market competitiveness</td>
</tr>
<tr>
<td></td>
<td>Product-market fit /Attractiveness *</td>
</tr>
<tr>
<td></td>
<td>Specialised initial market</td>
</tr>
<tr>
<td></td>
<td>Responds to demand cycle</td>
</tr>
<tr>
<td>Nature of the new service</td>
<td>Expert/People based</td>
</tr>
<tr>
<td>offering</td>
<td>Equipment based</td>
</tr>
<tr>
<td></td>
<td>Service innovativeness</td>
</tr>
<tr>
<td></td>
<td>Service quality evidence</td>
</tr>
<tr>
<td></td>
<td>Quality of the service experience</td>
</tr>
<tr>
<td></td>
<td>Service complexity/customness</td>
</tr>
<tr>
<td></td>
<td>Market segment adjustment</td>
</tr>
<tr>
<td></td>
<td>Standardisation of the service process</td>
</tr>
</tbody>
</table>

* Factors of Interest for Fit (de Brentani, 1991)

Of significance for this paper is the Project Synergy category, containing reference to overall corporate synergy, service newness to the firm and market newness to the firm. Also the product-market fit /attractiveness factor listed under the Market Characteristics category as marked in Table II is of particular interest. Further discussion on these elements and their significance in the new service development success, as well as additional factors to consider for the e-commerce situation will be considered later in the paper.
Measuring Success

In discussing the fit of e-commerce, the firm and the customer as forming the basis for success factors in developing e-commerce services, it is important to define what constitutes success. There are a number of performance measures identified in the literature for new service development including those delineated by de Brentani (1991) in summary of the new product development and new service development literature. They are identified in Table III and include, sales and market share, competitive performance, cost performance and another factor referred to as "other booster", which refers to the flow on effects of new product development through the firm, for example, to the firm’s other products. Alternatively, Edgett and Parkinson (1994) allowed the respondents to their survey to apply their own definition of product success or failure in their study. This is unlikely to be appropriate for this model due to the varying measures of success of e-commerce services, ranging from a number of page impressions to profitability, making it important to capture which aspects of fit are connected to the various performance measures of success.

de Brentani’s (1991) model for measuring performance requires adaptation for the e-commerce situation, due to the additional factors that are sometimes used to assess the performance of websites. Table III indicates the additional performance measures relevant for e-commerce service developments as well as those outlined by de Brentani. When website development first began, objectives were determined in terms of first mover advantage, “monetising eyeballs” and the revenue model was based around a questionable banner ad strategy (Daniels, 2000). For some industries on the web, such as on-line gambling, this is still the case. But for much of the WWW, thanks to the “tech wreck”, the spending spree is over and the time has come to deliver on sales, profit, costs measures and market share. However, not in every case are firms delivering on these measures. Sometimes the e-commerce service is a cost centre provided in order to match an offering from a competitor and to insure against loss of existing customer base. In these cases the website is operating as a cost centre due to the small number of customers it is serving on-line and the firm’s inability to achieve critical mass. Another additional factor relates specifically to the enhanced ability of the firm to service their customers due to the development of the website, and performance is measured by improvements in customer satisfaction levels directly attributable to this.
<table>
<thead>
<tr>
<th>SOURCE of PERFORMANCE MEASURES</th>
<th>PERFORMANCE MEASURES</th>
</tr>
</thead>
</table>
| de Brentani (1991) Framework Performance Measures | **Sales and Market Share**  
Exceeded market share objectives (hits/pages/sales)  
Exceeded sales/customer use level objectives  
Exceeded sales/customer user growth objectives  
High relative sales/customer use level  
Large relative market share  
High overall profitability  
Strong positive impact on company image/reputation  
**Competitive Performance**  
Superior service “outcome” to competitors (perceived)  
Superior service “experience” to competitors (perceived)  
Unique benefits: perceived as superior to competitors  
Gave firm competitive advantage (“First-mover” advantage)  
**Cost Performance**  
Substantially lowered costs for firm  
Performed below (-) expected costs  
Achieved important cost efficiencies for firm  
**Other Booster**  
Enhanced sales/customer use of other products/services (including off-line v. on-line)  
Enhanced profitability of other products/services (including off-line v. on-line)  |

| Additional e-Commerce Specific Performance Measures | **Sales and Market Share**  
Percentage of on-line v. off-line sales  
Exceeded hit rate/page impression/login registration objective  
Achieving critical mass of delivery  
**Competitive Performance Measures**  
Match competitor e-commerce service offer  
**Cost Performance Measures**  
Cost savings directly attributable to the provision of product through e-commerce services  
**Other Boosters**  
Customer Satisfaction levels due to enhanced ability to service customers  |

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de Brentani (1991)
Success Factors and the concept of ‘Fit’

According to the Merriam-Webster on-line dictionary, “fit” refers to an item “suitable for” or “to harmonise with” something else [HREF1]. However, not only is suitability relevant in the context of combining elements together, but also the idea that there might be additional value generated from their integration, or in other words synergy. Of specific interest for this paper in the development of e-commerce services, is the degree of fit or suitability between the e-commerce service itself, the firm and the customer or market, and the likely impact these elements will have on the success of the service development. Research has shown that there are a number of factors that contribute to the success or otherwise of a newly developed service. Fit or synergy (both are referred to in the literature but have similar meaning in this context) has been identified as one of the most significant factors in their success, and in many cases the most significant factor. Cooper and de Brentani (1991) recognised the importance of new product synergy with the firm’s existing range of competencies as a critical success factor in the development of new services. Other authors also recognising fit or synergy as an important factor in the development of new services include; Storey and Easingwood, (1991), (1993) and (1996); de Brentani and Ragot, E., (1996); Edgett, (1994); Martin and Horne, (1993); Lovelock, (1991); Atuahene-Gima, (1996); and Edgett and Parkinson, (1994).

Edgett and Parkinson (1994) devote significant attention to the importance of synergy between the new product (or e-commerce in this case), the market and the firm in their article. The research they carried out was with specific reference to the consumer finance industry, and aimed at understanding how successful new financial services are developed. The authors identified 61 variables that were reflective of events during the product development process as borne out of the product development literature, and respondents were asked to record their level of disagreement or agreement with them. Their research emphasised the importance of three main factors with regard to the development of new financial services; market synergy, organisational factors and market research factors. In particular, market synergy was noted to be the most significant variable on a number of levels. These were that the new products fitted comfortably with the existing image of the firm and provided an advantage compared to competitor products and were also strongly supported by the firm once launched. The explanatory factor of market synergy rated significantly higher (with a standardised coefficient value of 0.93459, the next highest being the organisational factor with 0.45453) than the other factors emerging from the original variables after factor analysis.
According to Edgett and Parkinson (1994), market synergy refers not only the product and firm image fit, but also figures in the customer’s purchase decision, in terms of their needs and wants and whether it matched them.

The idea of the customer purchase decision is important in e-commerce service development as well. Breitenbach and Van Doren (1998) discuss research carried out by Lewis and Lewis (1997) that identifies five types of web visitor and notes the importance of directly addressing the needs of these different classes of visitors. So a new e-commerce service offering should be developed with the end-customer in mind, as to their likelihood to utilise or demand an online purchasing facility. A product specifically for use by a market with low Internet usage (say the elderly) for example is unlikely to prove successful, however one that might be targeted at the youth market has a higher likelihood of success simply because the market has higher levels of access. Edgett and Parkinson (1994) however exclude an element that is critical to the success of e-commerce, that of the firms capability or expertise in the area of the new product launch, and whether the product (in this case e-commerce) is considered to be consistent with the firm’s core competencies. For many firm’s, e-commerce stretches skills to a dangerously shallow level, thus forcing them out of the businesses primary competencies. e-Commerce is somewhat unique in that unlike product or service development it is likely to involve skills outside of the firm’s core.

In de Brentani’s (1991) article, fit or synergy once again emerges as significant, and the related elements are listed in Table II. Overall corporate synergy is listed under both columns referring to the firm, being relevant to both due to its reference to the firm’s capabilities. Notably, it is the only factor borne out of that author’s research considered significant across all four identified performance measures. Project synergy is the ability of a company to “leverage existing proficiencies and resources”, and according to de Brentani is “by far the most important determinant of success” (de Brentani, 1991, p.52). In this case the author refers to “project synergy” as being based on three elements; service newness to the firm, overall corporate synergy and market newness to the firm. Here the research differs from Edgett and Parkinson, by incorporating the fit of the firm’s skills and resources to the new service or product. In fact, de Brentani makes the point that it is particularly important in services (and less dominant in the goods sector), because of services’ association, and in some cases reliance, on technology for service provision. Relating to project synergy is the product-market fit of the new service, indicating the need for the service to be a response to
market needs rather than simply one that is created in a business development vacuum. Also for new manufactured goods, this is relevant for service development due to the operations oriented nature of service firms. (de Brentani, 1991)
### Table IV – Success Factors of New e-Commerce Services

<table>
<thead>
<tr>
<th>SOURCE of FACTORS</th>
<th>CUSTOMER/ MARKET &amp; E-COMMERCE</th>
<th>E-COMMERCE &amp; FIRM</th>
<th>FIRM &amp; CUSTOMER (MARKET)</th>
</tr>
</thead>
<tbody>
<tr>
<td>De Brentani Framework Success Factors</td>
<td>Product/ Market Fit and Attractiveness</td>
<td>Service newness to firm</td>
<td>Market newness to firm</td>
</tr>
<tr>
<td></td>
<td>Satisfies clearly identified customer need</td>
<td>Class of service totally new to firm</td>
<td>Customers/Clients new to firm</td>
</tr>
<tr>
<td></td>
<td>Responds to important changes in customer needs wants</td>
<td>(NOT) improvement/modification of existing service</td>
<td>Customers (NOT) similar to ones already served</td>
</tr>
<tr>
<td></td>
<td>Consistent with existing customer value wants</td>
<td>Service production process totally new to firm</td>
<td>Competitive environment totally new to firm</td>
</tr>
<tr>
<td></td>
<td>Solves important customer problem</td>
<td>Exploited technology totally new to firm</td>
<td>Overall Corporate Synergy</td>
</tr>
<tr>
<td></td>
<td>High growth rate market</td>
<td>(NOT) Core or primary service of firm</td>
<td>Fit: Sales and promotional capabilities and resources</td>
</tr>
<tr>
<td></td>
<td>Large dollar volume market</td>
<td>Overall Corporate Synergy</td>
<td>Fit: Managerial skills and preferences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(as for Firm &amp; Customer (Market) column)</td>
<td>Fit: Company “expertise”/ human resource capabilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fit: In line with financial resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fit: Current, behind-the-scenes, production facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fit: Current service delivery system</td>
</tr>
<tr>
<td>Additional e-Commerce Specific Success Factors</td>
<td>Product profile</td>
<td>Firm capability</td>
<td>Customer (Market) profile</td>
</tr>
<tr>
<td></td>
<td>Product category</td>
<td>Established brand reputation</td>
<td>Target customers (market) have propensity to use technology</td>
</tr>
<tr>
<td></td>
<td>Intrinsic technology elements in product</td>
<td>Extent e-commerce capability (resource) is contained inside the firm</td>
<td>Target customers (market) have a high propensity to shop on-line</td>
</tr>
<tr>
<td></td>
<td>Level of involvement</td>
<td>Resource created expressly for the development and provision of e-commerce capability</td>
<td>Customer (market) wish to choose the channel they shop in (ie. on-line and off-line)</td>
</tr>
<tr>
<td></td>
<td>High/low degree of information search</td>
<td>Firm created specifically to provide e-commerce services (ie. pure-play)</td>
<td>Firm’s target customers want an off-line and on-line presence</td>
</tr>
<tr>
<td></td>
<td>Tangibility product category</td>
<td>Firms resources match to its e-commerce services provision requirements</td>
<td>Approximate age of customer target market</td>
</tr>
<tr>
<td></td>
<td>High/low price</td>
<td>Logistics and Distribution capability</td>
<td>Male/ female target market</td>
</tr>
<tr>
<td></td>
<td>Price on-line relative to off-line</td>
<td>Technology</td>
<td>Convenience of purchase important/unimportant</td>
</tr>
<tr>
<td></td>
<td>Wide range of competitor alternatives</td>
<td>B2B supply chain established in back-end</td>
<td>Risk averse v. risk taker</td>
</tr>
<tr>
<td></td>
<td>Wide assortment of product types/variations (ie. on-line cataloguing)</td>
<td>Firm is a traditional manufacturer or retailer</td>
<td>Education level or proficiency in internet usage</td>
</tr>
<tr>
<td></td>
<td>Frequency of purchase</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High/low level of differentiation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Degree of customisation/ standardisation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Secure transaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Large/ small assortment on-line relative to off-line</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Level of integration with off-line offering</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
e-Commerce Supplementary Success Factors

Also listed in Table IV are the additional factors that are required in adapting the de Brentani model for the e-commerce situation. The additional factors are derived from the interactions between the three elements as shown in Figure I, referring to the product profile, firm capability and customer (market) profile.

Figure I – Three Elements for Fit and the New Service Development Success

Product Profile

The importance of capturing the profile of the physical product being sold via the e-commerce service is to capture the appropriateness or otherwise of certain goods to the on-line environment. Research has shown that certain product categories have been successful in e-commerce in many countries across the world. In Appendix I, the top 5 purchase categories in countries around the world, show that books, CDs and computers figured prominently (Ernst & Young, 2001). In many cases, the level of involvement for the buying decision is an important consideration in consumer’s purchasing products on-line, some more complex purchases facing resistance on-line. As well as this, highly priced product categories may inhibit the purchasing of products on-line, due primarily to the perceived security risks and as such higher purchase price categories are being avoided on-line. Related to the price issue, the charging of substantial shipping costs has also been a significant deterrent. Another factor to consider here is the level of integration with the off-line offering. This was considered in
the Ernst & Young Global On-line Retailing Report (2001), and found to be critical to the success of traditional retailers establishing on-line capabilities.

### Firm Capability

The purpose of also incorporating characteristics of the firm is to capture the core competencies of the firm, and whether these affect the development of e-commerce services. In particular this relates to e-commerce, logistics and distribution, marketing (with specific reference to on-line marketing), the extent to which the e-commerce capability is contained within the firm, and whether alliances are established to fulfil particular e-commerce functions. The intention is to determine which firm core competencies are associated with particular performance measures.

### Customer (Market) Profile

The final adaptation to the de Brentani (1991) model for e-commerce services relates to the profile of the firm’s target customers, whether they are the existing customer base of the traditional firm or the on-line target market of a pure on-line business. Factors to be included are the target age group, the gender, and whether convenience is important to the target customer market. Other factors to consider in the success or otherwise of e-commerce services are the propensity of the target customer group to use technology, and whether they are likely to be willing and able to purchase products on-line. (Walker, Craig-Lees, Hecker, and Kent, 2001)

### What ‘Fit’ means for e-Commerce

An important requirement of e-commerce service provision is that there are many skills and resources that firms must possess or acquire in order to be successful. The skills required to provide on-line services include; the technological and design capability to develop and maintain the website; the marketing talent to build adequate on-line brand and marketing programs; the customer management capability for interacting with target customers on-line and off-line; and the logistic capability to move the product from its warehouse to the end customer as well as dealing with returns and other associated issues. In the case of the model
adapted from the de Brentani (1991) research, these can be best dealt with by addressing the three key elements in e-commerce provision – the customer, the firm and e-commerce. Not all firms will necessarily possess all these talents. In fact it could be said that it is not possible for businesses to have capability in all of these areas, and in reality the majority of firms will have a core competency in one of them. This comes to the heart of the issue, the fit of these three elements - e-commerce, the firm and the customer. Given it is unlikely that firms will possess talent in all these areas, the question is which areas of their business does the provision of the e-commerce service fit? And of the areas where the skills and resources do not fit, how is the firm achieving these ends? Is there an advantage for firms of a certain size and industry type in developing e-commerce services? So in a sense, the model incorporates technology and distribution into the e-commerce factor, marketing and brand into the customer or market factor, and these are matched against the expertise and competencies of the firm as well as against each other. And just as it is possible that particular markets are unsuited to e-commerce service provision, so too is it possible or likely that certain firms may be unsuitable for e-commerce provision, forcing them to look to alternative means for provision of the services, such as outsourcing or alliances.

**Future Research Directions**

Now that the consumer market model for testing the degree of impact for the fit of e-commerce, the firm and the customer is developed, there is an opportunity to implement the model by undertaking research of businesses involved in developing e-commerce services. The model requires testing utilising factor analysis to determine applicability of the variables that represent “fit” to the e-commerce situation and to determine how firms are dealing with the large number of competencies required to successfully develop e-commerce services.

Aside from the implementation of the model discussed in this paper, the wider area of e-commerce is decidedly unexplored. There are many gaps in the research carried out up until now, offering significant opportunities for further research to be undertaken. Product ‘fit’ is but one element linked to the likely success of newly developed services – albeit an important one. The opportunity exists to test other factors identified in de Brentani’s model and the literature as to its relevance to the success or otherwise of e-commerce services. In particular, the proficiency of the new development processes, the nature of the new service offering, and service quality issues.
Conclusion

The new breed of consumer services in the field of e-commerce has led to the need to develop new models to assist in their successful development. The services and goods marketing literature have provided an invaluable backdrop for the examination of the issues surrounding e-commerce, with some obvious likenesses identified. This paper attempts to bridge the gap between this new developing body of knowledge and the established one, investigating the area of new service development and the concept of fit between the e-commerce service, the firm and the customer being critical to their success. Because of the breadth of skills required in providing an e-commerce service, it is highly unlikely that the firm will have core competencies in all of them. So the intention of this paper was to identify the variety of competencies available, and how they relate to the customer and the e-commerce service itself in the successful development of these new services. The foundation has been laid, through the model developed, for testing the validity of the concept of fit, as a crucial success factor in the development of new e-commerce services.
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## Appendix I

Global Top5 Purchase Categories On-line (Survey data collected in 2000)

<table>
<thead>
<tr>
<th>Rank</th>
<th>US</th>
<th>Non-US</th>
<th>UK</th>
<th>Australia</th>
<th>Canada</th>
<th>France</th>
<th>Germany</th>
<th>Netherlands</th>
<th>Spain</th>
<th>Switzerland</th>
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<tbody>
<tr>
<td>3</td>
<td>CDs</td>
<td>Computers</td>
<td>Computers</td>
<td>CDs</td>
<td>CDs</td>
<td>Tickets/ Reserv.</td>
<td>CDs</td>
<td>Computer</td>
<td>CDs</td>
<td>Tickets/ Reserv.</td>
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<td>4</td>
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<td>Tickets/ Reserv.</td>
<td>Tickets/ Reserv.</td>
<td>Tickets/ Reserv.</td>
<td>CDs</td>
<td>Tickets/ Reserv.</td>
<td>Tickets/ Reserv.</td>
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</tr>
<tr>
<td>5</td>
<td>Tickets/ Reserv.</td>
<td>Videos</td>
<td>Videos</td>
<td>Apparel</td>
<td>Apparel</td>
<td>Videos</td>
<td>Videos</td>
<td>Electronic Products</td>
<td>Electronic Products</td>
<td>Financial Services</td>
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