

Development of eBusiness Strategies For Competitive Advantage

Shiromi ARUNATILEKA

University of Western Sydney, Locked Bag 1797
PENRITH South DC NSW 1797, Australia
shiromi@cit.uws.edu.au

Prof. Athula GINIGE

University of Western Sydney, Locked Bag 1797
PENRITH South DC NSW 1797, Australia
a.ginige@uws.edu.au

Abstract

The current business environment is very competitive and complex that organisations need to understand new possibilities and opportunities in order to survive, sustain and grow. This requires creation of strategic partnerships based on new eBusiness models. To implement these models organisations need to IT enable its business process by undergoing an eTransformation process. We conducted a study using Porter's five competitive forces and new business models in order to give a new meaning to eBusiness strategies. This study also describes the decision making process in arriving at the business strategies and appropriate eBusiness models and the competitive advantage it gives to the organisations

Keywords: *eBusiness Strategy, 7E's in eTransformation, Porters Forces, eBusiness Models, Competitive Advantage*

1. Introduction

The digital revolution is changing the way buying and selling is being done creating new business cultures, new business strategies and new business models. There are many force working on organisations forcing them to revolutionise the way they do business. These forces effect the organisation so much that a need is created for business organisations to transform in order to Survive, Sustain or Grow [6]. There are five competitive forces described by Porter that effect organisations and impact on their position in the market. They are the threat of new entrants, rivalry among existing firms, threat of substitutes, bargaining power of suppliers and bargaining power of buyers [10].

In addition to the forces affecting the competitiveness of the organisation, ETransformation also has had a major impact on the way business is being done in the world. Many businesses such as Amazon.com, ebay.com and DELL have completely changed the way business is being done introducing new strategies and new business models to gain competitive advantage.

This study looks at Porters five competitive forces and discusses what strategies should be adopted to minimise the negative impact of the forces and to capitalise on the forces that can be used for the business's advantage. It also looks at eBusiness models and proposes the most effective models for different combination of forces.

2. Theoretical Background

2.1 Michael Porter's Five Competitive Forces

Micheal Porter has identified five competitive forces that determine the attractiveness of a market [10]. They are described in Figure 1.

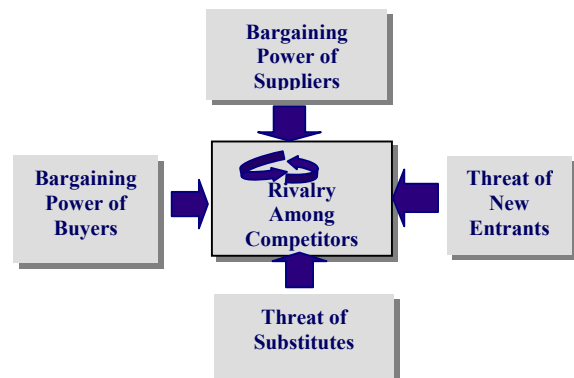


Figure 1: Micheal Porter's Five Forces [10]

The competitive forces are as follows:

- (i) Threat of New Entrants: This deals with the attractiveness of the industry sector and the height of it's entry and exit barriers [14].
- (ii) Rivalry among existing Firms: This discusses the strength and aggressiveness of the competitors in the industry sector. An industry is considered to be unattractive if there are many aggressive competitors thereby resulting in price wars, advertising battles, new and competitive product introductions, etc.
- (iii) Threat of Substitutes: Some products/services have substitute products eating in to the market share which is very difficult to manage. Substitutes generally place a limit on prices and profits, making the industry unattractive and unprofitable to work in.
- (iv) Bargaining Power of Suppliers: Suppliers can impact the price of products and limit the quantities as well if they are few in the market and if they are concentrated or organised.
- (v) Bargaining Power of Buyers: Buyers become powerful when the switching costs are low, when products are undifferentiated and when they are price sensitive. The customers are very powerful in the online economy as there are so much of information about companies for comparisons and switching costs being low.

The study proposes business strategies and eBusiness models by looking at which force is high and which force is low at a given time.

2.2 eBusiness Models:

The industry sectors are changing the way they do business by using many different collaborations with customers (B2C), service providers (B2B), financial organizations (ePayments), government (B2G), and even competitors (B2B). There are many eBusiness Models that organizations can use effectively to get benefits such as group marketing, group ordering, product bundling, direct-to-consumer access, etc. As mentioned by Rappa [11] and Burn [4] Internet commerce has given rise to new kinds of business models.

The models described by Rappa and Burn have been categorized in to a few main eBusiness models with a fare amount of differences and advantages. Few models have been added by the authors to complete the existing and new eBusiness Models. It is important to evaluate which model gives the optimum advantage for the business being considered. Some of the emerging and existing eBusiness Models are described below.

• **The linear Model (Traditional)**

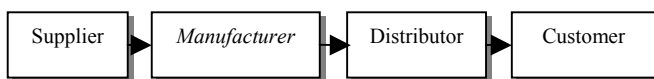


Figure 2: The Linear Model

• **The Digital Value Hub (eEconomy)**

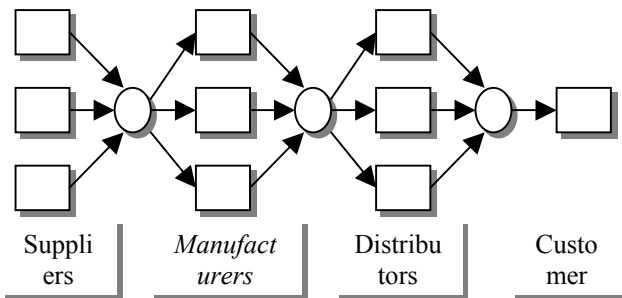


Figure 3: The Digital Value Hub

• **Direct-to-Customer eBusiness Model**

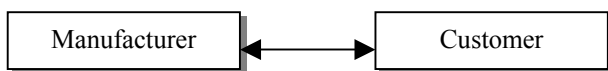


Figure 4: Direct-to-customer Model

The approach adopted by DELL increased their sales from \$7M per day in 1997 to \$40M per day in 2000 [14]. This model which bypasses certain nodes in the supply chain gives the manufacturer the competitive advantages to sell at a lower price reducing intermediaries, faster delivery of goods, build according to customised orders, earlier receipt of payments, speeds up new product

release cycles, uses customer data to provide value added service and helps proactive decision making [14].

• **Supply chain eBusiness Model (Horizontal Marketplace):**

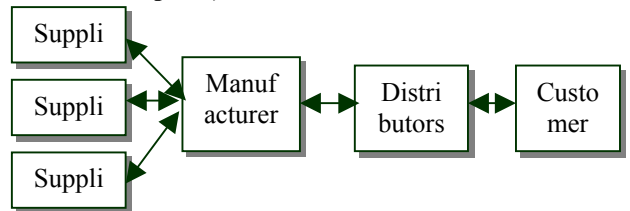


Figure 5: Supply chain eBusiness Model

This model creates a virtual value chain and an information flows across the supply chain. All parties have a strong electronic link among backend systems. This enables very effective order processing, product tracking and fast resolution of SCM issues.

• **Full service provider eBusiness Model (Vertical Marketplace):**

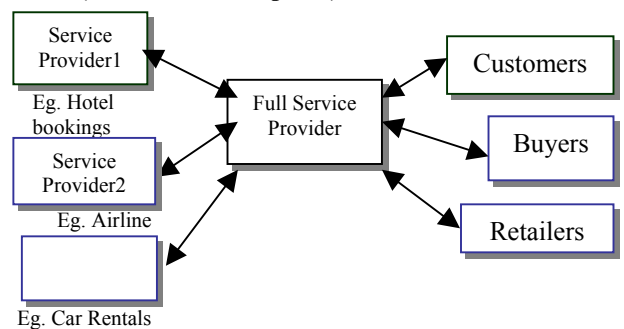


Figure6: Full service provider eBusiness Model

This is a very effective portal where the manufacturer sells their own products or services bundled with third party products or services. This offers a wider range of products/services to the customer at a reasonable or lower price as the products are bundled and therefore, concessions can be introduced. This is a very effective strategy to achieve economies of scale in delivery/distribution, channel usage and promotion which takes care of the threat of new entrants to the market.

• **eAuctioneer eBusiness Model:**

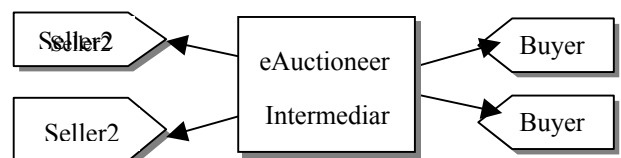


Figure 7: eAuctioneer eBusiness Model

The eAuctioneer model is very successfully used by eBay. Here the intermediary does not take responsibility

for the sale or the payment and the eAuctioneer owns the valuable customer relationship and data but not the transaction.

- **Revenue sharing eBusiness Model**

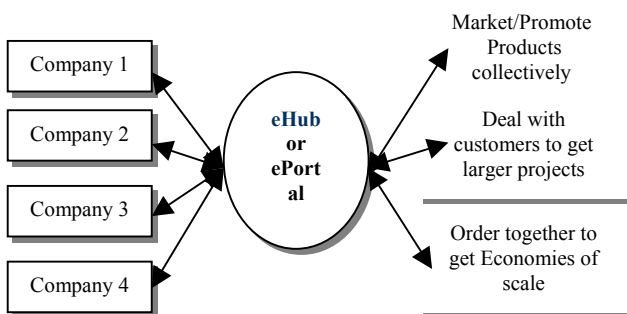


Figure 8: Revenue sharing eBusiness Model

This model uses the synergy of a collection of SMEs to get the competitive advantage. The eHub or the ePortal is the front-end for a collection of SMEs in the same industry using the portal to either market/promote each other's products collectively, pose as a larger company with a wider product range/capacity to get larger projects or use bulk ordering with suppliers to get economies of scale. Either way, the collective synergy is a much greater strength for the SMEs involved than trying to market or buy separately.

3. The Environmental Analysis and the Development of eBusiness Strategies

The study describes the business strategies adopted and eBusiness models that can be used after analyzing the business environment of an organization. This is used in linking environmental analysis to eBusiness Goals/Strategy development in the strategic eTransformation Model: Seven E's in eTransformation [2]. The 7E Model is developed by the researchers at the University of Western Sydney, Australia and currently, it is successfully being used to eTransform SMEs in the manufacturing sector in Western Sydney Region [3]. The Model is described in Appendix 1. The first two stages of the model deal with analyzing the strategic position of the company in the competitive environment it works in order to develop business strategies, eBusiness models and strategic alliances for the benefit of the company.

4. The Market Forces, Development of Strategies and eBusiness Models

As expressed earlier, Porter explains why strategies need to be developed according to the market forces working on a company in a given industry. As Porter explains, strategic positioning is "performing *different* activities from rivals or performing similar activities in *different ways*" [9], where competition is minimized by the adoption of proper differentiation strategies. The following section will explain how business strategies

and the appropriate eBusiness models should be linked to a company to get the competitive advantage depending on what forces work on that company. There are other factors such as the market economics (monopoly, oligopoly, perfect competition), company strengths/weaknesses and external opportunities/threats that will effect the final decision to adopt a particular strategy and a specific eBusiness model for the company.

According to Porter [10] the five forces working on a company at a given time are (i) Threat of New Entrants, (ii) Rivalry among competitors, (iii) Threat of Substitutes, (iv) Bargaining Power of Suppliers and (v) Bargaining Power of Buyers. When the forces are high, the strategy is mainly to position the company in the least vulnerable position or in other words, in a position where the company is least effected by the competitive forces. When a certain force is high, the business strategy should be to either minimize the force or diversify in to an area that will have a minimal effect from that force. When a force is low, the strategy should be to capitalize on the force or to use it to get more competitive advantage.

4.1 Threat of New Entrants

The best way to achieve the competitive advantage when there is a major threat from new entrants is to either differentiate or to strengthen the barriers of entry. This could be done by either adding value to the product/service by product differentiation strategy or product bundling. Another strategy would be to form strategic partnerships or alliances to strengthen the company's position in the market. Customer Relationship Management (CRM) [1] or in other words, providing a better, convenient, less costly customized service to the customer is also another strategy. Cost leadership is also an effective strategy where the company is in a position to reduce the price of the product/service to an extent that newcomers cannot even come close to the pricing structure.

The most suitable business models would be

- *The Full-Service-Provider Model* for value added service providing or product bundling where the new comers find it difficult to compete with
- *Direct-to-Customer Model* for Customer Relationship Management (CRM) [1] strengthening the B2B partnerships with suppliers to give the customer a customised product according to customer requirements
- *EPortal Model* where existng competitors get together for joint marketing, bulk buying of raw materials to get the competitive advantage through economies of scale and use the synergy to increase the product line making it difficult for new entrants to survice in the market
- *Digital Value Hub Model* to have strong B2B strategic partnerships with existing nodes in the supply chain such as suppliers, manufacturers, dealers and customers.

These strategies and eBusiness Models make sure that there are major barriers for the new entrants making their entry full of obstacles there by getting the advantage to the company.

4.2 Rivalry Among Existing Firms

When there is a very high (perfect) competition in the industry, customers are given a wide choice of companies to select the service/product from. With the Internet, the customers can compare prices/products/services, company's profiles, other products/services offered, after sales services, etc. very easily and conveniently. The main strategy would be to differentiate, integrate, promote, manage customer relationships and have strategic partnerships.

Value addition or Product differentiation will move the product from a very competitive market to a market segment which would not be that competitive. Product bundling will provide a total solution to the customer which many competitors would not be able to provide. This is practiced a great deal in the tourist industry where they deal with ticketing, hotel bookings, car rentals, etc.

With internet technologies, it is very easy to link up with partners to form strategic alliances. Organisations can link up horizontally with the supply chain to provide a value added better service to the customer increasing CRM. Target marketing or niche marketing are effective marketing strategies which will make a major difference in creating awareness of the company and its products/services.

Another effective strategy would be the price discrimination strategy as proposed by Shin [13]. There are many Internet shopping agents such as pricescan.com and mySimon.com [8] offering price comparisons and a lot of other information to customers to compare products/features and prices. Companies can change different prices for different market segments or different combinations of product/service offerings for different prices. Discounted pricing can also be offered depending on quantities as well. This makes it difficult for customers to compare prices of alternate products offerings [13].

The most suitable eBusiness Models would be

- *Direct-to-Customer Model* for better CRM and to provide a quicker convenient service to any customer anywhere in the world
- *The Full-Service-Provider Model* to provide the supporting services using the concept 'product bundling'
- *EPortal Model* for a few competitors to get together for joint marketing, bulk ordering (to get economies of scale) and taking large orders using the revenue-sharing concept.

- *Supply Chain Model* to provide a better service to the customer including order tracking, customised products/services, etc.
- *eAuction Model* to market the products in a new C2C market place attracting new customers from a different market segment.

4.3 Threat of Substitutes

This threat is often ignored or neglected till it becomes too big a threat to handle. The plastic bag manufacturers face the substitute force coming from the paper bag manufacturers and promoters such as the environmental groups. The best strategies for such a situation would be product diversification, market diversification, product bundling, effective pricing strategies or strategic alliances.

Diversifying in to a new product or market is a permanent solution of avoiding the pressure of dealing effectively with substitute products/services, but, is not always possible. Strategic alliances and product bundling can add value to the basic product/service taking it away from direct competition from substitutes. One good example would be how soft drink producers link up with major food chains such as McDonalds, Hungry Jacks and KFC to beat the competition coming from ready-to-drink fresh juice producers and dairy drink producers. In certain markets, with price-sensitive customers, cost effective pricing strategies would negate the force coming from substitute products.

The most suitable eBusiness Models would be

- *The Full-Service-Provider Model* mainly for Product bundling and Strategic Alliances. This can also be used effectively for discounted or low pricing strategies.
- *The ePortal Model* can also be used for many competitors to get together and act as a Market Force using the synergy mainly to market or promote the products/services.

4.4 Bargaining Power of Suppliers

In an industry where there are limited or powerful suppliers of raw materials, a company can face major problems not being able to produce the products on time or to the expected quality and quantity. The suppliers can also monopolise on the prices for raw material thereby affecting the pricing strategies of the manufacturer. The best strategies for such situations are backward integration, Supply Chain Management (SCM), strategic alliances and bulk ordering strategies.

Backward integration will allow a company to become a component manufacturer or a raw material dealer reducing or eliminating the barrier of dealing with the bargaining power of suppliers. Supply Chain Management will definitely improve the relationships with the nodes of the value chain where the raw material ordering, manufacturing, buying from suppliers and

tracking rawmaterial orders will result in lowering the bargaining power of the suppliers. Electronic links will help the transfer of valuable information w.r.t. raw material which will ease the situation. Bulk ordering is also a good strategy where few companies who are in need of the same material get the pricing advantage by ordering in larger quantities (getting economies of scale).

The proposed eBusiness Models for such a situation would be

- *The Supply-Chain Model* which will increase the relationships with the companies in the manufacturing process tremendously. It can also deal with backward integration effectively.
- *The ePortal Model* which could be used to get the advantage in bulk ordering which could lower the cost of raw material and the dependence on the suppliers.

4.5 Bargaining Power of Buyers

One of the most important dynamics driving the expansion of the global online environment is the shift or power in the business relationship from seller to buyer [7]. As predicted by Alwin Toffer in 1990s, the buyer is becoming more and more powerful making the seller's job more and more difficult to survive in the competitive business world. In some instances, the buyers or customers are getting together in ordering in bulk to get products for the minimum prices. With the Internet, the services offered have impacted the buyer more than ever demanding convenience, 24/7 service, best bargains, best discounts, services with no geographical boundaries and more than ever, excellent Customer Relationship Management (CRM).

The best strategies proposed are Product differentiation (with value addition), Customer Relationship Management (CRM), Marketing Strategies, Pricing Strategies, Expanding Product lines, etc.

Product differentiation is improving the product and adding value to it to be different from the competitors. Porter's differentiation strategy [9] is very effective in such instances. CRM will let the company focus on high value customers [1] and have a customised approach rather than a mass-production approach. This will create brand loyalty and trust among customers.

Online and offline marketing strategies [7] and Customer Relationship Marketing [8] are another important ways of promoting the company and products to reach the customers. There can be so many other mechanisms that can be used such as product based marketing, customer based marketing, segmented and behaviour oriented marketing [12]

Traditionally, the price of a product/service depends on quality, features, quantity, type of customer, etc. On the Internet, there are many more strategies used and one such technique is customised negotiated pricing, used by

priceline.com. Here, the customer sets the price and allows the sellers to bid and the lowest bidder gets the sale [7]. Another pricing strategy would be to camouflage the real price by bundling or unbundling the product/service related components or features thereby making it difficult for customers to compare the pricing with similar products/services. eAuctions such as eBay.com and reverse auctions are also ways of reaching the cyber customers in the e-marketplace. [12]. Expanding the product line can also give the customer a wider variety and choice creating a customised approach to selling products/services.

The most suitable eBusiness models for that category are described below.

- Direct-to-Customer Model has many advantages such as good CRM, understanding the customer better, customised product/service offering, being able to sell at a lower price, rapid offering of the latest or the newest products/services, etc.
- The Full-Service-Provider Model offering a bundled product making it convenient for the customer to get all the services needed from one company.
- EPortal Model where many competitors getting together in order to cater to large orders or to increase the collective product line to show that the company is larger than in reality.
- EAuctions Models that can be used to market, advertise and sell products with different client market segments dealing with brand loyal and other customers effectively.

Depending on which force is working on the company, the strategies are developed and the suitable eBusiness models are being used. Table 1 describes the summary of all the strategies described in this section.

Porter's Force	Business Strategies for Competitive Advantage	Suitable eBusiness Models
Threat of New Entrants	Product Differentiation / Product Bundling / Customer Relationship Mgt (CRM)/Strategic Alliances / Cost Leadership	Direct-to-Customer Full Service Provider EPortal Digital Value Hub
Rivalry among existing Firms	Product (Value-added) Differentiation / Strategic Alliances /Product Bundling / Horizontal integration / Marketing / Price discrimination strategies/ Pricing Strategies / Targeting Niche markets/ Customer Relationship Management (CRM)/Expand Product Line	eAuction Model Full Service Provider EPortal Supply Chain Model Direct-to-customer Model
Threat of Substitutes	Product diversification / Market diversification / Product bundling / Strategic Alliances / Pricing Strategies	Full Service Provider ePortal / eRegion

Bargaining Power of Suppliers	Product differentiation / Backward Integration / Supply Chain Management (SCM) / Strategic Alliances / ePortal for bulk ordering	Supply Chain Model EPortal / eRegion
Bargaining Power of Buyers	Product (Value Added) Differentiation / Forward Integration / Marketing / Product bundling / Product Development / Strategic Alliances / Customer Relationship Management (CRM) / Cost Leadership / Pricing Strategies / Expand Product line	Direct-to-customer Full-Service-Provider EPortal eAuctioneer

Table 1 : Development of Business Strategies/eBusiness Models using Porter's forces

The effectiveness of the appropriate strategies and eBusiness models described above can only be measured by actually applying them to businesses and measuring it's success. The researches at University of Western Sydney is applying these strategies to the businesses [5] in the industrial sector validating and refining the models, methodologies and strategies through a process of Action Research.

5. Conclusion

eTransformation is actually a business transformation to get the competitive advantage. The Internet makes it so easy to link up with strategic partners, but, the proper business strategies and business models should be adopted looking at the environmental forces and competitive forces working on the company. The mix of using a strategic eTransformation model along with a strong environmental analysis using some of the best models available such as the Porters Five forces model and the SWOT analysis and linking up with emerging eBusiness models definitely give the competitive advantage to any company working in any industry sector.

Appendix 1

The Seven E's in eTransformation – A Strategic eTransformation Model

The Seven E Model [2] was developed by the researches in the University of Western Sydney after carefully analysing the existing eTransformation methodologies and Models. This Seven E model is being currently used to eTransform SMEs in the Western Sydney region [3].

This model consists of seven very important aspects of eTransformation (Figure A). Each stage is important in it's own right and as a part of the whole process. The seven steps, out of which six steps could be achieved one after the other are linked to the seventh step 'Evolution', which deals with the crucial issues related to change management. After each stage, the organization can go

through the changes to the evolution stage and through that, go to the next stage, after the required evolutionary change management issues are done.

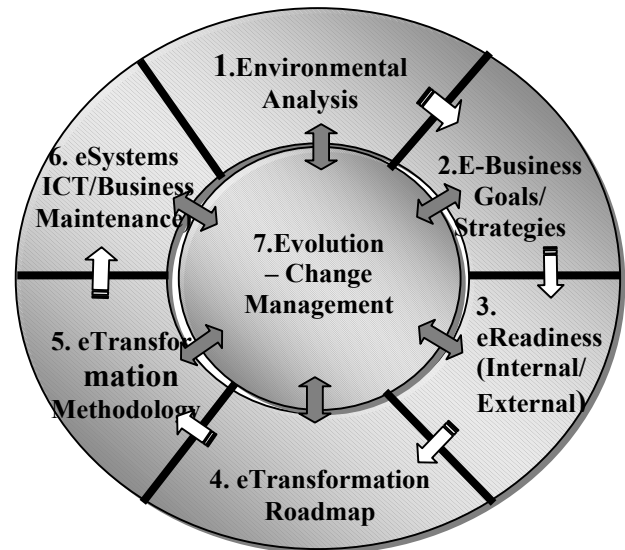


Figure A : The Seven E's in eTransformation (Arunatileka, 2003a).

The significance of each stage of the 7E model (Table A)

Stage	Significance	Methodology used
1. Environmental Analysis	To understand the Global IT and Business Trends and the Sector's Strategic Situation	Understanding of Global Trends in Business and IT SWOT Analysis Industry Analysis (Porter's Forces)
2. eBusiness goals and Strategies	Develop eBusiness goals and strategies to gain competitive advantage	Develop eBusiness, Strategies & Adopt eBusiness Models
3. eReadiness	E-Readiness of the industry and the enterprise under consideration	Questionnaires to measure eReadiness of the Internal and External entities
4. eTransformation Roadmap	To develop a specific path to proceed for the organisation	eTransformation Roadmap and the Convergence Model
5. eTrans. Methodology	eTransform the organization in an incremental way	The Evolutionary eTransformation methodology
6. E-Systems	Provide support and maintenance of the implemented systems	Develop IT Policies, Security, Support, Maintenance mechanisms
7. Evolution - Change Mngmnt.	Management of the proposed changes in an evolutionary manner	McKensy's 7S Model for Organisational Change

The significance of each stage of the 7E model and the methodologies used (Table A).

References:

- [1]. Anderson Jr., W. O. (2001), *Customer Relationship Management in an eBusiness Environment*, IEEE retrieved on 10th of July 2003.
- [2]. Arunatileka, Shiromi, Ginige, Athula, *The Seven E's in eTransformation – A Strategic eTransformation Model*, e-Society 2003, Lisbon, Portugal
- [3]. Arunatileka, Shiromi, Ginige, Athula, *Application of the 7 E's in eTransformation to the Manufacturing Sector*, eChallenges 2003, Bologna, Italy
- [4]. Burn, J., Marshall, P., Barnett, M. (2002), *e-Business Strategies for Virtual Organisations*, Butterworth-Heinemann, Oxford
- [5]. Ginige Athula, Murugesan San, Kazanis Phillip, *A Roadmap for Successfully Transforming SMEs in to E-Businesses*, Cutter IT Journal, May 2001, Vol 14.
- [6]. Hammer, Michael, Champy, James, 2001, *Re-engineering the Corporation – A manifesto for Business Revolution*, Nicholas Brealey Publishing, London, UK.
- [7]. Kirchoff, S. Mendonca, S. (2000), *Instant Advantage.com: Winning Strategies for the Online Economy*, New Jersey, Prentice Hall.
- [8]. Kotler, P. (2003), *Marketing Management*, Pearson Education, Singapore.
- [9]. Porter, E. Michael, *Harvard Business Review*, Volume 74, Number 6, pp 61 – 78
- [10]. Porter, Michael, E., 1980, *Competitive Strategy – Techniques for analysing Industries and Competitors*, Free Press, NewYork
- [11]. Rappa, M. (2003), *Business Models on the Web: Managing the Digital Enterprise*, Retrieved on 06-03-2003 from <http://digitalenterprise.org/models/models.html>
- [12]. Schneider, G.P. (2003), *Electronic commerce*, Canada, Course Technology.
- [13]. Shin, N. (2001) *Journal of Electronic commerce Research*, Vol2,No.4, 164 - 171
- [14]. Stoner, J., Freeman, R., Gilbert, Jr., (2001), Prentice-Hall, India.
- [15]. Toffler, A., (1991) *Power Shift: Knowledge, Wealth and Violence at The Edge of The 21'st Century*, Bantam Books
- [16]. Weill, P., Vitale, M. R., (2001), *Place to Space: Migrating to eBusiness Models*, Harvard Business School Press, USA