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Service quality and e-commerce analysis

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Abstract: *Examines the applicability of determinants identified in a physical services environment to assess the services relating to e-commerce. It is discussed that the lack of human interaction during the Web site experience means that determinants such as competence, courtesy, cleanliness, comfort and friendliness, helpfulness, care, commitment, flexibility are not particularly relevant in e-commerce. On the other hand, determinants such as accessibility, communication, credibility, understanding, appearance, and availability are equally applicable to e-commerce as they are in physical services. The paper argues the need for further research to identify suitable determinants for the e-commerce operating environment.*

Keywords: *E-commerce, Service quality, Internet.*

I. INTRODUCTION

E-commerce has so many advantages in our life because it makes convenient in daily life of the people. Several explanations have been proposed for e-commerce that most of them are based on past experiences in the use of e-commerce. As with e-commerce, e-business also has a number of different definitions and is used in a number of different contexts. One of the first to use the term was IBM, in October 1997, when it launched a campaign built around e-business. E-business or e-enterprise is the term used to define a business that has a virtual presence or Web site on the Internet either to promote brand awareness or enable e-commerce. E-commerce can be defined as "the conduct of business among e-enterprises and consumers" where e-business means "a business enterprise with the capability to exchange value (money, goods, services and information) electronically" (Anderson Consulting, 1999). Today, major corporations are rethinking their businesses in terms of the Internet and its new culture and capabilities and this is what some see as e-business. There is no one commonly agreed definition of e-commerce or e-business. Thus, there is a need to clarify terms being used and explain the context in which they are being applied. E-commerce has an impact on three major stakeholders, namely society, organizations and customers. There are a number of advantages, which include cost savings, increased efficiency, customization and global marketplaces. If an online company is to be successful, all aspects of its service must be closely integrated in terms of systems, networks, procurement, shipping and customer support. Many companies have found that setting up a Web site is relatively easy; however, it is the fulfillment of orders offline that is problematic, because systems are not sufficiently efficient to seamlessly pass on the order information and complete the order without error and/or delay. Companies must also prepare themselves for the volume of users accessing their Web site, as well as having the capacity to handle this all the way up the supply chain. The key element to business achievement is quality (Dale, 1999). Without a quality management approach that guarantees quality from its systems, staff and suppliers, a business will not be able to deliver the appropriate level of service quality to satisfy its customers. Just as speed is one of the main attractions for customers using the Web, rather than making transactions in the physical world, negative word-of-mouth appears to travel much faster in cyberspace. Business conducted on the Internet can still influence customers' expectations through advertising but the communication that takes place is via a computer interface on third generation devices such as the Wireless Application Protocol phone and household appliances. Service quality on the Web is especially important for the interface between customer and the Internet, namely the Web site. Even before a customer actually completes a subscription form or makes a purchase, he/she will have navigated a way through the Web site. If the Web site is

not easy to navigate, a customer will probably never return to use it again. The first critical issue is the access of the customer to an organization's Web site. Constant availability and up-to-date information 24 hours a day, seven days a week, 365 days a year are crucial from Web site start up. IDC in Computing Magazine (Gann, 1999) suggested that by 2003, between a third and half of all e-commerce will be conducted outside normal business hours. Zona Research in the same article (Gann, 1999, pp. 38-9) reported that "If page-response time is kept under seven seconds, fewer than 10 per cent of people leave the site. However, when it rises above eight seconds, 30 per cent of customers leave. When delays exceed 12 seconds, a staggering 70 per cent of people bail out." In the same report, it was said that 75 per cent of the Internet users surveyed, who had made purchases on the Web, cited downloading delays as the reason for not making a purchase. In any industry, customer loyalty is a key factor in gaining a competitive advantage over the competition. Parasuraman et al. (1991) found that customers place a great deal of importance on relationships in service experiences. Most customers want to be served by the same contact person each time they visit their bank, or be recognized by staff in a hotel if they use it regularly. Although this aspect is elusive from a human contact point of view, Web sites are now capturing customer information and can recognize returning customers by means of a simple registration of an e-mail address and by offering different options in order to provide customer customization. By building up this kind of customer relationship, e-businesses are executing customer retention techniques which should result in increased customer loyalty and help develop a successful business, as typically described by Heskett et al. (1994). In the world of e-commerce, the interaction between a customer and a business will for the most part take place with a computer as the interface. There is no human element as such in a service delivered over the Internet, apart from through customer service reached by e-mail or telephone, if that option exists, so the quality of the Web site becomes the "moment of truth". Another difference between the physical service environment and the Web site interface is that companies are able to customize their service to individuals, particularly when they interact directly with the customer. For the Web site interface, the opportunity to customize is not automatic because the Web site must first glean customer information and then process this information to provide customizations. Therefore the Web site must be created to provide relevance for any type of customer whether old or new.

II. THE CONCEPTUAL MODEL OF SURVEY QUALITY

Parasuraman et al. (1985) developed a conceptual model of service quality which they created from empirical research. The model highlights the following five service quality gaps:

- (1) Gap 1. Consumer expectations \pm management perceptions of consumer expectations.
- (2) Gap 2. Management perceptions of consumer expectations \pm service quality specifications actually set.
- (3) Gap 3. Service quality specifications \pm actual service delivery.
- (4) Gap 4. Actual service delivery \pm external communications about services.

The final gap \pm Gap 5 \pm is the result of the four other gaps.

This conceptual model of service quality and its gaps will be discussed in relation to the concept of e-commerce and its relevance will be examined. In e-commerce, the medium of the Internet means that the same information or service can be standardized each time there is an interaction between the customer and the interface. In this case, variability disappears as the customer makes several clicks depending on what is offered and each customer goes through the same experience. Therefore it could be argued that Gap 3 does not exist because the service specifications are put onto one common interface (i.e. the Web site), and do not differ for each customer. However, if the customer then contacts the company directly by e-mail and gets a personal reply, or telephones their customer service operations or experiences an after-sales service offline, then Gap 3 could exist. In relation to Gap 1, there could be a gap between what the customer expects and what management perceives that expectation to be. This kind of gap is relevant for any organization whether bricks and mortar (BAM) or just a pure play on the Internet. If management misinterprets what the customer's needs then this will affect the customer's evaluation of service

quality. In e-commerce, the difference between what the customer needs and what management perceives this need to be can become blurred. One outcome of the Internet phenomenon is that new business models are being created and innovation has increased enormously. Businesses are now creating and designing new products and services that customers would not otherwise have experienced. For example, Letsbuyit.com offers the service of negotiating with a supplier for a discount depending on how many customers want to buy a certain product. In the physical world, customers would seek out the lowest price and/or negotiate the price down but very rarely would a customer be concerned to identify five other or so people interested in order to gain a substantial discount on, for example, a CD-ROM player, due to the time and effort involved. Therefore the quality issue in this gap does not relate so much to meeting the needs of the customer, because their expectations are much lower to begin with, but more to the backend processes when the product is delivered. Horovitz (1990) supports this theory by saying that the quality of service will be perceived differently according to whether the service is new or well established. The customer who has just discovered a service tends to be less critical in his judgment than the experienced user".

While it can be argued that Gaps 1 and 3 may not be so relevant to service quality in the e-commerce environment, Gap 5 is still an important issue and is affected directly or not by the other four gaps. Perhaps in the case of e-commerce, different weightings are needed to determine which gap is more critical than others in affecting quality. Parasuraman et al. (1985) suggest this in their areas for future research. In order to judge Gap 5, the customer's perception of service quality during and after service delivery must be measured which depends on certain criteria.

Dimensions and determinants of service quality

GroËnroos (1984), Lehtinen and Lehtinen (1982) and Czepiel et al. (1985) have considered the service quality of the service encounter as two different dimensions, one being technical or output quality and the other functional or process quality. These dimensions were assessed according to attitudes and behavior, appearance and personality, service mindedness, accessibility and approachability of customer contact personnel. By means of the computer interface, these assessments are mostly invalid due to the absence of customer contact personnel; however, accessibility and approachability are relevant when referring to a Web site. Being able to access a company's Web site is crucial for a business transaction to take place, and the page layout must be suitably user friendly or "approachable" to encourage a customer to continue on to making a purchase. As for the corporate image, this can be said to be as relevant in a BAM environment as on the Internet. Czepiel et al. (1985) not only pinpointed the process and outcome quality dimensions but also identified three different dimensions of the service encounter, distinguishing between customer perceptions, provider characteristics and production realities. They suggested that these covered common crucial characteristics in service delivery and that the determinants of satisfaction were therefore similar in each case. For the customer perceptions and production realities, they listed elements which were then judged along a continuum. The customer perceptions included purpose, motivation, result, salience, cost, reversibility, and risk. The production realities related more to elements such as technology, location, content, complexity and duration. These two dimensions can be compared to the customer's perception of a Web site and the complexity or speed of the technology involved. The third dimension of provider characteristics relates to the expertise, attitude and demographic attributes of the staff which, in this case, would be inconsequential.

Edwardsson et al. (1989) expanded further these two types of service quality, and summarized four aspects of quality which affect customers' perceptions:

- (1) Technical quality;
- (2) Integrative quality;
- (3) Functional quality; and
- (4) Outcome quality.

Technical quality refers to the skills of the personnel and design of the service system. In e-commerce, these two aspects are hidden from view and are not experienced directly and therefore cannot be judged by the customer. Integrative quality is concerned with how the different parts of the service delivery system work together. This is crucial in e-commerce because the customer must have a positive experience online and if relevant a positive experience offline. The third aspect is functional quality which means the manner in which the service is delivered. As for GroËnroos (1984) and Lehtinen and Lehtinen's (1982) definition of functional quality, the meaning is the same and is relevant to e-commerce in so far as the layout and accessibility of a Web site is concerned, without the direct human contact or physical environment. Outcome quality is when the actual service meets the promised service and the customer's needs and expectations. This is true in the case of e-commerce just as much as for businesses in the physical world. If a customer is dissatisfied, he or she is unlikely to visit that shop or buy from the Web site again. The likelihood of non-purchase is greater on the Internet due to the ease with which customers can click to a competitor's Web site.

Even though this type of research had considered the matter of customers' perception of quality, it was Parasuraman et al. (1985; 1988a) who addressed the issue as to how the customer makes an assessment of service quality. They came up with ten determinants that can be used to measure service:

- (1) Access (approachability and ease of contact);
- (2) Communication (informing and listening to customers);
- (3) Competence (possession of required skills and knowledge to perform the service);
- (4) Courtesy (demeanour and attitude of contact personnel);
- (5) Credibility (trustworthiness and honesty);
- (6) Reliability (consistency of performance and dependability);
- (7) Responsiveness (timeliness of service and willingness of employees);
- (8) Security (freedom from danger, risk or doubt);
- (9) Tangibles (physical evidence of service); and
- (10) Understanding the customer (making an effort to understand the customer's needs).

Credibility is an assessment that can be made before using a service and this has the same bearing in e-commerce generally, a customer will only make a transaction in e-commerce after having had some kind of recommendation from an external source, whether it is through advertising or by word of mouth. Security is of critical importance when making transactions online. Usually, the Web site will indicate that it is a secure Web site so that customers can give. Other determinants such as understanding the customer and access are also relevant to the e-commerce marketplace. A Web site must be available at all times and does not have opening and closing hours like a normal high street bank or shop. To understand the customer, a clever Web site has cookies which recognize repeat customers and do this by asking a new customer to register some kind of user word like an e-mail address which they enter on each occasion that they access the Web site. In this way, customers can be sent information by e-mail or offered purchasing suggestions on re-entering a Web site depending on what they have previously bought. The aim is to meet the customer's needs and provide the kind of personalization that a regular customer would get from contact personnel in a BAM environment. Communication is difficult on the Internet because the interaction between the Web site and the customer is often one way, the Web site providing information to the customer. It is only if a Web site offers a telephone number or e-mail address that the customer communicates with the company directly, and in most cases, e-mail queries receive standard e-mail replies that may not respond directly to the query. In a similar way, courtesy and competence can be said to be almost non-existent during the Web site experience. The customer will generally navigate a Web site if it is

easy to use but he or she will not be able to judge what the personnel are like behind this interface or if they have the required skills to perform a service. It is only through the customer service option that this can be assessed and even then, an automatic reply e-mail message is often devoid of human characteristics. Tangibles are for the most part irrelevant for measuring service quality in e-commerce as the customer only interacts with the Web site. Therefore, the customer cannot have opinions about the physical properties used to deliver a service. Most e-commerce companies either have their own warehouses for fulfilling orders for products to be sent out, or ensure suppliers do this directly. The activity may take place far away from where the customer is sitting and so is not applicable. Responsiveness and reliability are, however, applicable because they relate to what the company promises. Reliability could be judged. This is important for any business and relates to the whole interaction between the interface and the back-end processes of fulfillment. Responsiveness as such is slightly more indiscernible, especially whilst directly interacting with the Web site. If the customer has a problem, the customer service option of telephone or e-mail is how to report this and it is here that the company's ability to respond well and at a reasonable speed is judged. This is also relevant if fulfillment is part of the service and the customer has to send back an item or it is late arriving.

Johnston (1995) added another determinant, flexibility, after carrying out further research on these 17 determinants in retail banking. This was used to describe "a willingness and ability on the part of the service worker to amend or alter the nature of the service or product to meet the needs of the customer" (Johnston, 1995). In an e-commerce transaction, there is little flexibility because what an e-business offers can be customized to a certain degree but not changed during the course of the service delivery. GroËnroos (1990) has also undertaken further research into the determinants of service quality based on his earlier model. He offered six criteria of good perceived service quality:

- (1) Professionalism and skills;
- (2) Attitudes and behavior;
- (3) Accessibility and flexibility;
- (4) Reliability and trustworthiness;
- (5) Reputation and credibility; and
- (6) Recovery.

The first five of these are similar to the five determinants of Parasuraman et al. (1988a) and therefore merit equivalent arguments put forward above, when applied to the world of e-commerce. The sixth determinant, recovery, has become an important factor in service quality. Lewis (1999) notes which effective service recovery can enhance customer loyalty and provoke increased positive word of mouth communication. Looking at this in terms of a Web site, service failure will most likely be due to the system crashing and could be caused by the company or customer. If there is a consistent problem accessing the Web site or while using it, then a customer should complain but they are more likely to click to another competitor's Web site rather than spend time complaining and therefore service recovery becomes immaterial. The research on service quality determinants has so far not addressed the means of assessing service quality in the world of e-commerce especially during the interaction between the customer and the interface of the computer. One reason for this is that only in the last couple of years has consumer e-commerce taken off and it is consumer issues that identify the problems for research. Another reason is that until recently, there has been scepticism about the future of e-commerce and therefore funding for research has not been readily available. The use of computers or technology in service delivery is not new as such. Catalogue shopping could be said to be extremely similar, except that the customer participation in e-commerce is limited to the time online and does not involve telephoning to order a product or putting an order form in the post. Furthermore the information on the Web site is for the most part real-time so the customer knows instantly whether a product is available or not.

Measuring service quality

In online environments, service quality is defined as a website make possible efficient and effective shopping, purchasing, and transport of product and services (Zeithaml et al., 2002). Service quality is a comparison of expectations with performance. The quality is part of anything in nature. Comparison of business services in an electronic environment is very easy and customer easily can search in other organizations simultaneously and with comparing service levels can choose an organization with best service. Service quality has a lot of underlying dimensions of electronic banking which that including: Reliability, responsiveness, security, ease of use, access and etc. A relationship between observed quality and customer loyalty is positive, relationship between service quality and customer shows that service quality has an impact on individual consumer behavior, where superior service quality leads to favorable behavioral aims, while unfavorable behavioral aims are a result of minor service quality. The previous discussion has examined whether the determinants of service quality can be applied to e-commerce. There is a further question as to whether some determinants are more important for customers than others. For example, Parasuraman et al. (1988a) noted from their research of four service operations using the SERVQUAL questionnaire that "A striking result in terms of the relative importance of the five dimensions in predicting overall quality is that reliability is consistently the most critical dimension. Empathy is the least important dimension in all four cases." Later on Zeithaml et al. (1990) concluded that tangibles were the least important dimension due to the fact that, on average, the companies in their research exceeded customers' expectations. Berry (1995) still rated reliability as key to service delivery when he stated "Dependable, accurate service increases the customers' confidence in the company; frequent service mistakes destroy the customers' confidence". Johnston's research (1995) led him to deduce that intangible determinants such as reliability and availability were key factors, although responsiveness was more important than reliability which was more a source of dissatisfaction than satisfaction. It is therefore interesting to assess the importance and relevance of such determinants in the e-commerce environment. Another issue in measuring service quality is that of customer expectations. Parasuraman et al. (1991) used focus groups to understand customer expectations and the outcome was that they expect the service to be how it is supposed to be. They also found that a key influence was price because the more a customer pays; the better a service should be, however, a low price was not an excuse for poor service. Using the key determinants described by Parasuraman et al. (1988b), they created the zone of tolerance which separates the desired service level from the adequate service level and compared this to the overall competitive edge which a business might have. After applying this to their aforementioned service dimensions, they concluded that "the opportunity for firms to exceed customer expectations is greater with the process dimensions than with the outcome dimension" (Parasuraman et al. 1991). They also concluded that if customers perceive that they have alternative suppliers from which to choose, then their zone of tolerance is likely to be smaller. Both of these statements are important for e-commerce because the interaction between the customer and the Web site is a process dimension and therefore a business should ensure quality in this area just as much as in their backend processes. The second conclusion is even more pertinent because of competitor's Web site, therefore the zone of tolerance is potentially much smaller than perhaps Parasuraman et al. (1991) had envisaged. The Web site is where the customer first comes into contact with the company and what it is offering in terms of information on products and services, and transaction capabilities. If the first experience is negative, then the customer is highly likely to click into a competitor and not return to that Web site. This increased competition is also affected by the fact that Web sites should be accessible all hours and all day. This means that the experience of the Web site must be a positive one and puts an even greater emphasis on the critical quality tenant of "right first time and every time".

III. DISCUSSION

Services are characterized by the fact that they are intangible, simultaneous, and heterogeneous and cannot be stored for future consumption. Comparing these characteristics with those of e-business, there appear to be similarities and differences. Where a service is intangible, this can also be said of e-commerce. A customer may access a Web site to receive information or make an order but does not receive anything tangible from this experience. It is only afterwards that the customer may receive a tangible product but this is offline. On the other hand, the customer does not necessarily participate in the production process nor consume at the same time. However, in some case (e.g. a customer accessing their bank account details online) they are

experiencing the production of the service on offer by browsing the Web site and consuming it when accessing their details. Another fact about the simultaneity experienced in services is that the customer judges both the production and consumption at the same time which is mainly dependent on the interaction between the customer and an employee from the company offering the service. The lack of personnel in E-business means that performance is judged on another level and therefore involves different standards. However, due to the novelty of e-business, many customers lack knowledge about Web site standards and are therefore likely to be less critical than in physical service delivery, especially when a large number of consumers are just starting to go online. Heterogeneity refers to the fact that a service often varies due to the human interaction involved in delivering the service. In e-business, the interface is technology which enables a process to be replicated repeatedly using strict controls, similar to those used in manufacturing technology to standardize processes. This also means that the e-business service delivered to the customer can be judged more objectively than with a physical service which involves the interaction of human beings on both sides of the interface. In the same vein, measuring quality in services is extremely difficult because all customers are different and the service will be delivered according to the interaction between the customer and a member of personnel. The only way to measure this is through interviewing a large number of customers and/or asking them to complete questionnaires but the answers are likely to be quite varied. In e-business, this kind of data is much simpler to obtain because technology allows the company to monitor a customer's progress throughout the Web site. If, for example, the majority of customers are checking out but not actually completing the order process, then it is assumed there is a problem within the order process. By following the clickstreams, valuable information can be obtained to help improve the site performance. Although the medium of technology has many benefits, it is still harder to build up a relationship with a customer via a Web site than it is between two people. The difficulty with trying to keep customers returning online is one of the main challenges for e-businesses and the reason why the quality of the offering is critical. The fourth characteristic refers to perishability and the fact that a service cannot be stored. This is not true of e-business, where looking at information or buying a product can be carried out as many times as needed with as little variation as possible due to the technology involved. The benefit of providing standardized procedures during the Web site experience is that it will give customers confidence to return and use the site again. If the Web site is not simple to navigate then not just one customer but several may never return again because they are all experiencing the same difficulties. In the services environment, the interaction is usually one on one and therefore if a mistake is made and a customer gets frustrated, the consequences are far less devastating. It is also easier to implement service recovery techniques but with e-business, service recovery can only be applied after the Web site experience, if at all. Although standardization is useful for guaranteeing a good experience to every customer who uses a Web site, it does not necessarily benefit the company in terms of personalizing that service. In a service environment, a company can usually customize the service encountered to each individual customer, adapting as needed. In e-business, the Web site has to appeal to a wide range of people and in considerable numbers, and only after customer data has been captured can customization truly begin. The research, carried out between 1982 and 1995, identified many different factors that customers can use to judge service quality during the service encounter. For the purposes of this discussion, the main determinants are assumed to come from Parasuraman et al. (1985), Johnston et al. (1990), Johnston and Silvestro (1990), Johnston (1995) and GroËnroos (1990). Out of these 22 determinants, we consider that only 11 are of value to the assessment of Web site quality. Competence, courtesy, cleanliness, comfort, friendliness, helpfulness, care and commitment all refer to a physical environment concerning the employees or surroundings of a service environment and therefore are not relevant to a Web site. Two other determinants which are not relevant to Web site quality are flexibility and recovery. Flexibility refers to the ability of the employee to change the service or product to meet the needs of the customer. The Web site experience is based on generic processes which do not allow the service or products on offer to be changed. The only way this can be done is by personalizing a site for a customer, but this is based on specific customer data and only takes effect after a customer's first visit. The other non-relevant determinant is recovery. The determinant can only be judged when the service or part of it goes wrong. If there is a problem with a Web site, it is highly likely that the customer will just click to a competitor and therefore the process of recovery cannot be started. If the problem occurs offline, then recovery becomes much

more important. It is therefore argued that recovery is not relevant to the Web site experience. If a Web site is too slow to download or unavailable for a significant amount of time, customers will probably not attempt to use that site again but click to a competitor. Just as crucial is the speed with which the home page downloads as well as the other pages to be navigated within the Web site. This is especially important because most customers use Web sites for speed and convenience. Communication is another important factor for the Web site experience although it is provided using text, color, graphics and animation rather than by personnel. It is also a one-way communication channel, unlike in services where the customer and company employee can interact. Communication can also be used to describe service, feedback and customer confidence because of the link with informing and listening to the customer. Credibility in Web site design usually refers to such factors as security, privacy, company details, and quality certification. Reliability in services is determined as consistency of performance and dependability which is relevant to Web site design. The security determinant in services is still important during the Web site experience, perhaps even more so as it is one of the main barriers to customers making purchases online but it is seen as a part of reliability instead of a separate entity. The determinant of understanding or knowing the customer is just as important in services as in e-business. Color is considered as an important factor of quality in that it serves to reflect the corporate image of the Web site and this is important for customers, giving them confidence in using the site. However, the use of flashy graphics and complicated animation can also discourage customers from using a site. Therefore the determinant of appearance is just as important in the Web site experience as in services. Availability is also important because it concerns the ability of the Web site to inform the customer of stock information for products offered in real-time. It is important for the customers to know whether the product they are ordering is available now or out of stock. Functionality in services refers to the serviceability or fitness for purpose of the service on offer. In terms of the Web site experience, this relates to clarity of purpose and ease of navigation.

IV. SUMMARY

The various surveys and research (e.g. Parasuraman et al. (1985) and Johnston (1995)) carried out by several sources have shown that the medium of the Internet and the development of e-commerce is not just a passing fad but a real event on a global scale. The development of new technology is advancing rapidly to speed up Internet systems and create new distribution instruments so that the World Wide Web becomes increasingly accessible worldwide. The number of consumers making transactions online is increasing in an exponential manner, and the amount of expenditure is also growing. There are powerful advantages of B2B transactions for suppliers and customers whose cost savings should have a far reaching effect on consumer products and services. While the Internet acts as a faster, less costly platform both for consumers and businesses, it has inadvertently increased the importance of customer satisfaction. By making transactions faster and easier, the Internet has unwittingly enabled the customer to switch just as quickly between e-businesses, causing the element of competition to take on a new dimension. Just as Heskett et al. (1994) stressed the importance of customer satisfaction to achieve good financial performance in services in the physical world, the same can be said of e-commerce where a customer can be lost if unable to access a Web site in the first place. Just as service quality has become a way of establishing competitive advantage through customer satisfaction in BAM companies, so it is just as crucial for e-businesses. The issue of service quality has been researched extensively by academics such as Parasuraman et al. (1985) whose "gap" model identified the main areas along the business process where differences could result in failure to deliver service quality. A number of academics such as Parasuraman et al. (1985, 1988b), Groenroos (1990), Johnston and Silvestro (1990), Johnston (1995) and others have tried to identify key determinants by which a customer assesses service quality and consequently results in satisfaction or not. As examined in the paper, many of these determinants are related to the personnel that the customer comes into contact with in service environments, however, the interface by which customers access businesses over the Internet are without this human element. It is clear that services and e-business, although not totally dissimilar, serve customers on different levels, the main differentiating factor being the lack of human interaction during the Web site experience. In order to identify the key quality factors in satisfying customers when they interact with businesses over the Internet, identifying suitable determinants for the e-commerce environment should be the focus of further research. Although some of the services determinants described by

writers such as Parasuraman et al. (1985) and Johnston and Silvestro (1990) are equally relevant for a BAM business as for an e-business, the computer interface throws up more issues and it will be the task of researchers to ascertain whether these issues differentiate service quality via the Internet from that offline.

References

1. Johnston, R. (1995), "the determinants of service quality: satisfiers and dissatisfiers", *International Journal of Service Industry Management*, Vol. 6 No. 5, pp. 53-71.
2. shahrzad shahriari , mohammadreza shahiari, Saeid gheiji " E-commerce and IT impacts on global trend and market", *International Journal of Research – GRANTHAALAYAH*, Vol.3,Issue 4, April 2015.
3. Parasuraman, A., Berry, L.L. and Zeithaml, V.A. (1991), "Understanding customer expectations of service", *Sloan Management Review*, Vol. 32 No. 3, pp. 39-48.
4. Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985), "A conceptual model of service quality and its Implications for further research", *Journal of Marketing*, fall, pp. 41-50.
5. Shahrzad Shahriari, "Effective factors on E-Loyalty of E-Banking customers", *International Journal of Advance Research in Computer Science and Management Studies* ,Vol. 2, Issue 3, March 2014.
6. Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988a), "Communications and control process in the Delivery of service quality", *Journal of Marketing*, April, pp. 35-48.
7. Shahrzad Shahriari, "Survey on the insurance service characteristics to retain and attract customers", *International Journal of Advance Research in Computer Science and Management Studies*, Vol. 2, Issue 6, June 2014.
8. Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1988b), "SERVQUAL: a multiple-item scale for measuring consumer perceptive of service quality", *Journal of Retailing*, Vol. 64 No. 1, pp. 12-37.
9. Gann, R. (1999), "every second counts", *Computing*, 28 October, pp. 38-40.
10. Gunasekaran, A., et al. "E-commerce and its impact on operations management." *International journal of production economics* 75.1 (2002): 185-197.
11. Subramani, Mani, and Eric Walden. "The impact of E-commerce announcements on the market value of firms." *Information Systems Research* 12.2 (2001): 135-154.
12. Schafer, J. Ben, Joseph A. Konstan, and John Riedl. "E-commerce recommendation applications." *Applications of Data Mining to Electronic Commerce*. Springer US, 2001. 115- 153.
13. Daniel, Elizabeth, and Hugh Wilson. "Adoption intentions and benefits realized: a study of e-commerce in UK SMEs." *Journal of Small Business and Enterprise Development* 9.4 (2002): 331-348.
14. Eastin, Matthew S. "Diffusion of E-commerce: an analysis of the adoption of four e-commerce activities." *Telematics and informatics* 19.3 (2002): 251-267.
15. Drew, Stephen. "Strategic uses of e-commerce by SMEs in the east of England." *European Management Journal* 21.1 (2003): 79-88.
16. Gibbs, Jennifer, Kenneth L. Kraemer, and Jason Dedrick. "Environment and policy factors shaping global e-commerce diffusion: A cross-country comparison." *The information society* 19.1 (2003): 5-18.
17. Wong, Poh-Kam. "Global and national factors affecting E-commerce diffusion in Singapore." *The Information Society* 19.1 (2003): 19-32.

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