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Factors Influencing Perception of Consumers in E-Business: Gaining Trust in E-Commerce

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Abstract. Perception of consumers when surfing the web for products has been heavily influenced by various factors such as risks, trust issues and uncertainty. Here we study the influence of perceived risk on consumers during the process of adoption of e-commerce. With the reference of the Technology Acceptance Model (TAM), the key issues being listed as the perception of the consumers influencing their decisions have been addressed in order to understand why the people want to use an online service for perception or discard their purchase.

Keywords: perceived risk, technology acceptance model, trust and uncertainty

1. Introduction

The evolution of the world is transcending the mere idea of daily monetary transactions. We can no longer look at the trends of the yesteryears where purchasing and selling power relied solely on tangibility of the environment and products. However, the thought of buying products online has made the consumers more sensitive and aware to the hazards of the process as opposed to traditional shopping. By traditional shopping, we can deduce the idea that the consumer experiences the actual product in order to remove uncertainty and reduce any possible risks before they make a purchasing decision. This means the consumers will visit physical stores in order to actually feel the product and clear any queries regarding the product in order to make their decision. Taking this statement to be true we still have to keep in account that even in traditional shopping there is always a factor of perception and uncertainty. Taking this into consideration, the inevitability of consumer perception on the involvement of risk during purchasing should not stop online businesses from flourishing. New challenges involve new risks and new methods or approaches to tackling the challenge. First and foremost we should understand that as a business we are responsible for forecasting consumer perception and reducing the chances of risks in order for the consumers to feel safeguarded in means of privacy and accountability. Typical studies point out the flaws and problems of the current system. This paper is written in order to try to explain on what can be done to and how to minimize the perception of risk.

The vastness of internet media quickly proposes entrepreneurs to adapt to the new business ideas, new market and form new business models in order to amend to the market demands. The main challenge for the business people is to internalize what the market wants, what are the constraints and how to deliver the needs of the people without the presence of any obstruction along the way. The difference between want and need is pretty clear as a consumer could want the most high end laptop costing about $5000 but in the end of the day what the consumer needs is basically a system to be able to work on [10]. The focus should be more on

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how to deliver the customer needs via online transaction in the safest and secure way possible while providing knowledge and trust of the transaction to the consumer. The Business to Consumer (B2C) not only depends on the consumer's perception of the trust in the internet transaction as means of purchase but also on the reputation of the web based retailer as reliable merchants [21]. Trust has been the major issue to consumer's expectancy of receiving the service and product in turn resulting in a satisfying exchange. The first part of the review involves the Technology Acceptance Model (TAM) [8] [9]. The TAM is explained below, analyzed along with perceived risk and its dimensions deducing its influence on e-business adoption.

2. Methodology

This review is explanatory and information is generated by literature review. The sources of journals are from internationally acclaimed databases such as emerald, ebsco, amazon, google scholar, etc. The papers were collected over a span of three weeks and reviewed with the context of e-business and management issues regarding e-business. Also a reference of a few online books has been made to define theories.

3. The Technology Acceptance Model (TAM)

Davis's [8] Technology Acceptance model is based on the Theory of Reasoned Action [1] explaining the behavior of usage on the new technology. This theory focuses particularly on the beliefs that influence individual attitudes and intentions [9]. Two specific attributes that normally affect a person's decision are perceived usefulness (PU) and perceived ease of use (PEOU). Perceived usefulness means how a system will affect usage in terms of effectiveness and performance. Perceived ease of use refers to how less effort is required in order to use the system. The Theory of Reason action states that system usage is determined by user intentions while TAM considers the attitude towards the system and PU. While PU affects the attitude toward the technology, the PEOU affects the user's PU and attitude towards it. From this we can assume the following hypothesis to be true. Attitude towards e-commerce positively influences the intention to shop online. PU positively influences the intention to shop online. PEOU positively influences the attitude to shop online. PEOU positively influences the PU of shopping online [5]. Reference to TAM: Figure 1.

4. Influence of Perceived risk on online shopping

By perception we mean the ability to make sense of reality of the things we are exposed to by sensory stimuli [22]. A regular exposure to certain environment can result in oversensitivity or desensitized emotion. Moreover, our perception depends on the amount of attention we focus on something. We can normally relate to it when we take branding for an example. The second we see a 'tick' sign we know it is Nike as we are so accustomed to seeing it everywhere.

After Bauer's [3] theory of reduction where he states consumer behavior as risk taking, the classical theory of decision has been said to be a variable reflected by consumer's behavior's possible results, probabilities and possible outcomes or values. Looking at perceived risks in a theoretical manner and keeping TAM in consideration several researchers have proposed that perceived in risk in e-commerce has a negative behavior when it comes to shopping online [20].

The main risks proposed in marketing literature are:

1. Economic, monetary or financial risk: Possible money spent on initial purchase, maintenance cost, possible financial loss due to fraud
2. Performance risk: Failure in delivery of the product due to malfunction, hence not meeting the design and performance as advertised.
3. Psychological Risk: Not achieving buying goal resulting in ego loss due to frustration
4. Social Risk: Possible loss of status among social groups due to bad investment in purchasing a product or service by being untrendy
5. Time Risk: Possible loss of time when making a bad purchase by wasting time on research and the actual purchasing only to have to replace the product due to unsatisfying performance not reaching the needs.

6. Privacy Risk: Possibility of loss of control of personal information, unwanted disclosure or use of personal information without consent. [7] [13] [14] [23] [27]

5. Understanding Risk and Uncertainty

With potential perceived risk comes uncertainty. In plain simple English, uncertainty could mean unknown constraints at first seeming very subjective. This is far from the truth as uncertainty is not luck but a phenomenon [2]. Uncertainty can be measured by deducing the truth degree of an uncertain event, uncertain variable used to represent uncertainty quantity and an uncertainty distribution used to describe uncertain variable in a more incomplete but understandable way. Uncertain risk can be an accidental loss with the addition of "uncertain measure of such loss". Risk is the potential outcome of an undesired loss and uncertainty is the quality of being indefinite. This means risks can be managed and uncertainty can be avoided. This is one of the key challenges in e-commerce; how to minimize uncertainty and risk so as to gain trust from the consumers. We have to keep in mind that however big the quantity of risk and uncertainty is involved, it will not influence the decision of a consumer if the consumer is not aware [24]. This does not give the businesses the room to play around with perceived risk and perceived uncertainty. The amount of information a consumer gets plays a very crucial role in influence of decision of the consumer. In turn, insufficient information of the uncertainty could mean a liability to the business as it is a big risk factor in reputation and consumers are less likely to engage in business transaction [16].

6. Understanding Trust

In spite of the presence of uncertainty, when there is a presence of economic and social interactions, we understand that there is a presence of trust. In consumer-marketer relationships, trust is considered to be a catalyst because it raises the expectations in the consumers to have successful transactions. [26]. When there is a lack of trust, consumers are more reluctant to using internet for shopping. Jarvenpaa and Tractinsky study pragmatically shows us that consumer purchase intentions in many cultures are directly affected by trust. [15].

Trust is a belief that a party will be socially responsible in behavior and fulfill the trusting party's desires and expectations without exploiting vulnerability. [11][17]. Trust in B2C is a belief that consumers willingly become vulnerable keeping provided that they have taken the web retailers characteristics into consideration, hence having a goodwill trust [18] [19]. There has to be some degree of uncertainty for the existence of trust. So this theory suggests that after having known the web retailers characteristics and of the technology infrastructure, the consumers still want to become vulnerable to the system.

7. Trust and Perceived risk: Integration with TAM

It is important for trust and perceived risk to be relatively consistent with ease of use and useful. This supports Ajzen and Fishbein's [1] theory that when expanding a model it is important to keep in account of the consistency of new variables with the existing variables. Trust and perceived risk deals with retailers and single transaction decision influenced by external variables. PU and PEOU also deal with a solitary technology acceptance decision in a particular system and time frame. Although objective reality could have a hand, trust and perceived risk primarily deal with variable interpretation of the willingness to trust and risk, provided that the information about the reality is limited. Likewise, PU and PEOU deals with a consumer's perception of usefulness provided that the knowledge of the real world system is limited. Thus trust and perceived risk is coherent with PU and PEOU, which is used to measure general beliefs without listing specific details. Trust and perceived risk are also general perception without accounting specific details of the retailer's characteristics [21].

The behavior of transaction and the intention to transact are most likely to be influenced by other variables as well in addition to those already accounted for. An example to this is that the frequency of online shopping can determine purchasing intention [25] By intention to transact we simply understand a consumer's intention to engage in online exchange relationships with retailers, for example share information and maintain business relationship [28]. In spite of the increase in the number of internet users, recent research showed that 75 percent of online consumers discard their shopping carts before purchase [4].

This is a huge threat to the web retailers because they want consumers who buy their products and not just browse. Even if the browsers discard their shopping carts, when they finally decide not to purchase, we can understand that their initial intentions during exchange of information was to complete the transaction process if all went according to their plans and expectations [12]. The Required variables to control are as follows:

i. Reputation of Retailer: This is the most important predecessor of trust, perceived risk and purchase intention.
ii. Satisfaction with previous transactions: The positive outcome of past transactions influences the future intentions
iii. Frequency of shopping: Frequent shoppers are the most likely to continue transacting online.

8. Potential e-commerce risks

- Physical threats – Undertaking risks on the infrastructure. For example, fire or flood.
- Data threats – the threat of virus infestation on database, software or files
- Human error – Error while data entry by the employees or accidental deletion of data
- Hoax – Rumors created by humans on nonexistent threats posing to end up being an actual threat.
- Technical failure – Hardware/software crash
- Infrastructure failure – server crash
- Fraud – credit card, information, payment
- Malicious attacks – DDOS attack
- Hacking threats [6]

These kinds of risks have adverse effects on the perception of the safety in e-commerce to the consumers. The best way to tackle these kinds of risks is avoidance. This means to opt not to enter a new working method just because of the risks that could follow. This is however not always practical. This would mean risk transfer is an option. There are two methods of risk transfer – insurance and contracting the job to a third party so as to transfer risks to another party. This method however could cost more money.

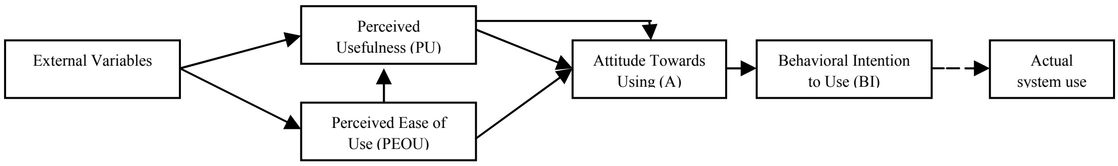
When it comes to tackling the threats there are various ways to ward off the risks. To reduce the risks you could decide on what information should be public, perception that your business is secure could be increased, warnings could be clearly stated in the websites, information could be made more private, antivirus and alert systems could be implemented, process of opening attachments could be done by using an online viewer to prevent viruses that are hidden. To reduce the vulnerability, firewall filters could be enabled, authentication processes should be implemented and clear to the users, digital certificates should be used to clear trust, virtual private networks could be implemented for a more secure network, the networking and operating system protections could be enforced.

9. Discussion

The past studies have shown how perceived risks and trust influences a consumer's intention to purchase alongside with perceived usefulness and perceived ease of use. The new variables need to be accounted for along with the existing variables when looking at a consumer's intent to transact. We need to understand how uncertainty is a phenomenon as opposed to randomness. Trust cannot come without uncertainty and even though there are variables in uncertainty consumers are willing to be vulnerable to the system. Potential risks in e-commerce can be managed by avoidance, reduction of risks and vulnerability. This implies that businesses have to tally all the potential internet risks when it comes to creating an internet business, as well as the marketing risks just to secure and clarify all the information to the consumers. Reluctance to internet shopping is most influenced by trust to a web retailer and reputation of the web retailer is the most important in e-commerce. Perceived risks cannot be avoided as it is a subjective interpretation of a consumer but it can be overall decreased and clarified. A consumer is more likely to indulge in a transaction when he knows the risks, understands the usefulness and ease of use of a product and perceives the reputation of a retailer is good. Even when there is a slight doubt in the consumer's perception, he would most likely discard a transaction. When the potential risks in transactions are unknown to a consumer, it would not influence the intention to purchase.

10. Conclusion

This paper is based on web based research of journals, articles and e-books to review the approach to understanding the perception of consumers in e-businesses and gaining trust. Firstly to understand consumer perception we have to understand what the general perception to people is when they want to purchase something online. Since perception is a subjective matter, we need to deduce what are the risk factors, what people look for when classifying products what are the uncertainties and how uncertainties can influence decisions when it comes to trust. The bigger challenge is that when people cannot view or feel the products they want to purchase they are in a bigger dilemma when they want to transact. They may be awe struck by a certain product but their decision to purchase will solely rely on other factors such as reputation of a web retailer, the perceived risks involved in transactions, their own previous encounters with buying something online, the frequency of their purchases, etc. There is no avoiding the reputation but to gain a reputation, firstly protocols must be followed as much as possible in order to minimize the risk factors whether it is infrastructure based, legality based or process based. Once the consumers understand what are the risks involved, who would be responsible for certain cases, how they themselves can be alert on the risks and uncertainty (example the use of web certificates and clarity of warnings), how secure their information is – they can decide to the amount of trust they can set for a certain retailer and this would mean they would be more willing to be involved in online transactions.



Fige 1: Technology Acceptance Model [8]

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