Factors Influencing Customer's Satisfaction towards Broadband Services

Li Dawei¹, Wong Chee Hoo¹, Lim Kim Yew¹, Alex Hou Hong Ng¹

¹Faculty of Business, Communications and Law, INTI International University, Persiaran Perdana BBN, 71800 Nilai, Negeri Sembilan, Malaysia.

Email:cheehoo.wong@newinti.edu.my

Abstract

This study examined the factors that influenced the satisfaction of broadband services among service providers of broadband in Beijing, China. There is limited research literature on customer satisfaction with broadband in China. This is also the gap due to the limited literature on customer satisfaction and broadband in China. From the above information analysis, it is necessary to research this subject. The focus of this research was on major factors towards customer satisfaction with broadband in China. This research used primary data and individuals as the unit of analysis to answer the research objectives. 395 completed questionnaires were collected from the samples located in Beijing. Data were further analyzed and the hypotheses were tested using Multiple Regression Analysis under SPSS. The finding of the research had demonstrated that all hypotheses namely price, perceived quality, brand awareness and customer service were significant in influencing the satisfaction of broadband This study found out that the most important impact on customer service in China. satisfaction came from customer service. The regression equation model was also proposed at the end of the study. The findings provide some contributions to the academicians and practitioners alike.

Keywords

Broadband, Price, Perceived Quality, Brand Awareness, Customer Service and Customer Satisfaction

Introduction

Background of study

There have been many benefits of the further development of broadband Internet to the Chinese economy, research has shown that the development of broadband has largely facilitated the delivery of information as well as allowed for more attraction of manufacturers and retailers that helps reduce the cost of transactions that are taking place between them (Xie, 2015).

Former cultural barriers do not have the same relevance as the power of the Internet and technology has made it easier for the overall economy to reap the benefits. The further penetration of broadband and Internet services is described as a national objective under the "Internet Plus" plan which was introduced in 2015 (Jiang & Zhang, 2016). This government initiative was to make sure that broadband services and other forms of Internet penetration

International Conference on Innovation and Technopreneurship 2019 Submission: 21 June 2019; Acceptance: 2 December 2019



Copyright: © 2019. All the authors listed in this paper. The distribution, reproduction, and any other usage of the content of this paper is permitted, with credit given to all the author(s) and copyright owner(s) in accordance to common academic practice. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license, as stated in the website: <u>https://creativecommons.org/licenses/by/4.0/</u>

INTI JOURNAL | eISSN:2600-7320 Vol.2019:57

receive the resources they need to further connect the Chinese economy. The goals of the government or to reduce the inequality between different parts of the country which have to be connected through digital means with broadband being a primary measure of how well businesses in that area can leverage Internet technologies for their usage (Ying, et al., 2015).

Problem Statement

E-Commerce has made a significant contribution to the growth of the world economy. China, being the country of possessing the fastest growth in the Internet population in Asia/Pacific region (Statista, 2018), has a large regional discrepancy of Internet usage. Limited research has been conducted towards exploring customer satisfaction with broadband service in Beijing, China. Compared to the study on customer satisfaction with broadband in Malaysia, similar research is expected to be conducted in Beijing.

The above discussion shows the importance of this research to both academic and industry. Many studies had been done on customer satisfaction globally. However, there is limited literature on the phenomenon in China. This shows the gap existed in factors that affect customer satisfaction towards broadband services in China. It provides a deeper understanding of some of the variables, which are used by broadband customers in Beijing China. At the same time, the statistics show that China has about 772 million people who had been using the Internet as of December 2017 (Statista, 2018). It is a huge market potential however, the strong competition existed. Therefore, it is important to understand the factors which can influence customer satisfaction. It will help the company to improve its performance to track more customers. It also provides them with better insight into what factors will make their consumers of broadband services satisfied.

Customer Satisfaction

Kaur (2018) who defined customer satisfaction as the attitude of the individual to the service or product. El-Said and Fathy (2015) argue that customer satisfaction is an important core of a business. Manjunath and Reginald (2016) explained customer satisfaction from another perspective and believe that customer satisfaction refers to the evaluation after the customer has finished using the product or service and compares it with the competitor of the product or service. Based on these views, Maharjan and Kabu (2017) believe that customer satisfaction is a marketing concept, and it is also one of the reasons why a company can survive in the market, and customer satisfaction can also be used as an indicator to measure products or services.

Price of Internet

According to Isoraite (2016), the definition of price refers to the amount of the same value that consumers must pay to obtain a product or service. Ehmke, Fulton and Lusk (2016) suggest that the pricing process is also a reasonable assessment of products or services, and high-quality, high-value products have always maintained high prices. From another perspective, customers can also judge the quality and value of the product or service through the pricing of a product or service. The price can help the customer understand the value of the service or product.

Then, there is a close relationship between market demand and price, which means that the higher the price of a product or service, the lower the demand. On the contrary, the lower the price, the higher the demand (Isoraite, 2016). One of the important factors in the marketing mix is the role of the price of the product or service in the formation of customer satisfaction (Wairimu, 2011). According to Salamin and Hassan (2016), expectations and performance are a function of price because of the weak link between expectations and satisfaction. Also, the empirical results show that when there is perceived price inconsistency

INTI JOURNAL | eISSN:2600-7320 Vol.2019:57

(complaints or unfair consequences), both have a stronger (negative) impact on satisfaction judgment.

Salamin and Hassan (2016) emphasize that when the perceived price if the customer does not match the actual price of the product or service, then customer satisfaction may have a strong negative impact.

Perceived Quality

According to the theory of Yoon and Kim (2011), customers use perceived quality as a tool for judging the quality of a product or service to determine whether the product or service meets their needs. Consumers' willingness to purchase is directly affected by perceived quality. As the perceived quality of products or services increases, customers' willingness to consume will be higher (Asma, Abdul, Muhammad et al., 2015). Before the customer buys the levelling, they know the price and style of the product for the first time, but with the product, most consumers will increase or decrease the satisfaction of the quality of the product or service. Consumers will rely on experience to determine the quality and product capabilities of a particular product (Yoon and Kim, 2011). A customer uses perceived quality to judge a good or service, the perceived quality will be considered as one of the variables that affect customer satisfaction (Asma, Abdul, Muhammad et al., 2015).

Similarly, a similar study by Thuy and Chi (2015) found that although many factors influence consumers' purchasing intentions, quality perception is one of the important factors for consumers to purchase products or services. The study finally proved the accuracy of this hypothesis.

Basfirinci & Mitra (2015) give different conclusions. The author believes that consumers will judge the perceived quality after purchasing a product or service. However, Garg and Kumar (2017) have shown that perceived quality is not just a judgment that consumers make after purchasing a product or service. It can also happen before the customer buys the product and service, but the author also mentions that perception Quality is not necessarily judged before purchase, it can also be obtained from past purchase experiences. Thuy and Chi (2015) pointed out that perceived quality and satisfaction can be used interchangeably.

Brand Awareness

According to Ahmad & Sherwani (2015), the popularity of a brand is one of the company's important assets, which can bring huge economic profits to the company. Besides, Ahmad & Sherwani (2015) said that brand awareness can stimulate consumer buying behaviour. When a customer generates brand awareness for a particular brand, then this will be a big advantage for the brand, because customers will ignore the price and other defects because of brand awareness, and this brand will also become a consumer's life (Ahmad&Sherwani1, 2015).

In addition, brand awareness builds a bridge between a particular brand and consumer, enabling consumers to better understand the brand and continue to purchase the brand's products and services It is also because of the existence of brand awareness that allows customers to distinguish the difference between the brand and other brands, thus making it easier to stimulate consumer behaviour (Ahmad & Sherwani, 2015). In other words, when a brand has a high reputation and the brand has a good image, it's market share will also expand (Bilal and Malik, 2014). The study by Bravo and Pina (2012) also proves that the higher the brand's visibility, the greater the economic benefits of the brand.

INTI JOURNAL | eISSN:2600-7320 Vol.2019:57

Finally, when a brand has considerable visibility, it will give it a huge competitive advantage when it enters a new market (Zeithaml et al., 2013). Brand awareness can be interpreted as an interaction between consumers and brands (Hussein, 2012). Therefore, when a brand with high visibility enters a new market, that is, when it increases its customers (Ahmad & Sherwani, 2015).

Customer Service

Similarly, My, Thong, Chon and Dinh (2018) also find, in their unique setting about public specialized hospitals in Ho Chi Minh City, that four factors related to customer service - interpersonal quality, technical quality, environmental quality and administrative quality - all exert significant influence upon customer satisfaction, and subsequently also upon customer loyalty.

As yet another study that takes a closer look at shopping centre operation, Kursunluoglu (2014) delineates the influence on customer satisfaction from loyalty effects and reveals that whereas "customer service about atmosphere" affects both satisfaction and loyalty, customer service provided when incentivizing customers or during the initial encounter/eventual payment stages can only influence loyalty. Focusing on the airline's industry, Adams, Yan and Martin (2012) find evidence in support of a service-satisfaction-performance model, in which outstanding customer service contributes to increase in customer satisfaction, which in turn translates into improved profitability.

Research that focuses on these specific components of customer service has also yielded results consistent with what articles such as Kursunluoglu (2014) and My, Thong, Chon and Dinh (2018) have reported regarding the broad concept of customer service as a whole. Saber, et al. (2017), for instance, has studied the business of Gurney Drive in Penang and found that factors related to parking conveniences, such as safety and availability, can contribute towards increased customer retention and satisfaction. With the backgrounds as stated, a research framework was suggested (Figure 1).

METHODOLOGY

A survey was chosen to achieve the objectives of the study. Online and face to face survey using questionnaire was used to collect the data from the broadband users in China. The samples were chosen using convenience sampling of which 395 questionnaires were successfully collected and proceed for data analysis using SPSS.

Multiple linear regression analysis

Multiple regression is the final analysis in this data analysis. This will help us create a correlation based on econometric models which allow us to map the statistical significance of the relationship between the variables especially the independent and the dependent variables. For the multiple regression to be successful the significance value of the overall equation has to be below 0.05 (Figure 2).

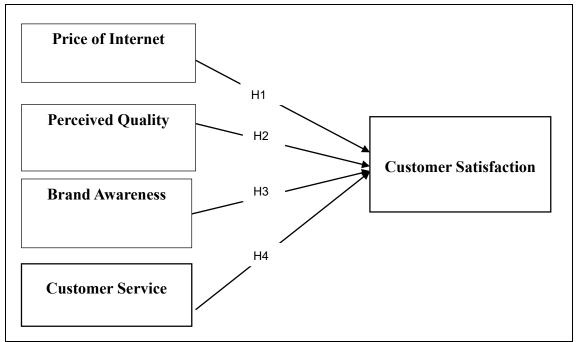


Figure 1. Research framework.

Coefficients^a

	Unstandardize	d Coefficients	Standardized Coefficients		
Model	В	Std. Error	Beta	t	Sig.
1 (Constant)	.057	.015		3.745	.000
PIS	.210	.010	.239	21.228	.000
PQ	.086	.008	.128	10.405	.000
BA	.268	.011	.331	25.147	.000
CSE	.384	.012	.412	32.966	.000

a. Dependent Variable: CSA

Figure 2. Multiple regression test.

Results

The results are shown in Table 1 as stated below.

Hypotheses	Descriptions	Results
H1	Price has a significant influence on customer satisfaction with broadband in Beijing, China.	Supported
H2	Perceived quality has a significant influence on customer satisfaction with broadband in Beijing, China.	Supported
Н3	Brand awareness has a significant influence on customer satisfaction with broadband in Beijing, China.	Supported
H4	Customer service has a significant influence on	Supported

C .1 1 **T** 11 1 D 1. 1.1 C 1

customer satisfaction with broadband in Beijing, China.

Source: Survey From the research findings, the model is functionally expressed as: CUSTOMER SATISFACTION = f (PRICE, PERCEIVED QUALITY, BRAND AWARENESS, CUSTOMER SERVICE) Thus, the model takes the form of multiple regression equation as Y = 0.057 + 0.210 (PRICE) + 0.086 (PERCEIVED QUALITY) +0.268 (BRAND AWARENESS) + 0.384 (CUSTOMER SERVICE).

Discussions and Conclusion

Having done all of the data analysis we cannot present a summary of the findings. The goal was to study the impact of the price of the internet, perceived quality, brand awareness and customer service on broadband satisfaction in China. The goal was altered to understand the relationship of this independent variable with the dependent variables. The researchers have concluded that all of the results are significant, which means that all of the independent variables have a significant influence on customer satisfaction towards broadband services in China. This would mean that the price of the internet, perceived quality, brand awareness and customer service all have a significant influence on which company needs to keep in mind especially customer service. Customer service was the most significant biggest influence on customer satisfaction in this case, China's context.

Broadband services are expected to grow in China. The population growth rate of the country, as well as the overall economic growth rate, are positive indicators for further broadband penetration in the country (Zhang, et al., 2015). The current levels of penetration are still extremely low and what is required is more homes taking up broadband and then in the process trying to shift away from mobile data as well (Agboje, et al., 2017). However collectively, all of these feeds into the digital future of the country, with most analysts having high hopes around the future growth of this industry as more individuals move from lower classes to middle classes which then requires them to take up the Internet to further their development (Li, et al., 2015).

The broadband services market has other significance for the Chinese economy (Chang, et al., 2016). The focus of this chapter is to summarize the main findings of this study. The goal was to see if the research questions have been answered and what directions did the answers take. Overall it was seen that certain variables were more important than others. For example, the price was seen to the important and in some cases more important than branding. This revealed that the consumers in Beijing were more prone to look at certain factors over others. This then also helps us conclude that the efficacy of that relationship is valid. All of the variables were reflective of the variables that were already significant in the literature. As such, it can also be concluded that the Chinese consumer has many of the same concerns as international consumers around the consumption of broadband services. Future studies may want to replicate this study again in other parts of China or in other parts of the world for a comparison or a meta analysis.

- Agboje, O. E., Adedoyin, S. O. & Ndujiuba, C. U., (2017). State of Fiber Optic Networks for Internet Broadband Penetration in Nigeria - A Review. [Online] Available at: http://article.sapub.org/10.5923.j.ijoe.20170701.01.html [Accessed 11 4 2019].
- Azorín, J. F. M. & Cameron, R., (2010). The application of mixed methods in organisational research: a literature review. The Electronic Journal of Business Research Methods, , 8(2), pp. 95-105.
- Bamfo, S. & Skouby, K. E., (2010). Mobile Internet Service Penetration Amongst Ghanaian Tertiary Students: The Case for Internet Service Provision as a Public Good. [Online] Available at: http://vbn.aau.dk/files/60596750/wwrf25_1_7.pdf [Accessed 11 4 2019].
- Bärenthaler-Sieber, S., Böheim, M., Piribauer, P. & Reschenhofer, P., (2018). Deficit of Broadband Demand in Austria. [Online] Available at: https://ideas.repec.org/b/wfo/wstudy/61509.html [Accessed 11 4 2019].
- Bouckaert, J., Dijk, T. v. & Verboven, F., (2010). Access regulation, competition, and broadband penetration: An international study. Telecommunications Policy, , 34(11), pp. 661-671.
- Chang, C.-L., McAleer, M. & Wu, Y.-C., (2016). Industrial Penetration and Internet Intensity. [Online] Available at: http://eprints.ucm.es/37429

[Accessed 11 4 2019].

- Chee, K. L., Anggraini, A., Kaiser, T. & Kurner, T., (2011). Outdoor-to-indoor propagation loss measurements for broadband wireless access in rural areas. [Online]
 Available at: http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.ieee-000005781765
 [Accessed 11 4 2019].
- Cohen, L., Manion, L. and Morrison, K. (2018). Research methods in education. London: Routledge.
- Edquist, H. et al., (2018). How important are mobile broadband networks for the global economic development. Information Economics and Policy, , 45(), pp. 16-29.
- Falch, M., (2007). Penetration of broadband services The role of policies. Telematics and Informatics, , 24(4), pp. 246-258.
- Frieden, R., (2015). Deja vu All Over Again: Questions and a Few Suggestions on How the FCC Can Lawfully Regulate Internet Access. Federal Communications Law Journal, , 67(3), p. 325.
- Ghosh, S., (2017). Broadband penetration and economic growth. Telematics and Informatics, , 34(5), pp. 676-693.
- Götz, G., (2013). Competition, regulation, and broadband access to the internet. Telecommunications Policy, 37(11), pp. 1095-1109.
- Gutterman, R. S., (2015). Book Review: An Open Internet for All: Free Speech and Network Neutrality, by Dana D. BagwellAn Open Internet for All: Free Speech and Network Neutrality. BagwellDana D.El Paso, Texas: LFB Scholarly Publishing, 2012. 162 pp. \$20 pbk.. Journalism & Mass Communication Quarterly, 92(4), pp. 992-994.
- Kessler, W., (2016). National Association of Broadcasters V. FCC. Federal Communications Law Journal, , 68(3), p. 430.
- Kongaut, C. & Bohlin, E., (2014). Impact of broadband speed on economic outputs: An empirical study of OECD countries. [Online] Available at: https://econpapers.repec.org/repec:zbw:itse14:101415 [Accessed 11 4 2019].

- Lee, S.-W., Brown, J. S. & Lee, S., (2011). A Cross-Country Analysis of Fixed Broadband Deployment: Examination of Adoption Factors and Network Effect. Journalism & Mass Communication Quarterly, , 88(3), pp. 580-596.
- Li, Z. et al., (2015). Offline Downloading in China: A Comparative Study. [Online] Available at: http://greenorbs.org/people/lzh/papers/[imc'15] offline downloading.pdf [Accessed 10 4 2019].
- McElhinney, P. et al., (2015). A corrugated horn with broadband window for W-band gyrodevices. [Online] Available at: https://strathprints.strath.ac.uk/59737

[Accessed 10 4 2019].

- Nisar, K., Osman, W. R. S. & Altrad, A. M. M., (2014). Modeling of Broadband over In-Door Power Line Network in Malaysia. [Online] Available at: https://link.springer.com/chapter/10.1007/978-3-319-06538-0_21
 - [Accessed 11 4 2019].
- Ohlhausen, M. K., (2015). The FCC's Knowledge Problem: How to Protect Consumers Online. Federal Communications Law Journal, , 67(2), p. 203.
- Ovington, T., Smith, R., Santamara, J. & Stammati, L., (2017). The impact of intra-platform competition on broadband penetration. Telecommunications Policy, , 41(3), pp. 185-196.
- Palinkas, L. A. et al., (2011). Mixed Method Designs in Implementation Research. Administration and Policy in Mental Health, , 38(1), pp. 44-53.

Pushkarskaya, H. & Vedenov, D. V., (2017). How internet penetration into rural communities changes demographics of rural entrepreneurs. [Online]
 Available at: https://businessperspectives.org/journals/innovative-marketing/issue-126/how-internet-penetration-into-rural-communities-changes-demographics-of-rural-entrepreneurs
 [Accessed 11 4 2019].

- Redican, K. J.,(2016). The Relationship Between Economic Well Being and Gigabit Broadband Penetration. [Online] Available at: https://vtechworks.lib.vt.edu/handle/10919/71702 [Accessed 11 4 2019].
- Saleh, A. R. M. & Melan, M., (2017). The Effect of Attitudinal and Satisfaction Factors on Household Broadband Penetration in Malaysia. International journal of scientific and research publications, , 7(9).
- Sutherland, E., (2013). A Short Note on Scotland's Future The Internet, Broadband and Telecommunications. [Online] Available https://papers.ssrn.com/sol3/delivery.cfm/ssrn_id2362015_code927092.pdf?abstractid =2361433&mirid=1

[Accessed 11 4 2019].

- Venkatesh, V., Brown, S. A. & Bala, H., (2013). Bridging the qualitative-quantitative divide: guidelines for conducting mixed methods research in information systems. Management Information Systems Quarterly, 37(1), pp. 21-54.
- Vettehen, P. H. et al., (2017). The Relationship Between Media Content Preferences and Political Participation in 25 European Countries: The Moderating Role of Broadband Penetration and Broadband Access:. Communication Research, , (), p. 009365021770103.
- Visoottiviseth, V., Akarasiriwong, P., Chaiyasart, S. & Chotivatunyu, S., (2017). PENTOS: Penetration testing tool for Internet of Thing devices. [Online]

Available at: https://semanticscholar.org/paper/pentos:-penetration-testing-tool-for-

internet-of-visoottivisethakarasiriwong/7a5448143ba0a47a3c9007c05bc4608f4a16f45f [Accessed 11 4 2019].

- Yang, X. et al., (2014). Switching Costs between Customer Satisfaction and Loyalty Empirical Evidence from Broadband Services in Mainland China. [Online] Available at: http://doi.ieeecomputersociety.org/10.1109/cso.2009.322 [Accessed 10 4 2019].
- Yuan, Y., Wu, X. & Lu, Y., (2012). Trustworthy Computing and Services: International Conference, ISCTCS 2012, Beijing, China, May/June 2012, Revised Selected Papers. [Online] Available at: https://dl.acm.org/citation.cfm?id=2502782

[Accessed 10 4 2019].

- Zhang, L., Amos, C. & McDowell, W. C., (2015). A Comparative Study of Internet Addiction between the United States and China. Cyberpsychology, Behavior, and Social Networking, 11(6), pp. 727-729.
- Zhu, L. & Wang, K., (2018). Research on Service Design of Public Service Institution Under Chinese Background—Beijing Talent Archives Management Center as An Example. DEStech Transactions on Social Science, Education and Human Science.