



Factors influencing electronic satisfaction of online music streaming service in generation Z

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Abstract

The purposes of this paper were to study the level of influence in terms of perceived usefulness and sacrifice in electronic satisfaction and also investigate the relationship between the causal model and the impact of perceived usefulness and perceived sacrifice on electronic quality service and electronic satisfaction. This paper was quantitative research that used a questionnaire to collect data using the samples of 500 generation Z participants. By using descriptive statistics, the data collected were analyzed using the percentage, mean, and standard deviation. Structural equation modeling (SEM) analysis was also conducted to test the hypotheses of the structure. The results of structural equation modeling indicated that perceived benefit-usefulness, perceived benefit-playfulness, and perceived sacrifice-price had impacts on electronic quality service. The electronic quality service also had an impact on electronic satisfaction with a statistical significance of 0.01. In contrast, perceived sacrifice-ease of use had no impact on electronic quality service.

Keywords: *Perceived Benefit, Perceived Sacrifice, E-Quality Service, E-Satisfaction and Generation Z*

1. Introduction

Technology that has continuously changed in the last 20 years causes the entertainment industry to adjust a lot, especially the “Music industry” that appeared to have changes in their content, strategy, and presentation style. “Music” is the job is created by human thought and classified as one of the creative economies. Early music was broadcast through the channels. People who were born before 1987 are very familiar with the cassette and CD before technology changed. The music industry received such a significant impact that it led to the beginning of MP3 (Digital music player), which remains until the present day where people are listening to music through the streaming system. This streaming media is one of the changes that occurred from technology development and makes listening to music easier in the consumer's corner (Supsinwiwat, 2017). Many scholars provide the meaning of “Disruptive Technology” differently. One of them is Clayton Christensen from Harvard University. Christensen had analyzed “Disruptive” as when a company develops products and jobs to a certain extent, and they are stuck. The disruption occurs when the company creates products with higher prices to satisfy high-end customers but neglect the lower level of customers. Similarly, if they only focus on their original product or service but ignore the needs of customers that change according to the social or technological environment, it will result in the replacement of new technology to replace the old technology that is unable to satisfy the customer group (Christensen, 1997). Over the last 20 years, a rise of Disruptive Technology in the music industry has been significantly apparent. Firstly, the phonograph was replaced with the cassette and CD. Then, those cassettes and CDs are going to be replaced by digital music. People will listen to music via streaming, which does not just happen to Thailand; instead, it happens globally.

Listening to streaming music by which “Streaming” is to play multimedia files on a computer without having to download from the internet until complete files. At the beginning of the new era, people used MP3 as a player in the first phase of listening to streaming music. We may say that it is a new trend that consumers are interested in. However, nowadays, it has developed into a standard for listening to music because this system is easy to use, and the service is also free, though some require monthly licensing fees at a fixed price. The monthly subscription allows users to choose to listen to an unlimited amount of music, making listening to streaming music popular in short. Popular applications for music listening via streaming in Thailand are available in a variety of options.

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Deezer, Joox, Line Music, and Apple Music are examples of the applications. Apple Music uses the same music database as the iTunes Store, resulting in a large number of music libraries. However, each service requires a different amount of fee as determined by each company due to changes in music listening equipment changes, which result in an adaptation of music work in many parts. The most important thing is that the record label must agree to change and adjust their work strategies for the survival of the company (Supsinwiwat, 2017). E-commerce or online businesses are different from businesses that have a physical storefront. Consumers have a buying decision process by considering the physical appearance through the website. Factors that influence customers in the decision process are such as design quality, information quality offered, system quality, process security, and privacy, which means the quality of electronic service results in customer satisfaction as a feeling of joy or disappointment. It is also the result of when each customer compares the results obtained from using the service or consuming the product to one's own expectations (Oliver, 1999).

Generation Z, people born between 1994 - present and aged 1-25 years (as of B.E. 2562), is considered as the youngest group at present. They are either studying or stepping into an early working age. They are a new generation that affects the economy in the future who generally born with the internet and various technologies (Boontham, 2011). They will be a role player in the future. Therefore, the researcher is interested in studying "Factors that influence the electronic satisfaction of online music users in the Generation Z," in the hope that the research results will be beneficial to the online music business and other electronics-related businesses.

2. Objectives

- 1) To study the level of influence of awareness of benefits and losing something for something that needs electronic satisfaction
- 2) To check the consistency of the causal model, the influence of perceived benefits and losing something for something that affects the quality of electronic services and electronic satisfaction

3. Methodology

Population and sample

The population used in this research is the Generation Z group. Who has experience in using online music services by choosing the service that is used regularly and used to use the service in answering questionnaires

The sample size is appropriate enough to represent the target population by setting the minimum sample size. However, due to the obvious limitation of the population combined with the use of the Path Analysis method that analyzes data based on the Structural Equation Modeling (SEM) and according to Rules of clarity (Rule of Thumb), Comrey (1973), the researcher obtained a suitable sample size. By specifying the scope of the sample, there should be at least 200 sample units used in the study (Kline, 2010). Also, a work by Schumacker & Lomax (2010) suggested that this type of research should use 15 - 20 sample sizes per 1 parameter as a predictive variable or observational variable, which also agrees with Anderson & Gerbing (1988). In this research, the researcher has 21 observable variables. Therefore, suitable and sufficient sample sizes should be at least 315-420 samples. Besides, Comrey and Lee (1992) suggested that for a multivariate data analysis (Multivariate analysis) that uses the structural equation model (SEM), 300 sample sizes are good, but 500 are better. The researcher, therefore, uses a total of 500 sample sizes to have more confidence, sufficient data, highest accuracy, and convenient substitute sample response rate for evaluation and data analysis.

Data Collection

The researcher conducted a convenience sampling, which was to travel to collect data in various places that the sample would be found. Generation Z tends to be at their friends' houses, schools, department stores, and cinemas (Ahead Asia, 2019). By collecting all the information in the specified



number of samples with an initial inquiry to the age range and behavior concerning the use of online music services, these samples will answer the questionnaire.

Research tools

The paper studies the literature and related research in order to create a conceptual framework that will be a guideline for the development of a questionnaire to collect sample population data using survey methods. The construction of the instrumentation, which is the main variables in collecting the data such as the demographic data, gauge of the respondents, and the list of variable gauges used in this research consist of 3 types of variables as follows. First, the initial variables consist of Perceived benefits, Received recognition of the enjoyment, Received recognition of ease of use, and Recognition of price. Secondly, the transmission variables consist of the quality of electronic services (the efficiency of use, goal achievement, and privacy). Lastly, the following variables consist of electronic satisfaction to test the confirmed hypothesis (Confirmatory Analysis). The measurement model is reflective using the Likert (5 levels) perceptual scale. The researcher analyzed the model with the structural equation (SEM) with Smart PLS 3.0.

Table 1 Accuracy Analysis Statistics

Construct	Cronbach's Alpha	Average Variance Extracted (AVE)	Construct Reliability (CR)
Perceived Usefulness (PBU)	0.865	0.712	0.908
Perceived Playfulness (PBP)	0.822	0.653	0.883
Perceived Ease of use (PEU)	0.893	0.823	0.933
Perceived Price (PEP)	0.777	0.692	0.871
Electronic Quality Service (EQ)	0.848	0.767	0.908
Electronic Satisfaction (ES)	0.818	0.648	0.880

Confidence measure of the questionnaire (reliability). Take a try-out questionnaire expertly tested in a population similar to the sample, such as users of online music. In Generation Y, a total of 30 sets, to check the purpose and completeness of questions from the questionnaire, the reliability of the questionnaire was 0.837, which is an acceptable value as the alpha value is not less than 0.7 (Cortina, 1993). The researcher analyzed the structural validity using the confirmatory component analysis method (Confirmatory Factor Analysis). By examining the central validity (Convergent Validity), the results of the analysis showed that the standard component values the standardized factor loading of each variable is greater than 0.5, the average variable variance of each latent variable is greater than 0.5, and the constructional reliability of each latent variable is greater than 0.7.

Statistics used in data analysis

The data collected were analyzed using basic statistical techniques: frequency, percentage, mean, standard deviation. The qualitative data were analyzed using content analysis. Structural equation modeling (SEM) approach using Smart PLS statistical software (Ringle, Wende & Will, 2005) was used to test the research model. PLS is a component-based approach to structural equation modeling.

4. Conceptual model and hypotheses

Perceived Sacrifice

Dodds (1999) previous studies have divided the sacrifices of things in exchange for things in two forms: non-monetary sacrifices. And monetary sacrifices, expenses including the decision to buy songs online that consumer will consider both monetary and non-monetary costs

1) Perceived Ease of Use It is a sacrifice that is not monetary, is a tangible and temporary cost of the mind. By consumers that require a lot of effort and time to use the service or product will tend to have a high awareness of non-monetary sacrifices, resulting in reducing the perceived value of the service or product (Zeithaml, 1988) by Van der Heijden (2004) Have studied this perception of ease of use in order to use the



online music listening service If the user believes that the service is easy to use, it will make the user intention to use.

2) Perceived Price The fact that consumers have to pay for using online music services, consumers are often unable to remember the price of goods or services they have purchased. Past studies have therefore used price recognition to measure consumer monetary sacrifices. Monroe (1973) with the increase in price, it will decrease consumer awareness (Kwon & Schumann, 2001) and if consumers cannot accept the price consumers will reduce the value of the product

Electronic Quality Service

A study by Parasuraman (1988) that provided dimensions for evaluating service quality of tools called SERVQUAL in 5 dimensions. Subsequently, Parasuraman et al, (2005), quoted in Pearson (2012), applied the principles of the Services Quality Assessment (SERVQUAL) to adapt to the context of the electronic business and developed a new website quality assessment tool, E-S-QUAL, which is a component of the electronic service quality 4 components Namely 1) Efficiency of use (Efficiency) means easy to use and speed of accessing information within the website 2) Fulfillment or Target means the ability to work to meet the goals that agreed 3) Privacy (Security) means the level of security and data protection of customers' behavior and 4) System Availability, which defines the meaning of system readiness It is to say that the work system is stable in use. Able to respond to usage anytime the user wants to use in this research, use only the first 3 components

Electronic Satisfaction

Electronic satisfaction is a situation in which positive feelings arise from evaluating the service experience that matches what customers expect or better than their expectations, while dissatisfaction (Dissatisfaction) is Situations show the negative feelings that result from a lower than expected service experience (Fornell, 1992). According to Cronin & Taylor (1992) research, service quality is positively correlated with customer satisfaction. The service quality is an evaluation of the client by comparing the expected service with the actual service from the service provider Orel & Kara (2014), adding that Customers who are satisfied with the quality of service received from the service providers will tend to have the intention to buy products from the same service provider repeatedly.

Past research has divided the benefits into two areas, which are perceived utility (hedonic benefit) (Childers & Carson, 2001; To, Liao, & Lin, 2007). The perception of utility relates to the function, use, ideas and external stimuli. On the other hand, perceptions of enjoyment, such as entertainment and appreciation, our emotions, and internal stimuli stimulated by the use of products or services.

Perceived Usefulness Involving marketing concepts in terms of quality of products and services. (Kim, Park and Lee, 2007) In which consumers will evaluate the use of whether or not to fulfill their desired duties and can continue to define consumers' beliefs about using online services to meet their needs. (Chu & Lu, 2007; Davis, 1989)

Perceived Playfulness It is a fun perception. Enjoyment Or the satisfaction received from the use of online services, which can be defined as activities that use online content that is perceived to cause enjoyment of the service itself By separating from functions that may be involved (Davis, Bagozzi, & Warshaw, 1992) Using the online music service, consumers can search and choose to listen to music in a variety of music genres. And can listen anytime and anywhere from a smartphone without having to buy music at music stores in various locations (Wang et al., 2013).

5. Results and Discussion

For the results of this research, the researcher has checked the accuracy data. Five hundred questionnaires are completed and used in the analysis, and the results are analyzed and processed. By dividing the presentation of the data analysis into two parts as follows.



Part 1 shows the results of the demographic analysis of the sample of 500 people. It is found that most of the respondents are males aged 18 - 20 years. By studying tertiary with a monthly income of 6,000 - 12,000 baht In terms of internet usage behavior Most of them will use the internet during 18.01-24.00 hrs from the smartphone devices. Which the total amount of time per day is more than 5 hours but not more than 7 hours per day the activities that are made from using social media are chatting, chatting with people who are members together, follow the news. And search for information as for the internet, each day will be home/dormitory and school.

Table2 Demographic detail of the respondents

Variable	Category	Frequency	Percent
Gender	Male	292	58.4
	Female	208	41.6
Age	15-17	117	23.4
	18-20	213	42.6
	21-22	170	34.0
Income	Less than 6,000 Baht	288	57.6
	6,000 – 12,000 Baht	85	17.0
	More than 12,000 Baht	27	5.4
Internet during from smartphone	00.01 – 06.00	52	10.4
	06.01 – 12.00	47	9.4
	12.01 – 18.00	107	21.4
	18.00 – 24.00	294	58.8
	Less than 3 hours	74	14.8
Total amount of time per day	3 hours – less than 5 hours	156	31.2
	5 hours – less than 7 hours	194	38.8
	More than 7 hours	76	15.2

Part 2 shows the results of the analysis of preliminary data of each observable variable in the research, a total of 21 variables, gauges by presenting the mean values. The standard deviation, skewness, kurtosis, and mean value of each variable can be summarized as follows:

- 1) Perceived benefit-usefulness, there is a high level of opinions that agree. Overall, the average is 3.95, which is found to be able to get information more easily than before, online music services through the application on the smartphone, there are many songs for you to choose.
- 2) Perceived benefit-playfulness, there is a high level of opinions that agree. The overall average is 4.01, which is found to be fun and enjoyable. Feeling excited when listening to music online via an application on a smartphone.
- 3) Perceived Sacrifice - ease of use, there is a high level of opinions that agree. Overall, the average is 3.58. It is found that learning how to listen to music online via an application on a smartphone is easy. And think that an application on a smartphone to listen to online music is easy to use.
- 4) Perceived Sacrifice - price, there is a high level of opinions that agree. Overall, the average is 3.81, which found that the price to buy online music services through an application on a smartphone is worth the money paid. And have high expectations for using the service when paying for online music service through the application
- 5) Electronic service quality-Efficiency there is a high level of opinions that agree. Overall, there is an average of 4.01 which found that there are various menus. That can be used quickly and various information the data is arranged appropriately.
- 6) Electronic service quality- Fulfillment there is a high level of opinions that agree. The overall average is 3.79 which found that it can receive-send work orders correctly. Respond to work orders quickly within a reasonable time frame
- 7) Electronic service quality - privacy there is a high level of opinions that agree. The overall average is 4.07 which is found to conceal usage behavior There is a security system that can conceal important information such as credit cards or accounts used to pay for services.



8) Electronic satisfaction there is a high level of opinions that agree. Overall, the average is 4.11. It is found that choosing to use online music services is a smart choice. Get a good experience in using the service and feel satisfied from using the service

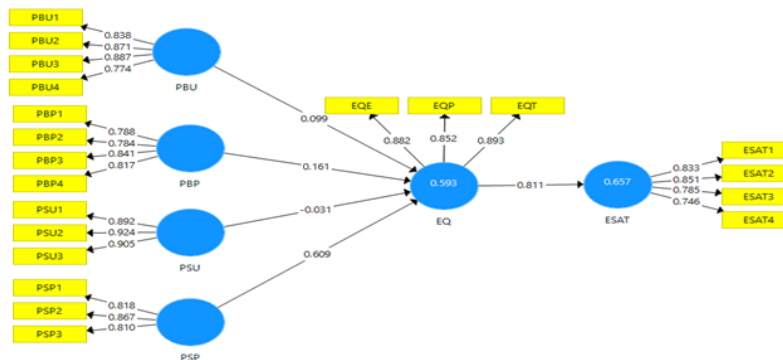


Figure 1 Analysis of causal relationships that affect electronic satisfaction

Table 3 The impact of Antecedents variables on the dependent variables

Dependent variable	R ²	Influence	Independent variable				
E-Service quality	0.593	DE	PBU	PBP	PSU	PSP	EQ
		IE	0.099	0.161	-0.301	0.609	N/A
		TE	N/A	N/A	N/A	N/A	N/A
E-Satisfaction	0.657	DE	N/A	N/A	N/A	N/A	0.811
		IE	0.081	0.130	-0.025	0.494	N/A
		TE	0.081	0.130	-0.025	0.494	.0811

Note: DE = Direct effect, IE = Indirect effect, TE = Total effect, N/A = not applicable

From Figure 1 and Table 3, showing the results of the structural equation model analysis, it is found that the quality of electronic services has the highest path coefficient of 0.811 and R² of 0.657, followed by price recognition with direct influence. On the quality of electronic services, the route coefficient was 0.609 and R² was 0.593. The perceived enjoyment had a direct influence The quality of electronic services Has a path coefficient equal to 0.161 and an R² value of 0.593 The perception of the benefits has a direct influence on the quality of electronic services. It has a path coefficient equal to 0.099 and R² is 0.593. In addition, the recognition of the benefits Recognition of the enjoyment received and price recognition has an indirect influence on electronic satisfaction the path coefficients were 0.081, 0.130 and 0.494 respectively, with R² of 0.657. The overall summary of the electronic satisfaction can be predicted 65.70%

Overall, R² for attitude E-service quality and E-satisfaction in Table 3, indicate that the research model explains 59.3%, and 65.7% respectively of the variance in the endogenous variables. Following formulae provided by Tenenhaus, Vinzi, Chatelin & Lauro, (2005), The calculated global goodness of fit (GoF) is 0.73, which exceeds the threshold of GoF>0.36 suggested by Wetzels, Odekerken-Schroder & van Open (2009). Thus, this study concludes that the research model has a good overall fit.

Summary of hypothesis testing

Table 4 Results of Structural Equation Model Analysis

Hypothesis	Path Coefficients	t-stat	Result
H1 Perceived benefit-usefulness had impact on electronic service	0.099	2.227**	Accept

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	Hypothesis	Path Coefficients	t-stat	Result
H2	Perceived benefit-playfulness had impact on electronic service quality (PBP -> EQ)	0.161	2.844**	Accept
H3	Perceived Sacrifice - ease of use had an impact on electronic service quality (PSU -> EQ)	-0.031	0.747	Reject
H4	Perceived Sacrifice - price had impact on electronic service quality (PSP -> EQ)	0.609	12.047**	Accept
H5	Electronic service quality had impact on electronic satisfaction (EQ -> ES)	0.811	37.861**	Accept

Note ** Statistical significance at the level of .01 ($p < 0.01$) ($t\text{-value} \geq 2.576$)

6. Conclusion

From the study on factors that influence the electronic satisfaction of online music users in Generation Z as follows

1) Perceived benefit-usefulness had a significant impact on electronic service quality (PBU -> EQ) at the 0.01 level showing that perceived benefit-usefulness of influence make the users see the quality of service caused by electronics where the users agree that you can choose the song or album you want to listen to conveniently and quickly. In addition, online music listening services through an application on the smartphone have many available songs. These results are in accordance with Leonnard, Comm & Thung (2017) which mentioned the way that users are aware of system performance. The system can fully respond to the needs of users, and the acceptance of technology through service quality affects the satisfaction of technology usage.

2) Perceived benefit-playfulness had an impact on electronic service quality (PBP -> EQ) significantly at the 0.01 level showing that the perceived benefit-playfulness has an influence on the users to evaluate the quality of service caused by electronics which the users feel entertain when listening to online music via an application on a smartphone. The users also feel excited when listening to music online probably because the quality of the service gives users privacy and enjoyment when listening to online music. This is consistent with Cui et al, (2016) which studied the stimulating online enjoyment of customers through good service quality that can affect loyalty through electronic websites or online.

3) Perceived Sacrifice - ease of use had an impact on electronic service quality (PSU -> EQ) significantly showing that the perception of ease of use has no influence, causing service users to see the quality of service generated by electronics. This is contrary to the research of Leonnard et al, (2017) that the user knows the ease of the system through the quality of service that affects the satisfaction in the use of technology. It might probably due to the fact that Generation Z is a group that uses technology Internet regularly leading to the point that the use of technology is normal for Generation Z that does not exceed capacity.

4) Perceived Sacrifice - the price had an impact on electronic service quality (PSP -> EQ) significantly at the 0.01 level showing that price recognition has an influence on service users to see the suitability of service quality. The users agree that the price for buying online music services through an application on a smartphone must be worth the value to be paid as there are high expectations for using the paid services. According to the theory of Sweeney & Soutar (2001), if the price is acceptable with a good quality of service, it will result in an overall increase in consumer satisfaction. Therefore, it can be concluded that if the users realize the increasing value of the price, it will result in the quality of service as well.

5) Electronic service quality had an impact on electronic satisfaction (EQ -> ES) significantly at the 0.01 level showing that the dimension of the quality of electronic services related to the efficiency of use achieving goals and privacy. It can significantly explain the quality of electronic services to please users. This is consistent with the previous research conducted by Ahmad Rahman & Khan (2017) and Kandulapati



& Bellamkonda (2014) which study the dimension of electronic service quality, satisfaction, and loyalty of users of online shopping in India that developing a quality website.

Suggestions

Suggestions for applying research results

1. From the results of the study, it is found that to lose something in order to get something in price sense the influence of electronic satisfaction, the highest priority. Therefore, users should be informed of the things that must be exchanged or money to get what they satisfy. Recognizing the price that is suitable for the quality of electronic services will lead to satisfaction.
2. From the study, it is found that the awareness of the benefits of awareness of enjoyment received the influence of electronic satisfaction. Hence, if users especially Generation Z will feel pleasure and excitement when using online music services, the privacy and good application performance are required, resulting in satisfaction and consequently re-use in the future and share their experience with others.

Suggestions for further research

1. In this research, the researcher conducted a quantitative study. Context studies should be conducted in-depth, such as by interviewing to get complete information.
2. Due to this research, the researcher studied with a sample of only generation Z alone, resulting in specific groups of data. In the future, it should be studied with other generation groups as well. To compare with the results of this research
3. This research can predict the variables that affect Electronic satisfaction by 65.70 percent. The remaining 34.30 percent may be caused by other factors that are not mentioned here. Therefore, the next research should study other variables that affect electronic satisfaction in addition to the variables that have been studied from this research.

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