

[LOG 1] LOGISTICS SERVICE QUALITY OF COURIER PROVIDERS AMONG STUDENT IN UUM

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ABSTRACT

Customer satisfaction is one of the most important part in business especially in services to gain a competitive advantage. Courier services needs to consider what the customers want because they know that if they do not meet the satisfaction of the customer, other competitor will be at an advantage for giving better services. Courier companies need to make sure that they fulfill the criteria needed by their consumers. The purpose of this paper is to measure the level of quality of courier providers based on the customer's satisfaction using their services. The Logistics Service Quality (LSQ) theory, which is a modified version of Service Quality (SERVQUAL) theory, is chosen for this paper. The theory includes variables such as timeliness, condition of order, availability of personnel and accuracy of information. It is to find out whether the hypothesis that a variable in the LSQ theory has significant influence on customer satisfaction for courier providers or not. To get a conclusion, 400 Students in Universiti Utara Malaysia were picked as the unit of analysis to be surveyed with questionnaire to collect the data and were analyzed statistically.

Keywords: *Logistics Service Quality (LSQ), customer satisfaction, courier services*

INTRODUCTION

The market in the world is becoming global, thus it shows that more and more people are getting into developing their own business. This will result in competition becoming more intense. The role in the logistics industry has changed rather rapidly over the recent years and has increased in scope. The way services that courier provides had went a serious change in becoming a very important factor in goods exchanging and communication of this day of age. Online shopping or E-commerce has now becoming a trend where people can just buy a product with a click of a button without leaving their homes. With the easy access to product information and payment to the item, the last part is how do the consumers gets the item. This is where the courier comes in. The courier must be fast like the process of payment because they are also an important factor of success for E-commerce. This all shows that supply and demand has changed a lot with the creation of internet. The courier services of old are now pressured by the competition using the Information and Communication Technologies. It is becoming difficult to stay relevant in the business as the environment is changing so fast. The rapidness of changes will need to be adapted by courier company. It will become a driver in which this business will offer more specific and giving a more diverse service

to stay in the industry. The result will benefit the consumers because they can request a more specific orders and fast responses from the couriers. For the business that focus solely on services, (Mentzer, Flint, & Hult, 2001) states that the consumers are the most important part in that kind of sector.

Customers satisfaction has become one of the key factor in becoming a successful business. Modern courier is striving to satisfy their consumers as much as they can so that the customer will always use their services instead of competitors. Customer satisfaction has a lot of benefits such as increased in sales, respected courier image and even lower the number of customer complaints. Therefore, the satisfaction of consumers should be the logical main goal for courier providers. Knowing the current levels of how satisfied their users is and having known what satisfies them has led the courier providers to focus in that area to fulfill their customer satisfactions. The level of satisfaction that is needed to be measured has allow the management of courier to pinpoint the component that causes their service users to leave.

It is not without a problem as (Hua & Jing, 2015) states that a survey on consumer's purchases were found that a lot of complaints are about the delivery not arriving at the time promise, the ordered product is damage, getting poor reception feedback from the personnel and so on. This type of issues had resulted in a significantly bad influence on customers' shopping experience. Therefore, doing a research in finding a factor on the services of logistics that can influence consumers' satisfaction has a meaning that it can give an improvement on the logistics service quality for a better experience and even helps encourage a better business practices.

LITERATURE REVIEW

Service is defined as something that has an untouchable like feature that is different from goods which has a physical form. It is an activity of delivering a kind of value to another person or an organization (Gronroos, 1984). It can also be said that it will be gone after the value delivery is done. However, service quality is known as a level of expectation when receiving a service. It is compared through the difference of service expectation before getting the service and the level after receiving it. It is measured that if the gap between expected and perceived level is short, then the service quality is high. It can also be said the other way around in which if the service quality is low, then the difference between expected and perceived level is large (Parasuraman, Zeithmal, & Berry, 1985).

Customer satisfaction is said to be an important factor which contributes to the loyalty of consumers to the company (Saura, Frances, Contri, & Blasco, 2008). A business will gain more profit if the company focuses on increasing the factor of customer loyalty. The satisfaction of consumers is measured by comparing the difference between knowing what you will get and what you will get afterwards (Parasuraman, 2004). If the company had given the products or services to the consumers that meets or even exceed their expectation when buying the item or using the services, thus the customers' satisfaction is fulfill.

The quality of services given and meeting the expectation of consumers are somehow two of the same things. It can be said that customers' satisfaction is an essential part of

knowing the service quality of a business. (Gorla, Somers, & Wong, 2010) stated that the satisfaction of consumers is the antecedent of quality of service. It means that the service given will lead straight to the satisfaction of their users. Both elements are known to be an integral part in any business to help stay relevant in the industry and building up an affluent relationship.

Logistics service quality (LSQ) were first research by (Perreault, Jr., & Russ, 1976) in which they both suggested that time, place and utility were created by all things that is done in logistics. The quality services of logistics play an important part in industrial purchasing decisions. However, at the time of the research made, it is shown that it is from a logistics providers point of view instead of the consumers. (Mentzer, Flint, & Hult, 2001) states then that they are 3 dimensions which is time of delivery, good availability and the service quality that were included in the view of consumers of physical distribution services. It had later become a foundation of measuring the service quality of logistics.

The LSQ model that we are using in our research is based on the SERVQUAL model which was introduced by (Parasuraman, Zeithmal, & Berry, 1988). SERVQUAL had been used in many researches and is considered as a practical model in measuring the service quality (Lin, 1999). It consists of 5 dimensions which is tangible, reliability, responsiveness, assurance and empathy It is an important instrument that can determine the success of the corporation by increased flexibility and gave improvement to the service quality level (Stank, Goldsby, & Vickery, 1999). It is also important to gain an advantage over the competition as well. LSQ in short is defined as fulfilling the customer needs who receive logistics service (Mentzer, Flint, & Hult, 2001). The research that we are currently doing is using a modified version of the SERVQUAL model introduced by (Parasuraman, 1985) by (Mentzer, Flint, & Hult, 2001) and it is then changed followed by the development of logistics that which currently fits the scope of consumers and trying to find for a potential improvement. The modified version consists of quality of information, process of order, quantity of order release, timeliness, accuracy of order, quality of order, condition of goods, handling error and communication of staff (Mentzer, Flint, & Hult, 2001). For this paper, only 4 is chosen which is timeliness, accuracy of order, communication staff (which is then changed to quality/availability of personnel) and information quality.

When consumers needed an item to be received to satisfied their needs, it shows how connected the logistics services towards the customer. Research and findings has shown us how influence customers satisfaction is affected by the service quality. Courier can surely increase their customer satisfaction if they focus on giving the best timeliness of delivery and a reliable service to the consumers. As the changes of logistics from physical distribution perception to the present-day logistics idea, (Mentzer, Flint, & Hult, 2001) moved to an enhanced model that consists of 9 dimensions which is quality of information, order procedure, quantity of order release, timeliness, accuracy of order, quality of order, the status of goods, error handling and staff communication. Many studies had been conducted between different dimensions and trying to compare how each dimension affects customer satisfaction in different parts of the market (Hua & Jing, 2015). (Wen-liang, Song-dong, Jie, & Jing-zhi, 2011) stated that the perception of services has become a factor that influence consumer satisfaction and the key to gain advantage over competitors is by enhancing the logistics service quality. For this research, we use only 4 of 9 of the dimensions which is quality of information,

timeliness, accuracy of order and staff communication which changes to quality of personnel.

Table 1 below shows the explanation of the Logistics Service Quality model from (Mentzer, Flint, & Hult, 2001) which consists of the 4 dimensions that we are using (highlighted) and also the other 5 that we do not use because of time constraints and reasons that are stated below.

Table 1
Logistic service quality dimensions

LSQ Dimension	Meaning
Timeliness	It refers to the time taken for the order to arrive from the placement of order to the ordering recipient. The time of delivery to arrive will differ by the processes of courier to ship the product from one place to another until to the hands of the consumer.
Accuracy of Order	The order accuracy refers to the precision of how the items will arrive to the hands of the customer. This explains that the customers want their order to arrive as stated by their order. Courier needs to make sure that the goods will arrive to the recipient without any damages, correct quantity and no mistakes of sending other people's order.
Information Quality	This refers to how useful an information that the consumer can get from the personnel of the courier and even from the couriers' website to be used as reference regarding their orders. Customer prioritize in getting their packages fast and safely, thus, courier needs to give relevant information if any problems arises.
Personnel Quality/Availability	The definition of interaction between the customer and shippers' personnel. This means that the customer always wanted a good interaction between the personnel in helping with their needs. The courier personnel must know how to handle the issue and empathize the customers' situation as well.
Order Release Quantities	This dimension refers to the quantity of product that is available at the time. This mostly refers to business to business (B2B) transaction where the supplier is able to meet the demands of their customers order on supplies. The reason we do not use this because we are only focusing on the end consumers' satisfaction of using the courier instead of transaction between retailers/suppliers with the customers. This can be use as factor, however, if the customer is also using the couriers' packaging product such as wrap and boxes if it is available.
Process of Order	The procedure of how efficient and effective followed by the supplier is what this dimension is about. It explains that the supplier is following or not the process that the customers wanted. This dimension is not included in this study because regardless of how the shipment of courier is, it will arrive to the customer at the given date if no problem arises. The

Order Condition	<p>consumer cannot specify when the order will arrive as we only used students instead of people doing business with the supplier. This can be used if we only targeted students doing business with the supplier.</p> <p>This refers to the condition of goods whether it is damaged or not. The supplier must be in engage with the consumers if the products arrived as damaged goods. The courier will not take responsibility if the item is not labeled correctly about the fragility of the goods by the supplier/retailer. It must be the responsibility of the supplier/retailer. Therefore, the transaction of consumer and courier that only sends the goods as the middle man is the reason we do not use this dimension but rather only use Accuracy of Order dimension.</p>
Order Quality	<p>Order quality refers to how is the products' working condition. This shows how the product functions to the specification given and customers' needs. This is different from accuracy of order and order condition dimension, whilst the former takes on how accurate the product will arrive in quantity and condition and the latter is about addressing an item if it is damaged because of handling. However, order quality refers to the product's manufacturing. Courier is a type of transportation shipment of goods, thus, this dimension is not useful because they do not involve in manufacturing the product.</p>
Order Discrepancy Handling	<p>The meaning of this dimension is how well the shipper will process the order of different variation. It shows whether the shipper knows how to handle different types of customers' order. For example, an order is placed about a quantity of a product but when the supplier received the order, one the items is damaged or out of stock, thus, discrepancy occurs when shipping. This dimension is mostly between the supplier and customer and not the courier. Therefore, it is not appropriate in this study of courier service.</p>

RESEARCH HYPOTHESIS

As the above literature review on service quality and customers' satisfaction, industry that focuses on giving service to their consumers should know that a satisfied customer will help in increasing their loyalty to the company. This will result in a better business profitability. The research hypothesis that we used is the adopted from the previous research from (Ho, Teik, Tiffany, Kok, & Teh, 2012).

Based on the theory by (Tian, Ellinger, & Chen, 2010) which is on customer value, logistics providers and customers must factor in the timeliness of delivery as an essential part between them. Timeliness is defined as to when a delivery is delivered on the designated time (Saura, Frances, Contri, & Blasco, 2008). The total operation process needs to decrease in terms of times and in between stops, thus making timeliness an important part of the operation. A flexible time can also be an advantage

as this aspect can further improve the consumer needs whenever they wanted. The following hypothesis is made:

H1: Timeliness has a positive effect on customer satisfaction

Furthermore, (Xu & Cao, 2008) stated that the accuracy of order variable measures the effectiveness of logistics providers when they get the consumer orders. It includes the precision of billing, record keeping needed to be exact and completing it at the time promised (Parasuraman, 2004). Moreover, it is essential that the courier providers to meet all the needs of their customers' orders. The quantity and quality of the packages expectation upon arrival needed to be precise as any mishandle can cause customer to feel dissatisfied of the service and switch to another courier. Another hypothesis is made which is:

H2: Accuracy of order has a positive effect on customer satisfaction

There is also the variable of information quality. Giving the correct information about a service or promotions that meets the consumers' needs is important to gain more users to using the services (Tian, Ellinger, & Chen, 2010). The accuracy of information and the trustworthiness of it can surely affect the consumers' satisfaction as it is an important factor in making their decision with the information given. Other than that, (Parasuraman, 2004) also states that a company should use multiple language for the information given to their consumers.

H3: Information quality has a positive effect on customer satisfaction

Lastly, the quality of sound communicating between the courier personnel and the consumers can also affect their satisfaction level (Xu & Cao, 2008). The skill of the person in charge of handling customers' complaints and questions is essential as they had to differentiate between regular clients so that the personnel will provide full attentions on the matter needed (Lu, Tu, & Jen, 2011). This will essentially increase the satisfaction, thus encourage of repurchasing.

H4: Personnel quality/availability has a positive effect on customer satisfaction

Based on the research by Ho, Teik, Tiffany, Kok and Teh (2012), it is shown that their findings of the variable accuracy of order is the highest influencer on customers' satisfaction. Timeliness and the quality of information also shows a connection with the dependent variable. However, negative results are shown on the quality of personnel as it did not affect the satisfaction of consumers. Our purpose for this paper is to further test the LSQ model whether any changes has occurred that affect customers' satisfaction.

Logistic Service Quality (LSQ)

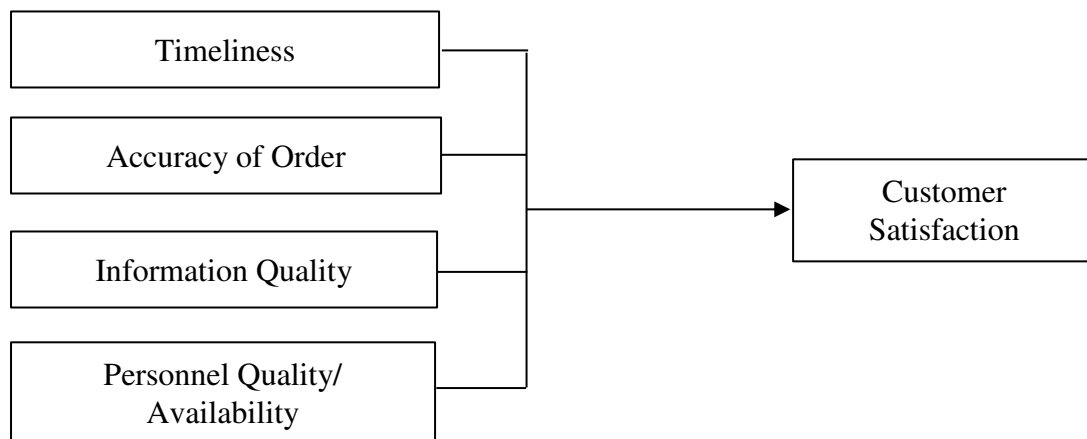


Figure 1
Theoretical framework

METHODOLOGY

Measuring variables

Following the research of this paper, the authors is conducting a quantitative research on logistics service quality of courier providers. A probability sampling method is used. Questionnaire used by the author which appropriate for this type of research. The authors create 33 questions for measuring the variable of this study. The survey was made into three parts in which the first part is based on the consumers' demographic information which consists of 6 questions. The second part of the questionnaire has 20 questions, 5 for each variable which was used to measure the customers' perception on the logistics service quality of courier providers which consists of timeliness, accuracy of order, information quality and personnel quality/availability. The last part is their satisfaction towards the courier service which consists of only one questions. For each of the variables in part 2, a Likert Scale of 5 is used which is from 1 to 5. For each of the scale, 1 is *strongly disagree*, 2 is *disagree*, 3 is *neutral*, 4 is *agree* and 5 means *strongly agree*.

Data collection

The unit of analysis that we used for this research are individuals that is continuing their studies at the university level. Questionnaire is given to the students by hand and they answered without monitoring. Some of survey is also using the online medium using Google Form. It is then shared to the university Facebook group. University students in University Utara Malaysia is used as a sample for this research. Statistics has shown that young people is what drives the graph to go up as they like to shop online. This is to study how satisfied the students are toward the courier service provided. Simple random sampling method is used for this research. The limitation of time has limit the author on finding only 205 random students to be picked from different background for this research instead of 400. The result is to make sure that it will not be centralized which focused on students in the same college or course of study. Students that answers the questionnaire must have the experience using the courier services. The respondents which is the students consisted of 23% male and 77% female.

RESULTS AND ANALYSIS

Reliability and validity

Questionnaire must have the reliability of data measured which must be both consistent and stable. The SPSS the author used is SPSS 23 which to measure the reliability of variables. Cronbach's Alpha is known for measuring the reliability of a data. For reliability measurement, the subscale of the value must be at least 0.7. Based on table 2 below, it shows that the variables are all greater than 0.7. The total Cronbach Alpha coefficient is 0.849 in which it indicates that the scale was reliable.

Table 2
Cronbach's alpha coefficient for variables

Variables	No. of Items	Cronbach's alpha
Timeliness	5	0.785
Accuracy of order	5	0.854
Information quality	5	0.921
Personnel quality/availability	5	0.849

Hypothesis test

Using SPSS 23, correlation analysis is to measure the correlation coefficient between the logistics service quality and customer satisfaction. The degree of correlation between factors are needed to be evaluate.

Table 3
Correlation coefficient of logistics service quality and customer satisfaction

	Timeliness	Accuracy of Order	Information Quality	Personnel Quality/ Availability
Pearson Correlation	0.068	0.195**	0.137*	0.015
Sig. (two-tailed)	0.335	0.005	0.050	0.830
N	205	205	205	205

Dependent variable: Customer Satisfaction

** Correlation is significant at 0.01 level

* Correlation is significant at 0.05 level

In Table 3 above, it shows that that timeliness is not significantly correlated to customer satisfaction ($r=0.068$, $p=0.335>0.05$). However, there is a significant correlation between accuracy of order and customer satisfaction ($r=0.195$, $p=0.005<0.01$). Moreover, the information quality and customer satisfaction shows that it does also have a significant correlation ($r=0.137$, $p=0.050$). Lastly, there is no significant correlation between personnel quality/availability and customer satisfaction ($r=0.015$, $p=0.830$).

Table 4
Regression result (model summary)

		Change statistics
R	0.263	
R ²	0.069	
Adjusted R ²	0.050	
Standard Error of the Estimate	0.68392	
R ² change		0.69
F change		3.709
Df1		4
Df2		200
Sig. F change		0.006

Dependent Variable: Customer Satisfaction; Independent Variable: Timeliness, Accuracy of Order, Information Quality, Personnel Quality/Availability.

Table 5
Regression result (Coefficient)

Variable	Unstandardized Coefficient		Standardize Coefficient	T	Sig.
	B	Standard Error	Beta		
Constant	2.490	0.379		6.566	0.000
Timeliness	-0.113	0.122	-0.092	-0.926	0.356
Accuracy of Order	0.338	0.128	0.284	2.469	0.009
Information Quality	0.193	0.138	0.172	1.405	0.162
Personnel Quality/Availability	-0.199	0.089	-0.240	-2.249	0.026

Dependent variable: Customer Satisfaction

A simple linear regression has been made to predict the level of logistics service quality based on the customer satisfaction with timeliness, accuracy of order, information quality, personnel quality/availability. Based on the regression equation, it is significant based on the result which ($F(4, 200) = 3.709, P < 0.06$) with R^2 of 0.069. The variables of accuracy of order ($\beta = 0.284, p < 0.05$) and information quality ($\beta = 0.172, p < 0.05$) were significant to customer satisfaction. However, there is no significance between customer satisfaction with timeliness and personnel quality/availability.

DISCUSSION

This research is aiming to examine the logistic service industry in which factor in quality of service that has the most effect on satisfaction of customer. Based on the research above, it shows that there is a difference in findings. The main difference is that previous research states that timeliness has a significance effect on the customer satisfaction (Ho, Teik, Tiffany, Kok, & Teh, 2012) which is contrast to this study. Based on the results and the analysis findings above, only accuracy of order (H2) and information quality (H3) has a significant effect on customer satisfaction. The reason significance is because the variable of accuracy of order has a p-value of $0.005 < 0.01$. For the information quality, the p-value which is $0.05 \leq 0.05$ which is counted as

significant to the customer satisfaction. Timeliness (H1) and personnel quality/availability (H4) is not significant on the customer satisfaction. This is because for timeliness, the p-value is $0.335 > 0.05$ and personnel quality/availability is $0.830 > 0.05$. This results in hypothesis 2 and hypothesis 3 are verified while hypothesis 1 and hypothesis 4 does not. This shows a trend that courier services had meet the minimum requirement of timeliness of delivery to meet consumers' satisfaction without hindering their experience.

In Table 4 above, it shows that the highest value of β is 0.284 which is the accuracy of order. This shows that this is the strongest variable in influencing customer satisfaction which is the same as previous research. Customers needed the packages to arrive safely and the quality is still intact. The consumers experience will surely be decrease if the goods is damage and broken, thus affecting their satisfaction. The weakest variable comes from personnel quality/availability which has a β of -0.024. This shows that consumers in Malaysia has seen the quality of personnel as insignificant as they are unable to differentiate companies based on these criteria. (Saura, Frances, Contri, & Blasco, 2008) state that personnel play an important role in their findings that influences consumer satisfaction. The industry in Malaysia can be harm if their staff is not up to the task on giving a better response to their customers. To increase the quality of personnel, it is best for the company to train their staff in giving a greater service to their clients.

CONCLUSION

In conclusion, customer satisfaction improvement through a better service quality of logistics is an important factor to gain an edge over competitors. This study had shown that timeliness had not been significant towards the customers' satisfaction. This study has some limitation which can suggest other researchers in the future. The time and budget for the study is limited and it is recommended that in the future, researches can be more abroad on the sample used for a better representation. Other than that, generalizability as sampling student is not enough to represent the whole population. For future recommendation, it is best to also include adults that are working and even organizations to get a different kind of scope for customer satisfaction based on the level of logistics service quality.

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