THE IMPACT OF DISTRIBUTION DESIGN NETWORK TO THE REVERSAL LOGISTICS PROCESS OF ONLINE PRODUCTS

Hairul Rizad Md Sapry[1*], Muhammad Naim Adzlan[2], Abd Rahman Ahmad[3]

[1,2]Industrial Logistic, Universiti Kuala Lumpur, Malaysian Institute of Industrial Technology (UniKL MITEC), Johor, Malaysia
[3]Universiti Tun Hussein Onn (UTHM), Johor, Malaysia
Email: *[1]hairulrizad@unikl.ed.my, [2]naim.tm.net@gmail.com, [3]arahman@uthm.edu.my

Abstract
The volume of online shopping transactions had increased drastically due to a change in consumer purchase behavior, as resulted in the rapid development in the purchase technology. This development has attracted considerable attention from the researcher to investigate this area. In comparison to conventional shopping, the buyers are solely depending on the images and details of the products that appear on the website of online shopping, which may differ from the actual products and quality received by the buyer that contribute to high return rates. Taking this matter into consideration, this study is motivated to investigate the impact of the distribution design network to the returnable process of online products. This research used a quantitative method by using a questionnaire to get the perspective from the customers towards the impact of distribution design network to the returnable process of online products. The research conducted at Bandar Seri Alam, Pasir Gudang which focused on the online customers among teachers. Teachers can be considered competent enough to be put as respondents since they have a stable income. The questionnaire was distributed to 217 respondents, the data collected analyzed by SPSS version 23 to obtain more detailed information. The findings revealed that there is a relationship between the reverse logistics process to repurchase activities. This study contributed to making several contributions to improve and to give ideas towards e-retailers on their distribution design networks and to provide knowledge among online shoppers.

Index Terms-- Supply Chain Management, Logistics, Reverse Logistics, Distribution Design network, Online products.

INTRODUCTION
Online shopping is now the norm, and since it has many advantages, consumers are adopting it. From the consumer's point of view, online shopping provides low and transparent prices, a comprehensive range of goods and services, and a much more convenient shopping alternative that has eliminated such traditional shopping, crowd-squeezing inconveniences, stuck in a long queue at a cashier counter, fighting for parking spaces in a busy mall.

[2] classifies online shopping as the process through which web merchants buy goods and services. It is also commonly recognized as internet shopping, electronic shopping, shopping online or shopping online [3] further defined internet shopping as examining, searching, browsing or looking at a product to gain more information on the internet with the possible intention of purchasing. [4] viewed online shopping as an exchange of time, effort and money to receive products or services from a certain point of view.

In recent research by [5] suggested that the ongoing upswing in the trend of e-commerce and mobile business will continue to have a significant impact on the retailers, distributors, and third-party logistics providers (3PL) on how their approach their distribution network processes.

JLL also notes in its report that the numbers of retailers that are using a multi-channel approach to meet buyer expectations and compete for market share through the online platform have been steadily increased for the last five years as increased online sales.

LOGISTICS ISSUES IN THE ONLINE BUSINESS DELIVERY
One of the problems in the online retail models is the process of returning the products due to defects, did not meet specifications, etc. The product returns process is disproportionally common with the other common retail model.

While online product sales are growing exponentially (at about multiple times the rate of brick and mortar shops) almost one-third of the online orders are being returned to the seller. Contrasted with the 9 percent of the product that is returned to physical stores, that immense error comes at a major expense. With free delivering, and frequently free returns, the cost of processing everything can reach up to sixty-five percent of the total cost of the products sold (COGS).

In recent research, 20 percent of online customers in Klang valley was not happy with the returning process, mainly because of a lack of support and difficulties in organizing the return process. The research also revealed a lack of online chatting support on the respondent's feedback, which is sometimes even hard for them to find a telephone number to contact. Shoppers have to wait for at least 30 minutes to an hour on email support or reply if there is any issue (Nanyang [6].

[7] expressed that the inefficient return process is the biggest disappointment among the online customer in Asia. Only 44% were happy with the clarity of retailers' return policies, compared with 62% of Europeans and 67% of Americans. The research by [7]. has consistently reported the least satisfaction of Asian customer towards the return related statements, for example, "Capacity to process an arrival/trade on the web", and "Ability to process a return/exchange online", and "Ease of shipping product back to retailer for return/exchange" although not exactly 50% of the respondents had made a return in the last year. It's maybe a result of these stumbling blocks that four out of 10 shoppers would prefer to return an item to a physical store over delivery one back to an online retailer.

REVERSE LOGISTICS.
There are several definitions are commonly used to define Reverse logistics among industry practitioners. Among the well-accepted definition has defined reverse logistics as a reverse activity that involving the backward process of planning, implementing, and controlling of cost and flow of raw materials, in-process inventory, finished goods or related information from the market or consumer to a point of recovery or point of proper disposal." [1].

Reverse Logistics gets its name because it is the opposite process of forwarding logistics [9] stated in their research titled "Reverse Logistics and its Pros & Cons" as suggested the element of remanufacturing and refurbishing activities to be included in the definition of reverse logistics.
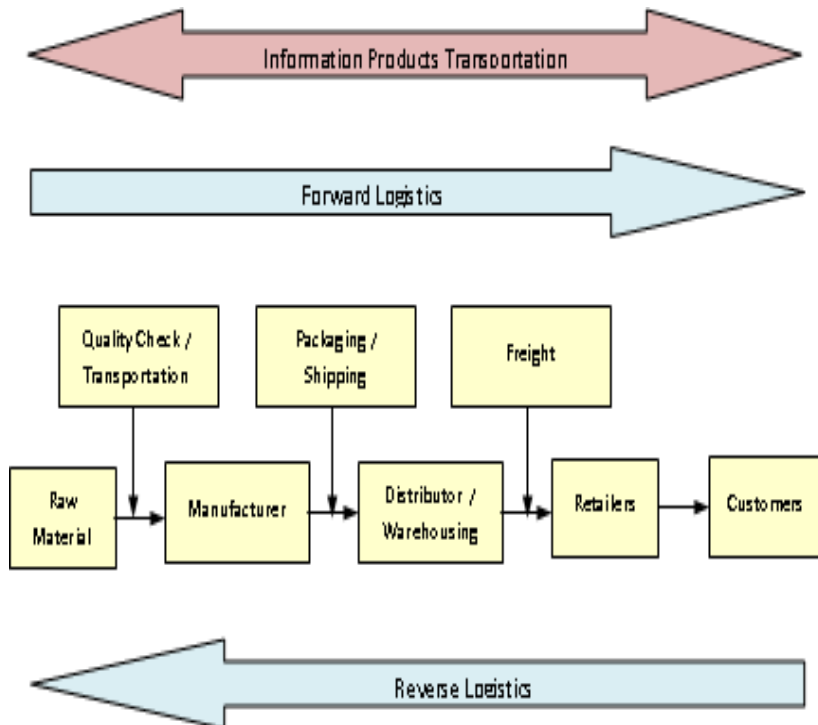
Figure 1. Forward Logistics and Reverse Logistics Process

In the usual case, logistics deal with bringing products towards the customer which is known as forwarding logistics. However, in the reverse logistics, goods move from customers to distributors or the manufacturers. In other words, reverse logistics takes place when the customer returned the goods if there are any damages or if it is not what customer desires [1] & [11]. suggests that reverse logistics in its simplest form is running its process backward to gain as much value as possible. However, reverse logistics can also start from distributors and retailers as well where they can reuse and recollected the products again. Apple is a great example of a reverse logistics system. It can be seen when Apple manufactures iPhones and other products which are then sold in various stores across the world. Consumers who purchase iPhones and enjoy the product will eventually want to upgrade their products. So, when consumers return their old product to a store to buy the latest model, Apple offers a discount to their consumers. Apple then collects the old models and brings the products back to their factories. These processes will not only help Apple in being more environmentally friendly, but it also helps in saving money on production costs. This is because it allows Apple to use parts from previous models in their newer products.

BARRIERS IN MANAGING RETURN PROCESS ACTIVITY
A. Lack of clear policy on returns.
In normal practice, online product returns are often not held by the sales departments. This results in unclear warranty conditions, varying service levels, and inconsistent return product policies. This is part of the company's agenda is to

reduce the number of returns driven by trade agreements.

B. Little recognition as a factor in creating competitive advantage of the return process
The researcher suggested that the product return process is perceived by many organizations are not as important as the delivery process which requires more attention as part of the holistic improvement in the logistics operation [12].

C. Limited planning and forecasting
There are hardly any precise return forecasts available. For both strategic and operational planning, which is a direct barrier. Currently, the return product process has only been implemented by the first movers [12].

DISTRIBUTION NETWORK DESIGN
The purpose of the distribution network design (DND) is to shape the distribution network structure to determine the number of tiers and, for each tier, the type, size, number and location of facilities where the product is temporarily stored to the end customers [16], [14-15] & [23]. These choices are driven by various contextual factors (e.g. product and demand features), have a strong impact on the performance of the supply chain in terms of both logistics and customer service costs. [13-14]. stated that an effective DND could significantly reduce the cost of inventory, transportation, and facilities while increasing (or at least maintaining) the level of service. [17]. describe DND as a key driver of a company's overall profitability. The globalization of economic activities and rapid

developments in information technology leads to shorter product lifecycles, smaller lot sizes, and very dynamic customer behavior, making it more important to have a robust and well-designed distribution network.

DISTRIBUTION PROCESS MANAGEMENT

The distribution process is an important element of operations as, without a role that tracks and improves the relationship between manufacturers and customers, a company cannot ensure the best possible service. If bottlenecks happen in distribution, deliveries fall short, customers, retailers and suppliers get angry, and trust is lost. For product distribution to be truly successful a continuous feedback loop needs to be implemented to ensure everyone is happy with the process and that any improvements that can be made, are made.

Managing the distribution process begins well before the organization chooses the selling options and, in most cases, it should start before even make the product. To properly manage the distribution process, it's important to know why organizations using those methods to bring the sales partners into the loop of marketing strategies and set benchmarks to measure the effectiveness of the efforts.

In terms of online products, customers buying items online which both merchants and customers do not get to try the product before they buy so they trust that the item will arrive just like in the pictures and descriptions. This means that the distribution channel needs to be efficient at providing responses and comments across the whole channel.

CONCEPTUAL FRAMEWORK

A conceptual framework is important in describes the theory that has been explaining why the research problem under this research exists. Below shows the research conceptual framework developed to guide the research.
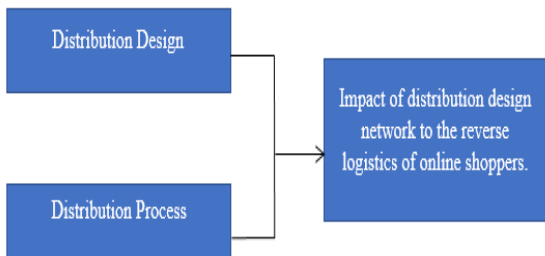

Figure 2. Conceptual framework

RESEARCH APPROACH

In this study, the data was collected based on a quantitative method to explore and understand the experience of the respondent on their empirical observations and critical interpretations of subject research. The use of the quantitative method is appropriate in investigating individual perception in social science [18]. The closed-ended questions were developed to collect the information from the and 217 respondents who participated in answering the questions. This number is sufficient for the data analysis requirement using Statistical Package for Social Sciences (SPSS). The data collected from the survey were analyzed using the descriptive and inferential analysis to identify converging or diverging areas of interest.

RESULT AND DISCUSSION

This finding from the survey is discussed using descriptive and inferential analysis as the following sub-heading:

A. Descriptive Analysis
1. Online Business Experiences

A total of 217 respondents participated in this study. Most of the respondents indicated that they were female (73.7%), while the remaining (26.3%) were male respondents.

According to the data collected, a group with the highest percentage of shopping last year is 39.6% which is 3-5 times followed by 27.6% for 5-10 times while 21.7% is for more than 10 times and the rest is 11.1% for only once. This indicates that most of the respondents are active shoppers.

62.7% of the respondents stated that they encountered problems while conducting online shopping while the balance of 37.3% of respondents has no problems at all. This finding indicates there are vast problems in online shopping platforms.

62.7% of respondents stated that they encountered problems in terms of delay in delivery for 24.0% followed by product damage 18.9%, 13.4% for cheap quality of products and finally 6.9% of non-delivery.
In this study, the majority of the respondents revealed that they had experience in returning online products which are 52.5%. It is followed by respondents with no experience which scoring 47.5% respectively.

There are only four categories of problems identified in this study. From the finding, 17.1% of the total respondents revealed that they experienced defectiveness of products while 15.2% of respondents stated that the seller sent them the wrong products followed by 14.7% of respondents who experienced the damage of products during shipping. The least problem with the scoring of 11.5% which is products does not match the description and the rest of 40.6% of respondents revealed that they had no problems.

In terms of problems faced during the returnable process, most of the respondents stated that they had problems with sellers sending them wrong products with a percentage of 15.7%. It is followed by the respondent of 15.2% with the problems of defectiveness of products while those with the scoring of 13.8% said to have problems on the damage of products during shipping and lastly, 11.5% of respondents had problems with products does not match the description.

The remaining 43.8% of respondents revealed that they have not experienced any problems before. This finding indicates a significant contribution to this study since these groups of problems can be suggested as the major issues involved in online shopping platforms.

Ranking among online sites (any 5) among shoppers is divided into six groups. 86.2% of shoppers chose Shopee.my as their favorite sites, followed by 82.0% picked Lazada.my and 53.9%, 40.6% and 37.8 of respondents have chosen Zalora.com, 11street.com, and Aliexpress.com. While the remaining percentage of shoppers with the scoring of 1.4%, 0.9%, and 0.5% picked Cjwowshop, Go shop and Taobao as their favorite online sites.

Table 1. Online Business Experiences

Item	Frequency	Percentage (%)
Times shopping online during last one year		
Only once	24	11.1
3-5 times	86	39.6
5-10 times	60	27.6
More than 10 times	47	21.7
Problems while conducting online shopping		
Yes	136	62.7
No	81	37.3
If yes, what kind of problem		
Delay in delivery	52	24
Cheap quality of products	29	13.4
Product damage	41	18.9
Non-delivery	15	6.9
Neutral	80	36.9
Experience in returning online products		
Yes	114	52.5
No	103	47.5
Problems faced during returnable process		
Damaged of products during shipping	30	13.8
Seller sent wrong products	34	15.7
Defectiveness of products	33	15.2
Does not match description	25	11.5
Neutral	95	43.8
Rank of favourite online sites (any 5)		
Lazada.my	178	82
Shopee.my	187	86.2
Aliexpress.com	82	37.8
Zalora.com	117	53.9
11street.com	88	40.6
Others (Cjwowshop,Goshop, Taobao)	3,2,1	1.4,0.9,05

2. Distribution design networks impact to reverse logistics

The respondent needs to identify the importance of these sources based on the developed five-point scales including "Strongly Agree", "Agree", "Neutral", "Disagree", "Strongly Disagree" as shown in Table 2.

First is about 54.8% (17.5%, strongly agree; 37.3%, agree) of the respondents are aware of the return policies when they shop online while 10.6% (10.1%, disagree; 0.5%, strongly disagree) of the respondents disagree that they are not aware of the return policies when shop online. The remaining 34.6% of the respondents opted to be neutral in this question. By answering this question, it is evident that many respondents are aware of the return policies.

Next, about 44.3 (9.7%, strongly agree; 34.6, agree) of the respondents are agree that the return policies did guide them on the return process while the remaining 41.5% selected neutral and 14.3% (12%, disagree; 2.3%, strongly disagree) of respondents are disagree when asked did the return policies guide them on return process.

Moreover, around 38.7% (6%, strongly agree; 32.7%, agree) of respondents agree that the seller gives fast response time on return complaints. Most of the respondents around 41.9% opted to be neutral in this question and about 19.4% (18.9%, disagree; 0.5%, strongly disagree) of the respondents disagree with the question.

There are about 36.8% (5.5%, strongly agree; 31.3%, agree) of the respondents agree with the seller properly guide buyer on the return processes while the remaining about 44.7% selected neutral and some of the respondents around 18.5% (17.1%, disagree; 1.4%, strongly disagree) with the question regarding seller properly guide buyer on the return processes.

Almost half of the respondents around 45.5% (18.3%, strongly agree; 27.2%, agree) that the seller able to offer solutions on the return products. There are some of the respondents about 16.1% (14.3%, disagree; 1.8% strongly disagree) on this question. The remaining respondents around 48.4% perceived neutral.

Next, around 41.9% (7.8%, strongly agree; 34.1%, agree) of the respondents felt that the process to return is clear and transparent while 47.5% are neutral and only 10.6% (8.8%, disagree; 1.8% strongly disagree), when asked about the process to return, is clear and transparent.

Most of the respondent acknowledges that no cost is involved. This opinion is shared by 43.3% (12%, strongly agree; 31.3% agree) of the respondents that answered this question. While 16.6% (14.3%, disagree; 2.3%, strongly disagree) indicates the opposite opinion. The remaining 40.1% of respondents opted to choose neutral.

Table 2. Online Business Experiences

Question	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean	Std. Dev.
Are you aware about return policies when you shop online?	38 (17.5%)	81 (37.3%)	75 (34.6%)	22 (10.1%)	1 (0.5%)	2.387	0.90647
Did return policies guide you on return process?	21 (9.7%)	75 (34.6%)	90 (41.5%)	26 (12%)	5 (2.3%)	2.627	0.8995
Seller fast response time on return complaints	13 (6%)	71 (32.7%)	91 (41.9%)	41 (18.9%)	1 (0.5%)	2.751	0.84591
Seller properly guide buyer on the return processes.	12 (5.5%)	68 (31.3%)	97 (44.7%)	37 (17.1%)	3 (1.4%)	2.774	0.84419
Seller able to offer solutions on the return products.	18 (18.3%)	59 (27.2%)	105 (48.4%)	31 (14.3%)	4 (1.8%)	2.742	0.87015
Process to return is clear & transparent.	17 (7.8%)	74 (34.1%)	103 (47.5%)	19 (8.8%)	4 (1.8%)	2.627	0.8243
No cost involved.	26 (12%)	68 (31.3%)	87 (40.1%)	31 (14.3%)	5 (2.3%)	2.636	0.94829
Convenience of productreturning procedure.	12 (5.5%)	71 (32.7%)	98 (45.2%)	31 (14.3%)	5 (2.3%)	2.751	0.85137
Lead time to receive the replacement products is within policy's agreed time.	12 (5.5%)	62 (28.6%)	104 (47.9%)	31 (14.3%)	8 (3.7%)	2.82	0.87663
Quality of returned products meets the buyer's requirements.	10 (4.6%)	65 (30%)	110 (50.7%)	28 (12.9%)	4 (1.8%)	2.774	0.79912
Gift or compensation involved while doing return processes.	10 (4.6%)	55 (25.3%)	104 (47.9%)	37 (17.1%)	11 (5.1%)	2.926	0.89964

3. Relationship between the reverse logistics process to the repurchase activities.

In this section, the respondents were asked to indicate the return processes of online products. The findings indicate that 39.6% (10.1% strongly aware, 29.5% aware) of the respondents aware that the seller will arrange a collection of the returnable product from the buyer. It was evident during the answering of this question, where many of the respondents have verbally expressed their awareness towards the process which translates to this result. However, 18.9% of respondents (14.3% unaware, 4.6% strongly unaware) still do not know this aspect. The remaining 40.6% of the respondent opted to be neutral in this question.

Around 39.7% (8.8% strongly aware, 30.9% aware) apprised of the collection center is nearby or easy to find for the return processes. This is an adverse finding from what the researcher expected which requires further examination because of the different distribution design networks used in different places. Only 19.8% (17.5% unaware and 2.3% strongly unaware) of the respondents are oblivious of the collection center is nearby or easy to find for the return processes. While the remaining respondent is around 40.6% remain neutral.

Next, the finding revealed that 39.1% (11.5% strongly aware, 27.6% aware) of the respondent's perceived returning process is easy to understand. Around 17.5% (13.8% unaware, 3.7% strongly unaware) of the respondents are unknowing of the returning process is easy to understand. While the remaining 43.3% neutral selected by the respondent.

Besides that, the respondent's perceived confidence towards every process and step of replacement will be informed through a mobile app. This perception is translated in the survey result of which 41.9% (10.6%% strongly aware and 31.3%% aware) of the respondent with every process and step of replacement will be informed through the mobile app. that means to keeps all information on track. 41.5% of the respondents perceived neutral and only 16.6% (13.8% unaware, 2.8% strongly unaware) of the respondents did not aware of every process and steps of replacement will be informed through the mobile app.

Next, about 41.9% (12.4%, strongly aware, 29.5%, aware) of the respondents about Poslaju Malaysia acts as a hub for buyers to send returned products, while the remaining 41.9% selected neutral. Finally, 16.1% (12.4%, unaware; 3.7%, strongly unaware) of the respondents about Poslaju Malaysia acts as a hub for buyers to send returned products.

Equally Important, based on the there is a period for the buyer to return purchased products. A major part of the respondent aware which contributed the result around 46.6% (9.7% strongly aware, 36.9% aware). Meanwhile, 12.4% (10.6% unaware, 1.8% strongly unaware) unaware about there is a period for the buyer to return purchased products. The remaining number of the respondent is 41.0% opted to be neutral.

Lastly, a large number of the respondent which is 35.9% (7.8% strongly aware, 28.1% aware) conscious of multiple distribution channels, for buyers to return purchased products. Meanwhile, 17.9% (16.1% unaware, 1.8% strongly unaware) is unenlightened on multiple distribution channels, for buyers to return purchased products. Remaining of the respondent 46.1% settled on neutral.

Table 3. Online Business Experiences

Question	Strongly aware	Aware	Neutral	Unaware	Strongly Unaware	Mean	Std. Dev.
Seller will arrange a collection of the returnable product from the buyer.	22 (10.1%)	64 (29.5%)	88 (40.6%)	31 (14.3%)	10 (4.6%)	2.9124	2.08981
The collection center is nearby or easy to find for the return processes.	19 (8.8%)	67 (30.9%)	88 (40.6%)	38 (17.5%)	5 (2.3%)	2.7373	0.92803
The returning process is easy to understand.	25 (11.5%)	60 (27.6%)	94 (43.3%)	30 (13.8%)	8 (3.7%)	2.7051	0.96974
Every processes and steps of replacement will be informed through your mobile app	23 (10.6%)	68 (31.3%)	90 (41.5%)	30 (13.8%)	6 (2.8%)	2.6682	0.93816
Poslaju Malaysia acts as a hub for buyers to send returned products.	27 (12.4%)	64 (29.5%)	91 (41.9)	27 (12.4%)	8 (3.7%)	2.6544	0.97439
There is a period for buyer to return purchased products.	21 (9.7%)	80 (36.9%)	89 (41%)	23 (10.6%)	4 (1.8%)	2.5806	0.87358
Multiple distribution channels, for buyers to return purchased products.	17 (7.8)	61 (28.1%)	100 (46.1)	35 (16.1%)	4 (1.8)	2.7604	0.88071

Inferential Analysis

The information obtained from the descriptive analysis has provided us with general information regarding the current status of the research subject. However, this information is not enough to report various issues on the impact of distribution design networks to the reverse logistics of online products.

For this reason, additional statistical analysis reporting is needed to address the relationship between the reverse logistics process to the repurchase activities. A standard 3 steps in the multiple regressions process was used to checking the assumptions, evaluating the model, and evaluating each of the independent variables [19].

Step 1: Checking the assumptions

The first step in the process is to check the standard assumption in multiple regression process discuss in the following:

a) Sample size

The determination of the sample requirement is adopted from the formula developed [20].

Sample size = N > 50 + 8m
(m = number of independent variables).

Based on the formula, the sample size of 217 respondents who participated in this study was sufficient.

Outliers were checked using Mahalanobis distance tests using multiple regression programs. The maximum score from the test was 27.782.

Based on 2 independent variables developed in the conceptual framework, the critical value for evaluating the Mahalanobis distance values determined at 9.210 as shown in Table 4. This approached is adopted from [20] & [19].

Table 4. Outlier Residual Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	11.2907	49.2897	29.8157	6.88908	217
Std. Predicted Value	-2.689	2.827	0	1	217
Standard Error of Predicted Value	0.044	0.182	0.072	0.026	217
Adjusted Predicted Value	11.3063	49.3125	29.816	6.88871	217
Residual	-1.66101	1.67755	0	0.6505	217
Std. Residual	-2.542	2.567	0	0.995	217
Stud. Residual	-2.548	2.579	0	1.002	217
Deleted Residual	-1.66904	1.71553	-0.0003	0.65862	217
Stud. Deleted Residual	-2.581	2.614	0	1.007	217
Mahal. Distance	0	15.771	1.991	2.495	217
Cook's Distance	0	0.091	0.004	0.008	217
Centered Leverage Value	0	0.073	0.009	0.012	217

a. Dependent Variable: Repurchase

b) Normal P-P plot of regression standardized residual

The result of P-Plot in figure 3 shows a normal plot, indicates appropriate data were used in the multiple regression analysis as shown a straight line (from bottom left to top right) relationship to predicted dependent variable scores.
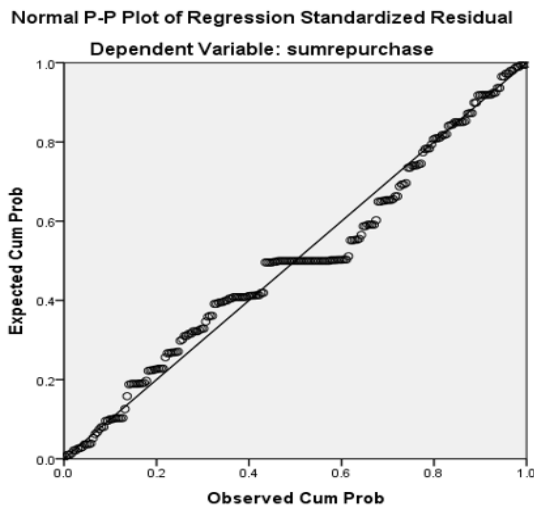
Figure 3. Normal P-P Plot of Regression Standardised Residual

c) Histogram

The result of the Histogram (Figure 4) shows a normal distribution that confirms the suitability of the data used in the multiple regression analysis to predict the dependent scores.
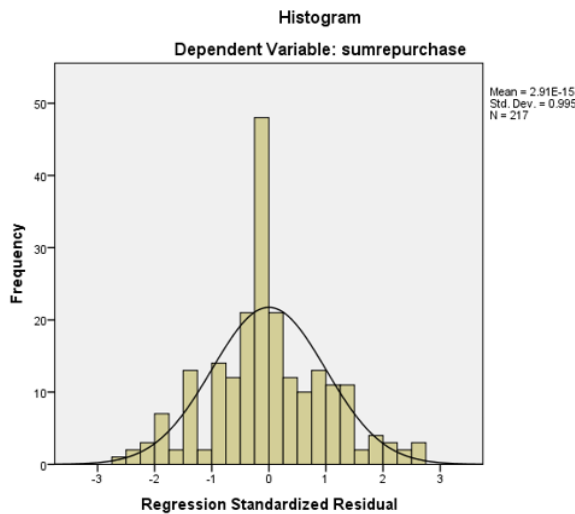

Figure 4. Histogram

d) Collinearity diagnostics

Table 5 shows the results of tolerance and VIF. Generally, cut-off points for determining the presence of multicollinearity are a tolerance value of less than .10 and VIF value of above 10. The result of Collinearity diagnostics shows the tolerance value for each independent variable was more than .10, and VIF values were below 10. This indicates the data is free from the presence of multicollinearity issues that could contribute to high standard errors.

Table 5. Coefficient

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.453	.210		2.159	.032		
Design	-.001	.010	-.001	-.094	.925	.773	1.293
Process	1.086	.008	.996	136.280	.000	.773	1.293

a. Dependent Variable: Repurchase

Step 2: Evaluating the model

As shown in Table 6 (Model Summary), the value of the adjusted R square was .991. When expressed as a percentage multiplied by 100, this means that the model explained 99.1% of the variance in frequency of repurchase.

Table 6. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.996[a]	0.991	0.991	.65353

a. Predictors: (Constant), Process, Design

b. Dependent Variable: Repurchase

Furthermore, to assess the statistical significance of the result (see Table 7) for testing that multiple R in the population was equal to 0, the model in this study reached statistical significance [F(2,214) = 12000.858, p <0.000].

Table 7. ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10251.226	2	5125.613	12000.858	.000[b]
	Residual	91.400	214	.427		
	Total	10342.627	216			

a. Dependent Variable: Repurchase

b. Predictors: (Constant), Process, Design

Step 3: Evaluating each of the independent variables

Results in Table 5 show only Process variables (p< .05) made a significant contribution to the prediction of the dependent variable (Repurchase). Furthermore, the Process variable was the largest beta coefficient (Beta = .0996) which indicated as the best factor that influenced the repurchase.

CONCLUSION

From the survey, the respondent revealed that they had experience in returning online products which are 52.5%. Reverse logistics occurs when there are complications or problems as per results from the data collected from the survey whereby 17.1% of the total respondents revealed that they experienced defectiveness of products while 15.2% of respondents stated that seller sent them the wrong products followed by 14.7% of respondents who experienced damaged of products during shipping. The least problem with the scoring of 11.5% which is products does not match the description. This evidence is strong enough to support Lucy [21], statements on when customers purchase their items in a real store, they can feel it and touch it. So, it is easy for them to see the goods that they're buying. However, it is not easy for customers to evaluate their goods if they purchase it through a screen monitor. Therefore, the customers have been given an option to return the goods if it does not meet their desires. Therefore, return items are not only common in online retail, but they are also to be expected as standard.

Based on the current design, the suitable design for e-retailers is distributor storage with carrier delivery whereby under this option, inventories are not held by factory manufacturers but are held in intermediate warehouses by distributors/retailers, and package carriers are used to transport products from the intermediate location to the final customer. It is suitable for medium-to-fast moving objects. It also makes sense if customers

want delivery faster than manufacturer storage is offered, but they don't need it right away shopper will interface with the seller only where the return process will be discussing. This design will ease the process of managing reverse logistics between e-retailers and customers.

The researcher found that the respondents are mostly aware of which the findings indicate that 39.6% of the respondents aware that the seller will arrange a collection of the returnable product from the buyer. It was evident during the answering of this question, where many of the respondents have verbally expressed their awareness towards the process which translates to this result. This proved that statements made by [10]. that customer service is the golden key to any successful business. If the customer service is great, then it will increase business productivity is accurate. The analyzed data also revealed 36.8% of the respondents agree with the seller properly guide the buyer on the return processes this result is in line with statements made by [10] there is evidence that says the implementation of reverse logistics shows business response times a lot faster. Therefore, creating a better experience and allowing for better customer service.

From the data analysis, the researcher managed to prove that there is a significant relationship between reverse logistics process to the repurchase activities in which the value of adjusted R square was .991, this means that the model explained 99.1% of the variance in frequency of repurchase. This analysis can be used to support the statement made by [22] on E-retailer who are competent in giving transcends reverse logistics services will result in practically 82% re-buy intention in web-based shopping. In this manner, it is paramount to guarantee the fulfillment of the delivery service can be done with the goal that any pointless or extra work required because of the improper transaction can be maintained a strategic distance from which toward the end consumer satisfactory can meet.

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AUTHORS PROFILE

Dr. Hairul Rizad Md Sapry is a supply chain practitioner with 17 years of working experience in the Shipping, Haulage, and Construction Material Industry. He obtained his B.Econ from UKM, MBA, and Ph.D. from UTM. His research interests mainly focus on supply chain management, Strategic Procurement, Planning and Forecasting, Supplier Relationship Management (SRM), Logistics, Branding, Marketing, and SME. He is currently Senior Lecturer at Logistic section at UniKL Mitec.

Muhammad Naim Azlan. is a student and research assistant at UnikL MITEC. His research interest mainly on Supply chain and logistics.

Associate Professor Dr. Abd Rahman Ahmad is currently a lecturer at UTHM. He obtained his BBA from UUM, MBA from UTM, and Ph.D. from Victory University, Australia. His research interests mainly focus on strategic management, Business, and Performance management.