MEASURING CUSTOMER PERCEPTION TOWARDS ROAD TRANSPORT DEPARTMENT BRANCHES BASED ON CONTENT ANALYSIS

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ABSTRACT

Customer perception is an important element for all service providers including government office. The road transport enforcer, Road Transport Department (RTD) Malaysia always ensures that the customers are satisfied with their services especially at their service counters throughout the country. Customer perception is shaped by multiple variables including direct and indirect interaction offered by government office like RTD. In this study, customers' perception towards RTD Perak state is explored. This includes all six branches within Perak state which are UTC Ipoh branch, Taiping Branch, Manjung Branch, Tapah Branch and Teluk Intan Branch, based on google maps review star rating. Details analysis on the comments left by the customers is done using content analysis and correlation analysis. Result shows the positive impact for the RTD especially and all public servant agencies generally.

1.   Introduction

According to traditional public administration, New Public Management (NPM) assists in demonstrating improvement in accountability performance and cooperation through efficiency, hierarchy of authority, professional institutional accountability, and competition. NPM emphasizes the relationship between a management strategy and the need for democratic accountability. The duties of public servants have to be taken into consideration to explain the democratic accountability. Despite the existence of designated individuals (elected public representative) to carry out the accountability, sometimes public servants have to make their own decisions due to time constraint. Usually, the accountability process happens for the benefit of the public representative only, and as such the requests of the public could not be fulfilled. Counter services of the Road Transport Department (RTD) are one of the necessities despite the Covid 19 pandemic due to its functions of providing licenses to move on the Malaysian roads. This can be seen when on May 15, the minister of Transport, Datuk Seri Dr Wee Ka Siong announced that RTD will fully open its counter services, including at Pos

Malaysia branches, for all transactions from Monday (May 18, 2020). The RTD personnel nationwide were making final preparations for full operations to resume, including ensuring that safety and health measures were taken. Prior to the date, RTD had resumed counter services in stages following the government's decision to reopen the economic sector through the implementation of the conditional movement control order (CMCO) (Bernama, 2020).

As RTD aims to be able to regulate motor vehicles, drivers and road traffic to be safe and efficient through the enforcement and delivery of efficient, integrity and high-tech services to meet the needs of customers and the country as well as safeguard the welfare and develop the capabilities of professional citizens, the initiative is taken in order to serve the citizens so that all the processes related to RTD will be at ease. This is also in line with the theory which advocates the effect of simplification, or non-simplification of work quality; the direct and indirect effects of the attitude of the employees and upgrading of the field of work; and the expected and unexpected effects of customer satisfaction. In the recent situation of Covid 19, every organization faces a lot of challenges especially in those in the service sectors. The Malaysian government agency that provides services like RTD especially is trying the very best to improve their services especially on the counter services. The problem can only be tackled by the introducing some upgrading in the Malaysian government service delivery. According to the changes that needs to be done must contain all the management and administrative dimensions, i.e., change in the structure, management practices, system and procedures, technology, and the last but not least, change in the mindset of the whole members of the organization. In order to effect the changes, an overview of the current scenario is needed, hence an analysis on customers perception towards the service provided by RTD is of utmost important. Hence, there are two objectives for this study which are to evaluate customer perception towards services or enforcement by RTD and to describe customer views towards the services by RTD counters. This section is followed by literature review of past studies, method in achieving the objectives of the study and results and discussion in the next section. In the last section, the conclusion of the paper is presented.

2.   Literature Review

There are several factors that describe the customer perception among which are work quality, efficiency, productivity that led to customer satisfaction.

According to Tackie *et al.* (2016) the development and upgrading, which can be referred to as work quality are the key determinants in improving a public sector in terms of efficiency and effectiveness. It also mentioned that the upgrading is needed when the existing strategies of an organization are no longer functional. New strategies need to be identified in order to ensure that the organization could function better. It identifies that work quality consists of the three dimensions of effectiveness, efficiency, and productivity. Wall and Berry (2007) emphasized that quality led to good customer perception in restaurant service. This is supported by Hossain and Leo (2009) in their study on banking services. In a more recent study on banking services by Ali (2018) also supported the idea.

The effectiveness of a group depends on the relationship between the leadership style and the influence of the group leader towards the group's situation, which in turn, would influence the output of the group (Banumathi & Rani, 2018). Meanwhile, according to Tham *et al.* (2017), effectiveness occurs when an employee acquires his/her character or attitude. "Effectiveness" of a leader based on two key factors, i.e., the situation of the leader, as well as his/her attitude. Effectiveness may determine the possibility of correctness of doing something opines that effectiveness may measure the possibility of achieving the management's objectives. The research findings of Selvanathan (2016) also demonstrate the same phenomenon, i.e., an agency that operates effectively will be able to provide better quality services. The finding of Hui *et al.* (2013) proves the relationship between the group's achievement, observation, and cooperation, as well as the promotion of effective services. Two groups, namely "low prior social-capital" and "high prior social-capital" had been

identified in the study found that "high prior social-capital" groups have higher level of belief compared to "low prior social-capital". The difference of these groups also has its effect upon the level of the group's achievement, observation, and cooperation also explains that the performance of a group will improve, if the members of the group cooperate, and have increased level of belief (Tham *et al.,* 2017).

Efficiency is the capability of doing something speedily and perfectly (Kahn, 2018), whereby efficiency occurs when an agent or an officer who liaises with the customers acts rationally. Considering that the competition among banks will become severer with financial liberalization under slower economic growth, the banks and supervisory authorities must continue to make greater efforts towards further reform in improving its customer services through having more efficient system (Okazaki, 2017).

In their study, Peterson *et al.* (2010) stated that efficiency means has achieved what has been desired; ecological – (has achieved an appropriate ratio of input or output); effective – (accepted by the social environment); adapted – (at least similar to efficacious, ecological and effective when compared with the environmental system); and balanced (if the variation in the level of achievement among the various departments is minimal). At the same time, productivity is also being considered in ensuring the best customer service (Lee *et al.,* 2017).

Research analysis has presented two key variables as independent variables, i.e., the workers' attitude, and innovation in the job scope that can be contributed to customer satisfaction. Customer satisfaction is the perception of a customer whether his/her expectation is fulfilled (Choudhury, 2013). They further stated that customer satisfaction wholly depends on the seller's or service provider's effort to identify a suitable means, by which the customer will be satisfied with the service provided. One of the means of knowing whether the customer is satisfied with the service provided is by observing the frequency of the customer's repeated visits to get the service (Dimyati and Subagio, 2018). If customer dislikes the service, he/she will not likely to return to the place anymore opines that customer satisfaction can be attained through a few methods. Nevertheless, the type of customers has to be noted beforehand, prior to looking for a way to satisfy their needs. Resnick and Griffiths (2011) provides six (6) key aspects which are prioritized by the customers when receiving the service: the frequency of the delivery, the duration of delivery, reliability of delivery, fulfillment of promised request (Hui *et al.,* 2013), the accuracy in the information provided, and to offer what customer need.

In a study on the factors influencing online consumer perception and purchase orientation for digital stores operating in Vietnam through apps and websites, the empirical analysis was carried out using exploratory factor analysis, confirmatory factor analysis, very simple structure (VSS) criterion, and parallel analysis (Singh *et al.,* 2020). At the same time, a study on 177 Airbnb customers perception through their personal online Airbnb accounts, the authors conducted a binary logistic regression analysis to test the hypothesis on relation between their comments and level of perceptions (Meijerink and Schoenmakers, 2020). Another study used a measurement model using composite-based structural equation modelling to measure the customer's perception on toward employees' emotional labor in service industry settings in the United States (Gong *et al.,* 2020).

Customer perceptions are sometimes expressed in form of words and expressions that need to be interpreted. In a study is to discover the public's general perceptions of robots as frontline employees in the hotel industry based on YouTube online reviews, it applied data mining techniques to the two most frequently viewed videos related to the employment of robots in hotels. The Thematic content analysis was conducted based on the Godspeed dimensions in data mining is used (Yu, 2020). Liu *et al.* (2020) in their study also used content analysis to explore e-commerce big data and customer-perceived value on Chinese online customers. Hence in this study, in which the customer perception is viewed based on the online content, a similar approach of thematic and content analysis is done.

3.   Method

In this study, data on customer's perception towards RTD services is collected from google reviews. The targeted population is customers of RTD Perak particularly in Ipoh (HQ), RTD UTC Ipoh branch. RTD Manjung branch, RTD Teluk Intan branch, RTD Taiping branch and RTD Tapah branch and is based on the number of reviews and comments left in the Google reviews.

This study used secondary data gathered from google reviews (Figure 1). First step is by going to the google map and gathered the number of ratings and comments for each particular branch (Figure 2).
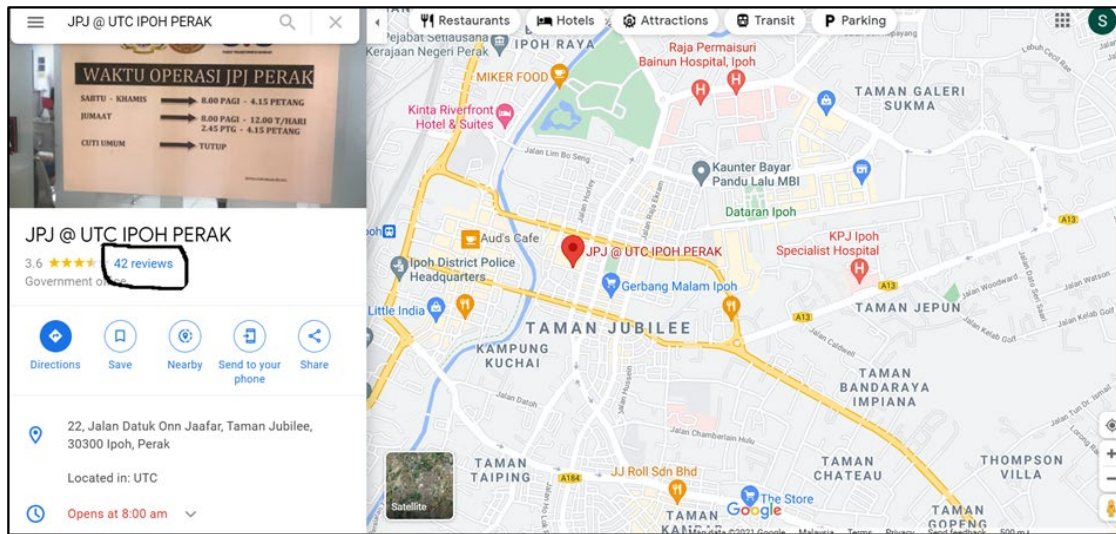

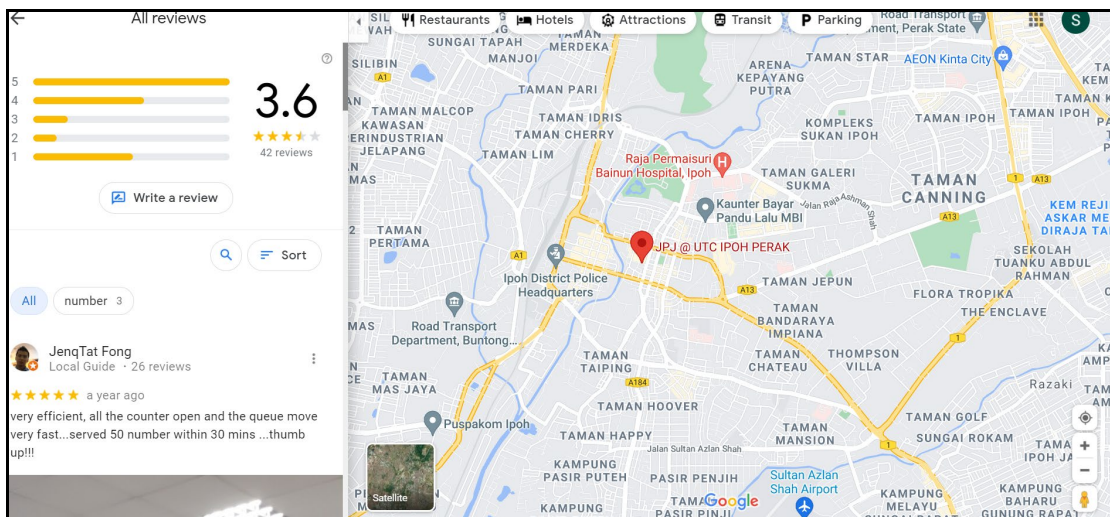
Figure 1. Google map and the number of reviews.

Figure 2. Details of star rating and reviews.

In the second step, all comments being left by the customers for each branch will be tabulated. Based on Robinson (2016), there are four (4) approaches to comments which are High Praise, Middle of Road Evaluation, Poor opinion and General Angst. Hence, content analysis on the comments will be done and categoried based on Robinson's approach.

3.1 Method of data analysis

In order to achieve the objectives of the study, the following analysis will be done. Descriptive analysis of the responses.

i. Content analysis

Content of each review will be considered and categorized based on Robinson (2016). The public opinions can be categorized into four categories: High Praise, Middle of Road Evaluations, Poor Opinions and General Angst as described in Table 1.

Table 1. Robinson Based Categories Review Summary.

No.	Category	Descriptions
1	High Praise	Personal Experience with Gratitude, keywords are all positive notes
2	Middle of Road Evaluations	Nonconstructive opinion
3	Poor Opinions	No clear opinion
4	General Angst	Lack of Trust and Annoyed

ii. Correlational analysis.

This study will be using the correlation coefficient in order to find the relationship or correlation between the two variables. It is important to note that correlation has direction and can be positive or negative. The Pearson product-moment correlation coefficient is used to show the strength of the relationship between two variables. In this study the percentage of 5 star rating and the percentage of "High Praise" for each branch are used as the variables in order to see the correlation between rating and comments. A coefficient can range from $r = +1.00$ to -1.00. This is to analyse the relation between star ratings and review categories.

4. Results and discussion

4.1 Descriptive analysis

In this section, the summary of the respondents for each branch from Google review is tabulated. The objective of this is to find out about the star rating review of the respondent from minimum star rating of one star review to maximum star rating of five-star reviews.

Table 2 summarises the results.

Table 2. Total Star Rating by Branches.

Branch	5 star	4 star	3 star	2 star	1 star	Total Review
UTC Branch	15	7	2	2	5	31
HQ Perak	114	86	37	7	42	286
Taiping	56	28	17	6	10	117
Manjung	36	21	8	3	11	79
Tapah	21	9	2	2	7	41
Teluk Intan	30	17	4	3	8	62
Total	272	168	70	23	83	616
Percentage (%)	44.2	7.2	11.4	3.7	13.5	

From Table 2, it can be seen that the calculation for star rating in all branches in RTD Perak by google maps review focuses more on Headquarters (HQ) Perak. That is due to substantial promotion and reminder for corporate or enforcement unit take serious on customers that visited RTD HQ Perak. Visitors to RTD HQ Perak are also encouraged and reminded to evaluate the services after any transaction at the branch using google maps. Total review for RTD HQ Perak is 286 reviews (46.4 percent) compared to the Taiping branch recorded 117 reviews (19.0 percent) and Manjung branch with record of 79 reviews (12.8 percent).

Table 3 shows the total review for six RTD branches with comments, it is found that the highest of comments is for HQ Perak branch with 155 reviews (49.4 percent) and the lowest number of comments is for Tapah branch, 20 reviews (6.4 percent) only. The number of customer visits to that RTD branch is also parallel to the number of customers' reviews at that particular branch. For Tapah branch in the rural area of the Perak district, the transaction from the public is limited compared to that of RTD HQ Perak which is in the urban area with more business activities. This is also the reason for the numbers of customers who visited the branch is a lot higher compared to that of other RTD branches in Perak state.

Table 3. Summary of the Star Rating with Number of Comments.

Branch	No of comments	5 star	4 star	3 star	2 star	1 star
UTC Perak	16	7	4	0	1	4
HQ Perak	155	58	45	14	4	34
Taiping	48	21	12	7	2	6
Manjung	42	17	15	3	0	7
Tapah	20	12	5	1	0	2
Teluk Intan	33	16	8	3	1	5
Total	314	131	89	28	8	58

Figure 3 shows the patterns of star rating at each of the RTD branches in Perak. The figure summarises the relation between the Star Review of six RTD branches and the number of reviews or comments each branch received. The graphs show similar patterns despite different numbers of reviews received. The pattern plotted in the bar graphs is U-shapes means the average value for 3 star-rating is lower than the 1 star-rating and 5 star-rating.
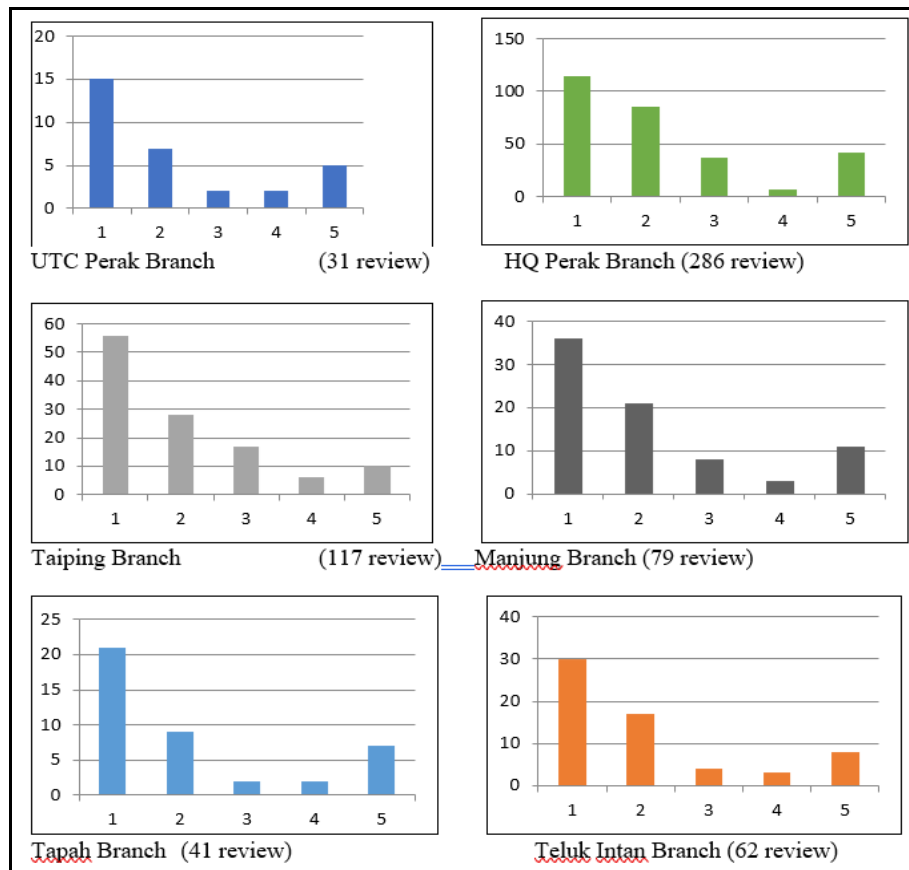

Figure 3. Review on Six RTD Branches.

Figure 3 also shows the customer satisfaction in RTD UTC Perak as 48.4% or 15 reviews gave 5-star while only 16.1% or 5 reviews gave 1-star. This U-shape relationship as concurred by previous research as common distributions of positive and negative reviews. This is because happiest customers are likely to give review and give an opinion. Only 16 respondents out of 31 reviews are with comments. The same pattern can also be seen at other branches. At RTD Headquarters Perak, the highest percentage is for 5-star at 39.86% (114 reviews) and 1-star 14.69% (42 reviews). Only 155 respondents out of 286 reviews are with comments. RTD Taiping Branch Perak has its 5-star at 47.86% (56 reviews) and low 1-star at 8.54% (10 reviews). Total of 48 out of 117 reviews are with comment.

As satisfaction is also shown at the other branches with 45.56% (36 reviews) 5-star at RTD Manjung Branch Perak, 51.21% (21 reviews) 5-star at RTD Tapah Branch Perak, and 48.39% (30 reviews) 5-star at RTD Teluk Intan Branch Perak. This indicates that most customers are happy and satisfied with their encounters at RTD branches.

4.2   Inferential analysis

In this section, details analysis on the written comments for each branch is done. Data is collected from Google reviews. From the content analysis, HIGH PRAISE came from the reviews that expressed admiration for the professionalism of the officers who serviced them and those officers' dedication to the community. MIDDLE EVALUATION is a helpful reminder that these online reviews are often like graffiti which can be difficult to understand or interpret. In addition, there are POOR OPINION and GENERAL ANGST for communicating complaints that focused on difficulties with making initial contact with the branches. Based on the definition, Table 4 derives the assumptions on the relation between comments and star rating.

Table 4. Description of Star Rating.

Approach Category	Assumption based on rating
High praise	Among 4-star rating and 5-star rating
Middle evaluation	Among 3-star rating
Poor opinion & general angst	Among 2-star rating and 1-star rating

In addition to that, Table 5 shows a sample of the classification of comments into approach category as described by Robinson (2016) based on keywords. Table 6 shows the percentage of 5 starts and categories of comments for all 6 branches. It can be seen that Taiping has the highest percentage for its "High Praise".

Table 5. Sample Analysis Between Key Words and Approach Category for UTC Perak.

No.	Star	Key words	Approach Category
1	1	No; Bad; Never; Noisy; System Down;	General Angst
2	2	Stinks; Rude; Wrong	General Angst
3	3	Long queue	General Angst
4	3	Nice	High Praise
5	4	Convenient; Nice; Good; Faster; Time; Breaktime	High Praise
6	5	Friendly; Good; Best; Awesome; Time; Operation; Convenient; Symbol; Helpful; Efficient; Location; Various	High Praise
7	4	Convenient	High Praise
8	3	Closed; Hot	Middle Evaluation
9	4	Facilities; Not Bad	Middle Evaluation
10	1	Time	Poor Opinion
11	2	Political	Poor Opinion

Table 6. Percentage of 5 Stars and Categories of Comments.

Categories	Percentage of 5 stars					
	UTC Perak	HQ Perak	Taiping	Manjung	Tapah	Telok Intan
General Angst	26.1	11.7	8.5	33.3	23.8	4
High Praise	63.8	67	68.1	40.7	66.7	76
Middle Evaluation	5.8	7.8	17	11.1	4.8	8
Poor Opinion	4.3	13.6	6.4	14.8	4.8	12

Figure 4 shows the correlation between 5 star rating and the High Praise in customers reviews. It shows some weak positive correlation at 0.18. Hence, it can be concluded that for all RTD branches in Perak, despite the high 5 star ratings at all branches, not necessarily the comments and reviews will be of "High Praise".
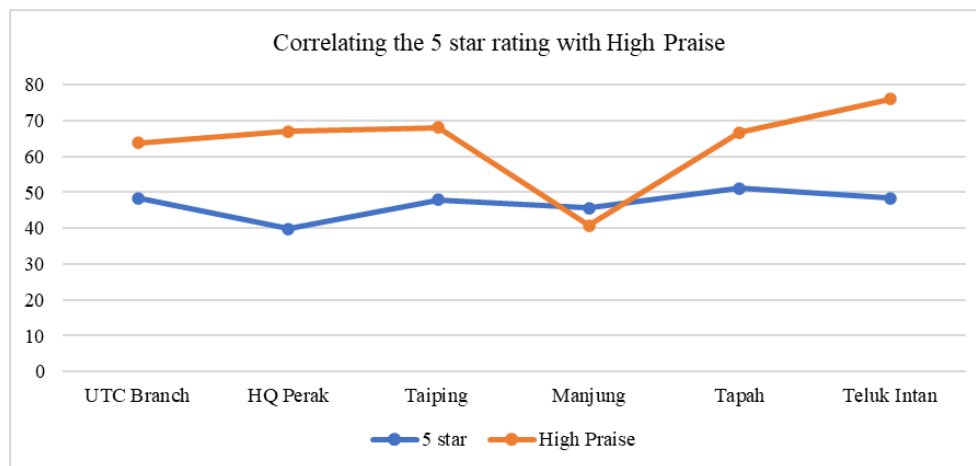

Figure 4. Correlating the 5 star rating with High Praise.

5. Conclusion

From the data analysis, it can be concluded that High praise ratings are the highest compared to Middle evaluation, Poor opinion and General angst for all six branches of RTD Perak. All branches are perceived to be good, performing due to the comments. Poor Opinion and General Angst show the comments from the public and customers for better service from RTD. Other than that, for the Middle evaluation is when the customers cannot decide for positive and negative evaluations meanings for certain situation.

For this study, it also can be concluded that the counter service of RTD must be improved. Most importantly is the possible initiative in ensuring less waiting time, having good attitude among the enforcement officers during working hours, not only in counter but also at the field. This is because the social media reports can influence the perception of customer and public figure towards any services. In this study, data was collected using a Google review by internet website with the targeted population of customers in RTD Perak in Ipoh (HQ), RTD UTC Ipoh branch. RTD Manjung branch, RTD Teluk Intan branch, RTD Taiping branch and RTD Tapah branch only. For future research, a study that includes all branches all over the RTD in Peninsular Malaysia also in Sabah and Sarawak state could be done for better impact to the related organization.

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