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Abstract - Corona Virus Disease (Covid-19) in a pandemic situation, various elements are affected, one of which is the automotive sector. Companies are required to increase profits where in the current conditions loyal customers are the basis of their market. Marketing information systems are important to increase customer loyalty during a pandemic accompanied by quality service and customer satisfaction. This study aims to determine the correlation between the marketing information system mediated by service quality, customer satisfaction, and customer loyalty in the automotive industry in Denpasar. The sample method uses random sampling with accidental sampling through distributing questionnaires that are measured using a Likert scale. The research sample consisted of 80 respondents, namely customers who had been to an authorized car dealer in the city of Denpasar. The results showed that the marketing information system had a positive and insignificant effect on customer loyalty. Marketing information systems have a significant positive effect on service quality and customer satisfaction. Service quality has a significant positive effect on customer loyalty, besides that customer satisfaction has a positive and insignificant effect on loyalty. Service quality and customer satisfaction are perfect mediations of the relationship between marketing information systems and customer loyalty, so this shows that marketing information systems are needed to maintain customer loyalty which is assisted by service quality and customer satisfaction so that companies can survive the Covid-19 era, especially in the industry automotive.

Keywords: Loyalty, Marketing Information System, Satisfaction, Service

INTRODUCTION
Corona Virus Disease (Covid-19) in a pandemic situation like now, has a considerable impact in various sectors in Indonesia, especially in the business sector (bbc.com, 2020). The corona outbreak which has become increasingly massive lately has ultimately disrupted the marketing process to a significant point. This occurs due to restrictions on community movement and the number of employees working through online methods. Various elements affected, say, from the main sectors in Bali, namely hotels, tour guides to automobiles. According to (Fuller, 1999) Marketing Strategy involves Global, Multi and Transnational Economy and International. This means that external influences such as disrupted supply chains result in higher prices for goods, and the economy becomes increasingly difficult during a pandemic.

The increase in the virus outbreak has caused domestic and foreign tourists who come especially to Bali to experience a decline, daily industry income in Bali is 18% and the industrial sector affected by F&B, Service, Retail (Mokapos.com, 2020). With increasingly difficult conditions, the competition is getting tougher, especially between similar companies in attracting customers. One of the companies affected in the service sector is an

In the face of intense competition today, automotive companies are required to always pay attention to factors that can meet customer expectations such as improving the quality of their human resources, improving service, and always building creative ideas, promotions to always maintain customer satisfaction levels so as to produce good customer loyalty as one of the bases for building good relationships with customers. All of these things will certainly have an impact on customer retention and repurchase, the purchasing power of the people in the automotive sector has decreased, they refrain from purchasing vehicles until 2021 due to the Covid-19 pandemic. This is in sync with the results of a rapid survey conducted by MarkPlus, Inc. to 68 respondents throughout Indonesia who previously owned motorized vehicles and were dominated by the Jabodetabek community by 63%. Even in difficult circumstances, opportunities for automotive industry players are wide open in the after sales aspect by providing excellent service and paying attention to health protocols. In addition, the use of mobile applications for dealers is expected by customers as a medium to check the availability of spare parts to be purchased or to do virtual consultations (kontan.co.id, 2020).

A delay in purchasing new vehicles is predicted to occur until mid-2021. As many as 44% of respondents postpone purchases until the second quarter of next year, 29% in the first quarter of 2021 and 19% plan to buy a vehicle in the fourth quarter of this year. Especially in the vehicle service section, there are several KPIs (Key Performance Indicators), namely CPUS (Customer Paid Unit Service) One of the most important KPIs which is the main reference, namely CPUS, because CPUS is the number of customer units paying for service and spare parts that are able to measure volume levels, retention and repurchase of customers who come to the workshop. The realization of the achievement of CPUS in the automotive industry illustrates the decline in conditions during the pandemic (Kotler, 2016).

As one of the efforts of automotive companies to be able to compete in pandemic conditions, according to the Executive General Manager of PT TAM Fransiscus Soerjopranoto, explaining that the availability of digital channels with complete information is considered to make it easier for potential consumers to use technology and consumers to digitally view products according to their wishes. (antaranews.com, 2017). The marketing information system, in the conditions of the Covid-19 outbreak, is a series of processes that are used as consideration in decision making (Kotler, 2016) the rapid advancement of technology in the industrial era 4.0 so it is important to implement it. To increase customer service, the automotive industry in Denpasar must be able to maximize the level of service quality and marketing information systems that will have an impact on customer loyalty in vehicle service even during the Covid-19 pandemic.

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Based on the preliminary description, this research was conducted to determine the correlation between the marketing information system mediated by service quality, customer satisfaction, and customer loyalty in the automotive industry in Denpasar.

CONCEPT AND HYPOTHESIS

1. Marketing Information System

According to (Kotler, 2016) Marketing information systems are the people, tools and procedures shown to accurately collect, analyze, and display the required data to make it easier for marketing management to make decisions.

The marketing information system has an input sub-system where the sub-system will be processed into a database and will produce an output sub-system consisting of a product, place, promotion, price, and integrated mix subsystem (George, McLeod, & Schell, 2004).

2. Quality of Service

(Kotler et al., 2018) Quality is a product or service characteristic that is able to satisfy customers directly or indirectly. According to (Alma, 2009) in research (Dewi, Yasa, & Indiani, 2018). Tangibles, reliability, responsiveness, assurance, empathy are dimensions of service quality. According to (Tjiptono & Diana, 2016) service quality is the fulfillment of needs and desires to meet customer expectations.

3. Customer Satisfaction

Today the company's attention to indicators of satisfied or dissatisfied customers is getting higher, because basically the goal of a company is to satisfy customers. The better customer satisfaction, the greater the benefits for the company, because customers will repurchase a company's product and vice versa (Wantara,

According to (Hawkins, 2006) in (Tjiptono & Diana, 2016) is suitability of expectations, interest in revisiting/repurchasing, willingness to recommend.

4. Customer Loyalty

According to (Kotler & et al., 2018), loyalty is a firmly held decision to have back or subscribe to a product or service at a later date even though it is influenced by situational or marketing efforts that have the potential to encourage consumers to switch to other products.

Customer Loyalty is the impact of previous transactions which are defined as attitudes and intentions to behave and are expressed through things such as a commitment to provide recommendations to others and making repeated purchases and the financial means to pay more (Fraering and Minor, 2013) in (Dewi et al., 2018).

This study empirically investigates the effect of marketing information systems on customer loyalty according to the research framework illustrated in Figure 1. Based on the above propositions, several hypotheses are proposed. To be precise, seven sub-hypotheses predict the relationship between marketing information systems (independent variable), loyalty, service quality and customer decision (dependent variable).

Based on the above concept, the hypothesis of this study is described in Figure 1:

H1: The marketing information system has a positive and significant effect on service quality.
H2: The marketing information system has a positive and significant effect on customer satisfaction.
H3: Marketing information systems have a positive and significant effect on customer loyalty.
H4: Customer quality has a positive and significant effect on customer loyalty.
H5: Customer satisfaction has a positive and significant effect on customer loyalty.
H6: Service quality mediates in a significant way the effect of marketing information systems on customer loyalty.
H7: Customer satisfaction mediates in a significant way the effect of marketing information systems on customer loyalty.

METHOD

In this study, the population is the automotive industry customers in Denpasar, where the sample is determined using Accidental Sampling in order to get samples according to the requirements of the researcher in order to obtain accurate data. The number of samples in this study based on references from (Sugiyono, 2014) research that performs analysis with multivariate (multiple regression), the sample in this study is 80 respondents.

RESULTS AND DISCUSSION

The results of the statistical calculation of the statistic test in table 1 show the validity test significant at the 0.05 level all indicators have met the valid requirements, and reliable with a Cronbach Alpha value of each construction> 0.60 which means the data can be received and continued in the next test (Sugiyono, 2014). The AVE value based on the discriminant validity criteria of all constructs has shown a value> 0.50 so it meets the valid requirements. Results of the calculation of composite reliability and
Cronbach alpha in this study meets the requirements of being reliable based on the criteria, indicating the value of each construct is greater than 0.70.

Table 1
Results of Statistical

<table>
<thead>
<tr>
<th>Construct</th>
<th>Indicator</th>
<th>Outer Loading</th>
<th>Alpha Cronbach’s</th>
<th>Composite Reliability</th>
<th>AVE</th>
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<tbody>
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<td>X1</td>
<td>0.784</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X2</td>
<td>0.790</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X3</td>
<td>0.724</td>
<td>0.809</td>
<td>0.865</td>
<td>0.563</td>
</tr>
<tr>
<td></td>
<td>X4</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X5</td>
<td>0.711</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y1.1</td>
<td>0.699</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y1.2</td>
<td>0.757</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service quality</td>
<td>Y1.3</td>
<td>0.849</td>
<td>0.864</td>
<td>0.903</td>
<td>0.652</td>
</tr>
<tr>
<td></td>
<td>Y1.4</td>
<td>0.861</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Y1.5</td>
<td>0.858</td>
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<td></td>
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<td></td>
<td>Y2.1</td>
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</tr>
<tr>
<td>Customer satisfaction</td>
<td>Y2.2</td>
<td>0.856</td>
<td>0.864</td>
<td>0.895</td>
<td>0.741</td>
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<tr>
<td></td>
<td>Y2.3</td>
<td>0.904</td>
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<tr>
<td></td>
<td>Y3.1</td>
<td>0.876</td>
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<tr>
<td>Customer loyalty</td>
<td>Y3.2</td>
<td>0.793</td>
<td>0.780</td>
<td>0.872</td>
<td>0.694</td>
</tr>
<tr>
<td></td>
<td>Y3.3</td>
<td>0.829</td>
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</table>

Table 2
Results of discriminant validity

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Service quality</th>
<th>Customer satisfaction</th>
<th>Customer loyalty</th>
<th>Marketing Information System</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>0.363</td>
<td>0.515</td>
<td>0.447</td>
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<tr>
<td>X2</td>
<td>0.290</td>
<td>0.460</td>
<td>0.336</td>
<td>0.790</td>
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<tr>
<td>X3</td>
<td>0.342</td>
<td>0.424</td>
<td>0.376</td>
<td>0.724</td>
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<tr>
<td>X4</td>
<td>0.179</td>
<td>0.429</td>
<td>0.225</td>
<td>0.738</td>
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<tr>
<td>X5</td>
<td>0.637</td>
<td>0.589</td>
<td>0.342</td>
<td>0.711</td>
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<tr>
<td>Y1.1</td>
<td>0.468</td>
<td>0.699</td>
<td>0.436</td>
<td>0.510</td>
</tr>
<tr>
<td>Y1.2</td>
<td>0.476</td>
<td>0.757</td>
<td>0.337</td>
<td>0.556</td>
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<tr>
<td>Y1.3</td>
<td>0.679</td>
<td>0.849</td>
<td>0.497</td>
<td>0.556</td>
</tr>
<tr>
<td>Y1.4</td>
<td>0.625</td>
<td>0.861</td>
<td>0.487</td>
<td>0.513</td>
</tr>
<tr>
<td>Y1.5</td>
<td>0.644</td>
<td>0.858</td>
<td>0.550</td>
<td>0.537</td>
</tr>
<tr>
<td>Y2.1</td>
<td>0.819</td>
<td>0.721</td>
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</tr>
<tr>
<td>Y2.2</td>
<td>0.656</td>
<td>0.545</td>
<td>0.593</td>
<td>0.378</td>
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<tr>
<td>Y2.3</td>
<td>0.904</td>
<td>0.604</td>
<td>0.672</td>
<td>0.481</td>
</tr>
<tr>
<td>Y3.1</td>
<td>0.634</td>
<td>0.487</td>
<td>0.876</td>
<td>0.468</td>
</tr>
<tr>
<td>Y3.2</td>
<td>0.525</td>
<td>0.437</td>
<td>0.793</td>
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<tr>
<td>Y3.3</td>
<td>0.575</td>
<td>0.517</td>
<td>0.829</td>
<td>0.379</td>
</tr>
</tbody>
</table>

Path Analysis and Statistical Testing

Analysis and Testing of the Hypothesis Path that is expected is a significant value of 1.96 and Ho is rejected with a significant level of 0.05 (Sugiyono, 2014).
Table 2 shows that: 1) Customer satisfaction is 0.574, which means that it has a positive effect, has a significant relationship with customer loyalty, which is greater than the T- Statistical value of 1.96, namely 2.777. 2) Service quality of 0.085which means it has a positive effect, not significantly related to customer loyalty because the t value is smaller than t table 1.96, namely 0.462. 3) Marketing Information System of 0.523 which means that it has a positive effect, has a significant relationship with customer satisfaction because the t value is greater than the t table value of 1.96 which is 5.650. 4) Marketing information System of 0.661 which means that it has a positive effect, has a significant relationship with service quality because the t value is greater than the t table value of 1.96 which is 13.154. 5) Marketing Information System of 0.116, which means that it has a positive and insignificant effect on customer loyalty because the t value is smaller than the t table value of 1.96 which is 0.669.

Based on Figures 3 and 4, customer satisfaction and Quality of Service is a perfect mediation (full mediation) between the marketing information system on customer loyalty.

The Effect of Marketing Information Systems on Customer Loyalty

The marketing information system is also a factor that affects customer loyalty according to research (Indrasari, Hapsari, & Sukesi, 2019). From the results of the analysis of customer loyalty which is influenced by the marketing information system shows that the marketing information system has a positive and insignificant effect on customer loyalty. It can be interpreted that the better the value of the marketing information system, the more it will affect the level of loyalty, but not significantly. This study explains that a good marketing information system does not only make consumers very loyal, but requires other variables that support this marketing information system to significantly increase customer loyalty. This insignificant relationship is also because some indicators of the outer loading marketing information system are low, such as product subsystems such as service alert systems, this system is not able to significantly increase customer loyalty, there must be a touch of service, satisfaction so that a customer loyalty system can increase. So that the marketing information system is able to make customers loyal but the relationship is not significant.

Differences in the results of previous studies from (Indrasari et al., 2019) (Hidayatullah, Patalo, Firdianjah, & Waris, 2019) which describes the positive influence and has a significant relationship with customer loyalty which is influenced by service quality. However, the results of this study are supported by the same results as previous studies such as research (Dewi et al., 2018) which shows that service quality has a negative and insignificant effect on customer loyalty.

The Effect of Service Quality on Customer Loyalty

Customers will feel satisfied if the service received is higher than the desired expectations, and vice versa makes customers feel fast (Alma, 2009). The results of the analysis show that the effect of service quality on customer loyalty has a positive and insignificant effect on customer loyalty. the conclusion is that the better the value of service quality, the more it affects customer loyalty but is not significant in increasing customer loyalty. The results of this study also explain that good service quality does
not only make consumers loyal, but requires other variables that significantly support the realization of loyal customers, there must be innovation to balance service quality, if customers do not want to come to the service place because it is not attractive, and lack of education during a pandemic, good service quality will not really affect customers, especially in the conditions of the Covid-19 pandemic. The results of this study do not support previous studies (Purwati, Rukmana, & Deli, 2020) which states the positive influence and significant relationship between customer loyalty which is influenced by service quality. However, this study supports several previous studies such as (Dewi et al., 2018; Surahman, Yasa, & Wahyuni, 2020) explains that customer loyalty is negatively influenced by service quality and is not significant to.

The Effect of Customer Satisfaction on Customer Loyalty

Factors that affect customer loyalty are customer satisfaction factors (Oghojafor et al., 2014). The results of the analysis of customer loyalty which is influenced by customer satisfaction have a positive and significant effect. The results of the analysis show that the higher the loyalty value of the customer, the more customer satisfaction must be. Customer satisfaction is reflected in several indicators such as conformity with expectations, coming back and recommending service at an authorized dealer which will have an impact on customer loyalty. The descriptive statistics of this study indicate that the respondents in this study have a good level of satisfaction.

With a sense of satisfaction in customers, namely the feeling of pleasure in visiting, then visiting exceeds customer expectations raises customer loyalty in visiting. To increase customer loyalty in service vehicles at authorized dealers must increase customer satisfaction so that customer expectations are more fulfilled by improving service so that it excels in competition, customer loyalty will be even higher even during the pandemic Covid-19. Evidenced by the results of previous research conducted by (Muzdalifah, 2017) in the restaurant sector in Pakistan, which found that satisfaction positively and significantly affects customer loyalty, explains the variable service quality, consisting of restaurant service speed, modern and complete restaurant facilities in Pakistan, (Tripathi, 2018) restaurant industry in Delhi India which states that satisfaction has a positive and significant effect on customer loyalty. Where the variable word of mouth is explained, namely the ability to persuade customers to give positive responses about this restaurant and convey it to others. And supported by other research states that customer loyalty is influenced by customer satisfaction positively and significantly (Bahadur, Aziz, & Zulfiquar, 2018; Jere & Mukupa, 2018; Muzdalifah, 2017).

The Role of Service Quality Mediation on the Effect of Marketing Information Systems on Customer Loyalty

Based on the results of the direct and indirect effect analysis, it shows that service quality perfectly mediates the influence of the marketing information system on customer loyalty. This is evidenced by the results of research that the relationship between marketing information systems and service quality has no significant relationship to support customer loyalty, but on the other hand, if the quality of service becomes a mediator it can increase customer loyalty. Full mediation means that service quality fully explains the effect of marketing information systems related to customer loyalty.

With service quality variables able to improve the relationship of the marketing information system to customer loyalty. A good marketing information system is supported by its subsystem indicators supported by good service quality in delivering a marketing system that will create satisfaction first and then generate customer intention to visit again. The marketing information system will be able to increase customer loyalty if it is supported by quality servants at the time Covid-19 in the Denpasar automotive industry.

Research result before from (Dewi et al., 2018) Supporting this result is done by the better the marketing information system in the company must be supported by the quality of service so that the information system can be maximized. Research conducted by (Hidayatullah et al., 2019) regarding the marketing information system which states that the marketing information system in East Java Park has a negative and significant effect on service quality.

Relating to previous research related to the positive influence between service quality on
customer loyalty carried out by (Kaura, Prasad, & Sharma, 2015) in retail banking in India which states that service quality affects customer loyalty with assurance indicators, namely service providers can solve customer problems, ease of access to services. And supported by tangible dimensions, namely modern bank facilities, neat looking bank employees. Able to significantly increase customer loyalty.

The Role of Mediating Customer Satisfaction on the Effect of Marketing Information Systems on Customer Loyalty

Based on the results of the direct and indirect effect analysis, it shows that customer satisfaction perfectly mediates the influence of the marketing information system on customer loyalty. This can be seen from the direct relationship between the marketing information system and the positive but insignificant loyalty, while the indirect relationship, namely the marketing information system on customer loyalty, is mediated by significant positive customer satisfaction. Full mediation means that service quality fully explains the effect of marketing information systems on customer loyalty.

With the customer satisfaction variable, it can improve the relationship of the marketing information system to customer loyalty. A good marketing information system is supported by its subsystem indicators supported by good customer satisfaction in using the system, satisfaction with costs incurred during the pandemic, sterile places to good socialization regarding health protocols so that customers are safe and comfortable to come to service to authorized dealers. satisfaction that exceeds expectations so as to maximize customer loyalty in the future Covid-19 in the Denpasar automotive industry.

Research result previous (Hidayatullah et al., 2019) Supporting research results from customer satisfaction has something to do with marketing information systems, marketing information systems have a positive and significant effect on customer satisfaction who visit the Jatim Park group. The significant role of marketing information systems on customer satisfaction is very reasonable, because modern business systems today, especially in the past. Covid-19 currently puts forward an online information system and a quality website.

Relating to previous research related to the positive influence of service quality on customer loyalty, and customer satisfaction has a positive and significant effect on customer loyalty. Expectations that are fulfilled after using the company's products and services will make repeat purchases of these products (Bahadur et al., 2018). Research conducted by (Muzdalifah, 2017) In the restaurant sector in Pakistan, which found that satisfaction positively and significantly affects customer loyalty, explains the service quality variable, consisting of restaurant service speed, modern and complete restaurant facilities in Pakistan.

CONCLUSION

Based on the results of the data analysis described in the previous section, several conclusions can be drawn as a result of this research, including: 1) The marketing information system has a significant positive effect on service quality during the Covid-19 period in the Denpasar automotive industry. 2) The marketing information system has a significant positive effect on customer satisfaction during the Covid-19 period in the Denpasar automotive industry. 3) The marketing information system has a positive and insignificant effect on customer loyalty during the Covid-19 period in the Denpasar automotive industry, so the better the level of customer loyalty is not necessarily supported by a good marketing information system. This is presumably because the marketing information system must be supported by other variables to maximize its effect on customer loyalty. 4) Service quality has a positive and insignificant effect on customer loyalty during the Covid-19 period in the Denpasar automotive industry, then the better the level of customer loyalty is not necessarily only supported by the quality of service during the Covid-19 period. This is presumably because the quality of service is not supportive during the pandemic, if customers do not want to come to the service place because it is not attractive and there is a lack of education during the pandemic, then good service quality will not really affect customers, especially in the conditions of the Covid-19 pandemic. 5) Customer satisfaction has a significant positive effect on customer loyalty during the Covid-19 period in the Denpasar automotive industry. 6) Service quality fully mediates the relationship between the marketing information system and customer loyalty during the Covid-19 period in the Denpasar automotive industry, so service

quality absolutely fully explains the effect of marketing information systems on customer loyalty.

REFERENCES


