THE DESIGN & IMPLEMENTATION OF CRM-TAXI ONLINE IN INDONESIA

Rusdiaman Rauf**, Hengky Wijaya**, Ezra Tari**

*) Study Program of Management, Sekolah Tinggi Ilmu Ekonomi Tri Dharma Nusantara
   Jl. Kumala II No.51, Makassar 90222, Indonesia
**) Study Program of Education Science, Sekolah Tinggi Filsafat Jaffray Makassar
   Jl. Gunung Merapi No. 103, Makassar 90141, Indonesia
***) Study Program of Education Science, Institut Agama Kristen Negeri Kupang
   Jl. Cak Doko No. 76, Kampung Baru, Kupang 85112, Indonesia

Abstract: Lifestyle shifting is directly proportional to advances in information technology. These developments cannot be prevented or stopped, so everyone must keep up with the changes. System changes occur including in transportation. There are three big online taxis, namely: GoJek, Grab, and Uber, Maxim. Their problems exist in regulation, drivers, consumers, and human resource development. Furthermore, the main attention is the comfort and income of the community. This paper will describe how to solve problems between government, society, and online taxi entrepreneurs. The research approach used is development. Researchers are trying to find information to implement the program created. We have a solution framework that is thought of and constitutes an innovative idea based on two directions. CRM is proposed as a system used to help online taxi users avoid inconvenience problems. All parties must follow this change because society may not survive in the face of globalization if everyone does not want changes that are more effective and efficient changes. Changes were made to improve people's lives. Furthermore, as the main person in charge, the applicator must have a sophisticated system in developing human resources, especially the drivers they have.

Keywords: online taxi, innovations, human resource, systems, aplicator

Abstrak: Peralihan gaya hidup berbanding lurus dengan kemajuan teknologi informasi. Perkembangan ini tidak dapat dicegah serta dihentikan, sehingga semua orang harus mengikuti perubahan tersebut. Perubahan sistem terjadi pada transportasi, yaitu taxi online. Ada tiga besar taksi online yakni: GoJek, Grab dan Uber, Maxim. Permasalahan taxi online ada pada regulasi, driver, konsumen dan pengembangan sumber daya manusia. Hal yang pelu mendapat perhatian adalah kenyamanan dan penghasilan masyarakat. Dalam tulisan ini, penulis akan memaparkan mengenai cara mengatasi masalah antara pemerintah, masyarakat dan pengusahaan taxi online. Pendekatan penelitian yang digunakan adalah pengembangan secara kualitatif. Peneliti berusaha mencari informasi hingga mengimplementasikan program yang dibuat. Kerangka solusi yang dipikirkan dan merupakan ide inovasi harus berbasis dua arah. CRM diusulkan sebagai sistem yang dipakai untuk membantu pengguna taxi online terhindar dari masalah ketidaknyamanan. Perubahan ini harus diikuti oleh semua pihak karena masyarakat tidak mungkin akan dapat bertahan dalam menghadapi globalisasi, jika semua orang tidak menginginkan perubahan yang lebih efektif dan efisien. Perubahan dilakukan agar dapat meningkatkan taraf hidup masyarakat. Lebih jauh lagi, aplikator sebagai penanggung jawab utama harus mempunyai sistem canggih dalam mengembangkan sumber daya manusia terutama driver yang dimilikinya.

Kata kunci: taxi online, inovasi, sumber daya manusia, sistem, aplikator

1 Corresponding author:
Email: rusdiaman@yahoo.com
INTRODUCTION

Today, technology can be used to find the nearest restaurant within seconds, take a picture, and immediately send it to a friend who lives far away. One of the tools that can be used to apply information technology is a computer. Now, computers are being entirely built to create real avatars. Computers combine two different technologies that are calculators and automation. It is much more sophisticated than just a desktop. People have used calculators for thousands of years. Finger or stone counting, counting sticks, abacus, and various objects have been used to aid calculations. Abacus was used to solve complex additions much faster than early computers.

Human and computer interactions are widely applied in modern times, such as recognizing human actions and recognizing hand gestures. In general, cameras are equipped with computers that can capture social action. According to different people’s instructions, the computer will take action, such as the human gaze, hand gestures, and body. Movement can be used as a means of communication between humans and computers. This is a significant contribution to people’s lives (Yun et al. 2021; Xiao and Guo, 2020).

In the 17th century, Blaise Pascal made the first mechanical calculator, called an arithmetic machine, to help his father work on calculations, although it could only add and subtract (Goswami et al. 2019). Algorithm learning helps to detect objects and images based on examples. The algorithm engine has the capability to integrate and synthesis (Khan and Al-Habsi, 2020). The development of computers continues to move rapidly and rapidly, starting with lifestyle changes, ways of communicating, and using transportation. Therefore, human resources development must match this rapid growth based on professionalism in character and other technical abilities.

Chaos is not impossible to manage, but it isn’t easy to do in a short time. The only way to manage this significant change is to look ahead and assess the potential changes that will be made in the future. Therefore, exploring the future is a way to spot trends that can change the world and monitor them regularly. This simple act can change the way you think about the future. One example is an online taxi. Online taxis are one of the solutions to solve transportation problems cheaply. There is an online car-hailing service (OCS) which provides alternative travel for passengers. The service pattern uses Structural Equation Modeling (SEM), which implements e-CRM for customer-based service. Quality and outcomes use an approach based on customer satisfaction (Helmreich and Foushee, 2019; Wang et al. 2019; Čulik et al. 2020; Sivaraks et al. 2011).

Crew Resource Management (CRM) provides several tools to help with the job but does not reduce technician competence. CRM is a workload management program. The principles of Crew Resource Management (CRM) demonstrate team skills. The benefits of using the system in online taxis are very beneficial. There needs to be careful consideration of users and distance traveled traffic situations, design, and performance. The system was developed due to the increasing demand for online taxis (Orlady, 2019; Hamman, 2010; Nugroho et al. 2020).

Online taxi transportation must consider the distance that the driver travels to reach the passenger. Due to the lack of detail, pick-up distance scenarios were made, assuming the driver has to travel a distance of between 0 and 1 km when picking up customers. Service quality is divided into three categories, namely, people, physical, and applications. Satisfaction is assessed using a variant-based structural equation approach. The study results show that there is a relationship between constructors and consumers. The identified relationships highlight the person who determines passenger satisfaction. The online queuing approach is used to measure taxi services’ performance, such as waiting times and searching for vehicles in urban areas. A study of online taxi and motorcycle taxi services in Vietnam shows that the number of motorist accidents is relatively high. So, regulations are needed to reduce the risk of accidents. The government needs to limit safe distances for motorists (Suatmadi et al. 2019; Suhartanto et al. 2020; Nguyen-Phuoc et al. 2019; Zhang et al. 2020).

This paper discusses how the applicator manages responsibility for drivers that we can improve service and security. Of course, CRM needs to be implemented comprehensively with reliable cooperation between the government, applicators, and the public who use online taxis. For now, GoJek, Grab, Uber are the most prominent online taxi companies in existence. What is needed is an online taxi company is a sophisticated management to solve problems such as passengers who are uncomfortable due to drivers, the presence of
criminal acts in small and large firms, and the absence of high-quality human driver development. This paper results from the development of David P Carter, who emphasizes opportunities, institutional analysis, and policy design (Carter et al. 2016). And Faramak Zandi and Madjid Tavana’s writing about E-CRM Framework: Service to Customer Perspective. He described the relationship between the E-CRM factor and the transaction cycle (Zandi and Tavana, 2011).

The two articles provide a complete picture of regulation and service to consumers to create a level of comfort between all parties. The purpose of writing this article is to know the design and implementation of CRM-Taxi Online in Indonesia. This paper aims to provide a solution for applicators, drivers, and governments to manage online taxis effectively and efficiently. There is an optimistic synchronization between online taxis and regular taxis.

METHODS

This research is qualitative research that develops the concept of design and implementation in this paper. The authors then followed the research cycle, namely, (1) strategies to create a social management team. Research cycle (2); emerging strategies reflect analysis and the role of emotions in conveying organizational change. Research cycle; (3) the important role of detecting emerging strategies as an introduction to agreeing on deliberate strategies (Eden and Ackermann, 2018). The problem finding procedure focuses on identifying research boundaries. The research stage is adjusted to a development study, more on collecting and analyzing data. The research results will ultimately be obtained in conjunction with the research objectives (Richey, 2014; Jilcha, 2020).

All parties must be able to sit together to design a system that unites these four things. The first system consists of two essential things, namely the applicator and the government. Here the applicator must understand that acceptance of people as drivers of online taxis must be strictly enforced. And it has a sophisticated reporting system that can help governments and consumers alike. The second part is the government, which must make regulations that can make drivers feel comfortable and have no difficulty operating their online taxis. The second system is the consumers and drivers. Here the consumer must have a level of comfort and be able to save costs. On the other hand, drivers should have competence and a good level of service to their customers. There are many stages of the validation process to find a robust, well-functioning instrument that researchers can use (Rachmatullah et al. 2020). This will be explained in the results and discussion in more detail and how to apply it. The key is to break down those systems into components, which will make the future of online taxis easier to handle and comprehend to think them.

RESULTS

Three things must be developed in running online taxis, namely; government, consumers, and drivers. These three elements are a unit that cannot stand alone in operation. So that management control is challenging to do if there is no unity. Any great technology requires professional management. Technology needs standard standards to be able to develop positively. Technology requires a framework for change that can be used as a guide for its users. Infrastructure without paying close attention to segregation can lead to instability in the process. Personal interests must be put aside in providing maximum service to society. Interests must be able to refer to the benefits received by consumers. So that innovation must be carried out by applicators who refer to human resource development. From here, we will describe the innovations that will be carried out, namely:

Online and Government Taxi Applicators

There are many complaints from the public and drivers for which no solution has yet been found. The online taxi applicator creates an application so that people can use transportation easily. The driver said that applicators do not care about them and do not get adequate service. The solution to this problem is:

Applicators can apply management, namely: first, the tendency to act. Second, study the choices and services to consumers. Third, autonomy and entrepreneurship. Fourth, productivity through humans. Fifth, oriented to real values. Sixth, be faithful and consistent. Seventh, simple organizational structure. Eighth, be flexible.

Taxis are a necessity in traveling, mostly daily workers. The market does not determine the development of the taxi industry. However, in the era of the Internet,
the service and efficiency of taxis must be improved. This needs attention in the development of online taxi companies, especially applicators. With the support of information and communication technology, it is possible to obtain information about an individual’s location in real-time. So those local roads are needed for mobility for residents. Applicator technology is used to map areas that do not exist in the world of transportation. So taxi drivers can get through traffic jams on urban roads (Li, 2016; Cai et al. 2019; Cheng et al. 2020; Rajendran and Srinivas, 2020).

Applicators are required to maintain a two-way relationship with drivers. The five things include (1) Setting goals. (2) Organizing groups. (3) Provide motivation and communication. (4) Measuring performance. (5) Developing resources. There are problems from the government side, namely regulations, which are a source of commotion that must be resolved immediately. The solution to this problem is:

The government must, first of all, be able to communicate based on a two-way relationship. A regulation can be made if it is well communicated and embracing the whole. Two-way relationships have several essential requirements: the government must have clear reasons for its decision and communicate comprehensively to the applicator and driver (the applicator owner must sit together with the driver (representative) and the government a solution can occur). These requirements include: (1) What information should the government provide to applicators and drivers. The government, its regulations in implementing, can apply the principle of 4 decisions in executing: (1) What will be done. (2) How to start the regulation. (3) Where to start. (4) Determine the goals to be achieved and set the deadline. Agent simulation is a powerful tool for analyzing the complex problems described above. Agent-based models are implemented in conjunction with agent behavior rules to obtain the optimal number of vehicles. And performance indicators of taxi service providers (Grau and Romeu, 2015).

The proposed taxi service aggregates taxi route-related information from GPS data using machine learning techniques. Because taxis can deviate from the route that can be detected in real-time, companies must develop appropriate policies to improve driver health and safety. Electronic governance is made with privacy in mind and continuous innovation. Information technology experts can explore new data—many features for detailed visualization and analysis. Elements can be divided into three parts, namely: geographic, business strategic, and mobility. The combination of different components is designed to evaluate new plans. Experiments and proposed models can better solve geographic problems but can provide simple predictions to develop well. The results showed that the decline in pedestrians, bicycles and public transport occurred due to taxi services (Dou et al. 2019; Bartel et al. 2019; Ju et al. 2019; Chen et al. 2019; Almlöf et al. 2020).

**Consumer dan driver**

It should be understood here, and the applicator must be strict in accepting working drivers because the community will feel comfortable traveling. Applicants must apply strict honesty principles in the acceptance of drivers. Drivers must use the original photo, e-KTP, which is uploaded on the application and can be seen by consumers. The photo and ID card when the consumer get the driver, as a sign and proof that the driver is the same person. Another solution is that if it is not a Card Identity (KTP) that can be seen by consumers, the applicator can show a photo and a brief bio of the driver, such as the full name, driver’s cell phone number, and driver registration number. The first problem that arises here is: consumers, when ordering a taxi online using the application, find that the driver is the same person. Another solution is that consumers can refuse if the car that come is different from what is in the application. The solution to this is that consumers can refuse if the driver picks up his photo at a different location; this is to maintain consumer comfort. Consumers can refuse if there is no plate number at the time of ordering via the application and cancel if there is no plate number for a different vehicle. Consumers can refuse if the car that comes is different from what is in the application. And refuse if the vehicle plate number is different from what is listed in the application. At this point, consumers must be smart in seeing and deciding. The applicator can make a special dial number such as 911 when consumers use online taxis if drivers behave beyond the ethics that have been applied by the applicator. So, consumers can call or report it to the applicator, of course, with an explanation that can be sent via the application, not only 1-5 stars consumers in providing star sign. And short comments to applicators. And this has been very well done by the applicator. In certain
It takes a lot of time, possibly 1-2 years, to learn professionally. Drivers should develop their goals to be higher than drivers in general because advances in information technology are about the cost of being cheap and how to provide professional service so that consumers can be satisfied and provide positive feedback for drivers and applicators.

Drivers tend to be oriented towards the adopted usage. The situation factors and the availability of information regarding costs and methods need to be clarified. Managers and academics need to develop a framework that includes the driving and inhibiting factors of the service system (D’Agostin et al. 2020; Shaikh et al. 2020). The driver finds two dimensions of performance, namely, performance and traceability. The focus on performance is the driver’s most prominent. Full-time drivers who are permanently registered with the company are less likely to leave the business, while private car drivers are more likely to leave the business (Skippon, 2014; Du et al. 2020; Arts et al. 2011). Consumers were found to adopt innovations with less complexity and relatively higher returns. Social and relational elements drive adoption, unravel the effects of crossovers between them and reveal the moderating role of experiences and the needs of human interaction (Fernandes and Oliveira, 2021).

Furthermore, applicators must care, especially in training drivers to have a professional attitude, so that consumers can comfortably and easily use online taxis; things like this must be considered to develop the company to a global level and better service CRM systems.

**Managerial Implications**

Online taxis as public transportation with a CRM system well regulated by the government. This CRM system is implemented by prioritizing good communication between customers, drivers, and stakeholders, reducing customer problems and complaints. Crew Resource Management (CRM) supports serving systems running well, and many complaints from consumers and drivers can be adequately addressed. Communication between consumers and drivers is transparent and easily accessible.

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![Success triangle in communication](image-url)
Research results from Hayati and Usman (2019), show that customer management and the introduction of new systems are expected to increase sales and communication in the company, and there is room for development in the ageing process. With a CRM (Customer Relationship Management) system, employees feel that work efficiency will build growth and better utilize existing customers. Ventoniemi’s research (2018) implements CRM (Customer Relationship Management) in relationships with customers to impact employee performance for the better in the future. Likewise, Crew Resource Management (CRM) in this paper has a clear goal: to provide convenience and security to customers and drivers not to violate the rules passed by the government regarding online taxis.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Online taxis are a solution to improve people’s lives. Because jobs can be opened, and people can save money on transportation. HR development is carried out by applicators so that a professional company is created. The focus of the applicator is not only application development and information technology but HR drivers. The government made it based on a two-way relationship and was accepted by all parties. So, a level of fairness is evenly distributed between parties, regulators, drivers, and entrepreneurs. And the government’s job is to explain the regulations made in more detail.

Recommendations

CRM design that emphasizes two-way communication both internally and externally aims to reduce inconvenience in driving using online transportation. The emphasis on good communication allows the government to create CRM applications supported by active communication regulations between drivers and customers so that misunderstandings and customer complaints are low. Drivers also continue to develop themselves in communicating well to get excellent customer appreciation.

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