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Conference Paper

HRM, Marketing Strategic, Quality and Operations Management the Design to Improve E-Ktp Service Quality in the Klaten Population and Civil Registration Agency

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Abstract

The quality of public service refers to the satisfactionlevel provided by the government organizations, whichmeets or exceeds the customers'perceptions, demands, desires and expectations. In case of E-KTP (Electronic Citizen ID), the main problem is basically to improve the quality of its service. The qualified services depend on various aspects such as its implementation (management), human resources, and institutions. The Servqual method was used to find out the quality of E-KTP services in The Klaten Population and Civil Registration Agency (Dispendukcapil) and the service attributes thatshould be improved. The Kano method was employed to determine the attribute priority that must be improved based on its influence on the public satisfaction. The survey was conducted by distributing questionnaires to 148 respondents. Afterwards, a statistical test was performed to assess the validity and reliability of the data. The results were all the expectations attributes and the performance assessments were declared valid since $R_{count} > R_{table}$. The results of this study were in the form of design proposals to improve E-KTP services.

Keywords: service quality, government service quality, customer satisfaction, e-KTP

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1. Introduction

Dispendukcapil is a government organization that is the executor of making e-KTP, that is one of the approved public organizations that can provide high trust and satisfaction for the community. However, in this implementation, the government handled many problems such as corruption and unpreparedness related to the implementation of e-KTP program. The problems in making e-KTP are almost found in every region in Indonesia, including the area of Klaten Regency, Central Java.

An initial observation was done to 30 respondents who were making e-KTP in Klaten regency. Among 73% of them felt that the service from the officers were not punctual, 57% considered the officers was bad at communicating, 63% stated that the officers were sluggish, 77% mentioned that the officers did not give the clear and proper information,

83% of the respondents experienced that the officers were quite unfriendly, 73% judged that the officers' was incapable to handle problems, 73% thought that the physical condition of the office was inadequate, and 57% said that the cleanliess, tidiness and comfort of the working and waiting room poor. Moreover, 100% of respondents stated that the way the officers served the community was not as expected, 67% stated that the officers did not provide solutions to the problems they complained, 83% admitted that the completion of e-KTP go far beyond the schedule (late), 80% stated that the process of making e-KTP was very long, 80% felt uncomfortable when making e-KTP, and 70% of respondents rate that the e-KTP facility and infrastructure was insufficient.

Based on the observation in the Klaten Population and Civil Registration Agency (Dispendukcapil), it was found that the e-KTP problem appeared because the network can be dropped if the agency printed plentiful e-KTP. Due to the form limitations (250 pieces per day), the priority of E-KTP printing was given to the residents who just recorded data. The Agency also noted that the E-KTP queue reached 40,000 and kept growing day by day. The head of the Klaten Population and Civil Registration Agency said that the number of queue was only listed from the applicants of the new E-KTP. On the other hand, the other case of E-KTP renewal because of lost, data change or damage must be suspended (Dispendukcapil, 2017)

Based on the various above problems, it can be inferred that the prominent factor of e-KTP is on enhancing its service quality. The qualified services depend on various aspects such as its implementation (management), human resources, and institutions.

The quality of public services refers to the ability of government organizations to provide services which is not only based on the wishes and desires of government organizations, but also the desires and aspirations of the served people. It can be defined that the qualified public service emphasize on the satisfaction level provided by the government organizations, which meets or exceeds the customers' perceptions, demands, desires and expectations.

This study aims at improving the public service of E-KTP making by involving the community aspirations to make sure the services in accordance with the community expectations. The method to solve the problems above include Servqual integration, Kano Model and Quality Function Deployment. The Servqual is a service quality study to analyze the gaps between customer perceptions and expectations (Fardiana, 2006). Research by using Kano and QFD methods has been carried out by previous researchers including Đonlagić and Fazlić (2015) using servqual method to assess quality in higher education. Nitipan (2015) uses Kano model to understand e-service attributes using empirical investigations. Hsu, et al. (2007) integrate Kano

Model into Quality Function Deployment to facilitate analysis of decisions on service quality. Prabha, et al. (2010) conducted service quality research on public services in Mauritius with the Servqual method. Afsar, et al. (2011) conducted research to identify the services that customers want and describe their priorities as a basis when planning an internet based service with quality function deployment, Kano Models and AHP techniques to determine priorities. Sabrina (2012) conducted an empirical study of servqual as a method of measuring service quality. Li, et al. (2013) integrated Kano Model and Servqual to improve hotel customer satisfaction standards. Michael, et al. (2015) used servqual to evaluate the quality of service at stores in agricultural schools. Sudiarso and Kailani (2013) integrate Fuzzy Quality Function Deployment to improve service quality and Servqual. Waraporn and Natcha (2014) proposed a comprehensive approach to designing service innovations by combining QFD and SERVQUAL. Izwaan (2012) integrates Servqual and Kano Model into QFD to develop courses and training models. Ida Verna (2014) examines the problem of consumer satisfaction in one of the universities with the Quality Function Deployment method. Further research by Fitra Fardiana and Patdono Suwignjo in 2006 that analyzed the use of the Servqual method, Kano Model and QFD for improving service quality at MM ITS. Tan and Pawitra (2001) which discuss the level of customer satisfaction in the tourism industry in Singaoura with the etode used is Servqual, Kano, QFD. Research conducted by Munhurrun, Bhiwajee and Naidoo (2010) discusses the quality of service in the public service with the servqual method. Setyawan (2012) examined the effect of service quality on the level of community satisfaction of the users of the DKI Jakarta Provincial TransJakarta Busway service based on the perceptions of passengers using the Servqual method. Anjar and Andina (2017) integrate canoe models and Quality Function Deployment to design services at the hospital front office.

By knowing the gap, it can be easier to determine which part of the service variable that should be fixed. Both methods, Servqual and Kano, are integrated into Quality Function Deployment (QFD). According to Tan (2001), the use of the servqual method for measuring service quality must be followed by the application of QFD to clarify the action plan that must be done to close the gap. The service quality is formed by comparisons between the ideal format and the perceptions of quality dimension performance. The action plan generated from QFD method was measured using Kano Model to determine whether the variable was able to satisfy customer needs or not (Wijaya, 2011).

2. Method

The research can be catagorized as descriptive approach with the combination of quantitative and qualitative approach. According to Dermawan Wibisono (2013), descriptive approach refers to the transformation of raw data into some kind of format that is easily understood and translated. The results of descriptive research are broad because it also clarifies the causes of events.

The study was conducted in Klaten Regency, especially at the Population and Civil Registration Agency from July 2018 until its completion. This location was selected purposively.

Based on data in the Klaten Population and Civil Registration Agency, the daily printing capacity of e-KTP is 250. The limited time and conditions make it impossible to studied all the populations, but the sample can be used as a generalization of the research. The samples was taken accidentally referring to Krejcie and Morgan tables where the taken was 148 people.

3. Data Colelction Techniques

The first data collection used Wibisono's observation (2013) as a systemic recording process towards the behavior patterns of people, objects and events to obtain information relating to research agenda. The second was a questionnaire as a tool and technique of data collection with a list of questions which was distributed to be filled out and returned to the researcher. The type was a closed questionnaire where the respondents were not given the opportunity to give another answer because the answer was determined earlier. After obtaining the information on the services quality expected by consumers, those were made into concise and easy sentences grouped into 5 dimensions of Servqual. The third instrument was interview as a method that gave the structured questions to the sample population to obtain data from respondents (Amirullah, 2013). Finally, documentation was done to collect the secondary data in the form of documents on E-KTP service activities.

4. Research Instruments

The research instrument was used by the researchers in collecting data.

Questionnaire

The questionnaire was needed to obtain the research data.. The measurement scale in Servqual integration, Kano Model and Quality Function Deployment used Likert scale.
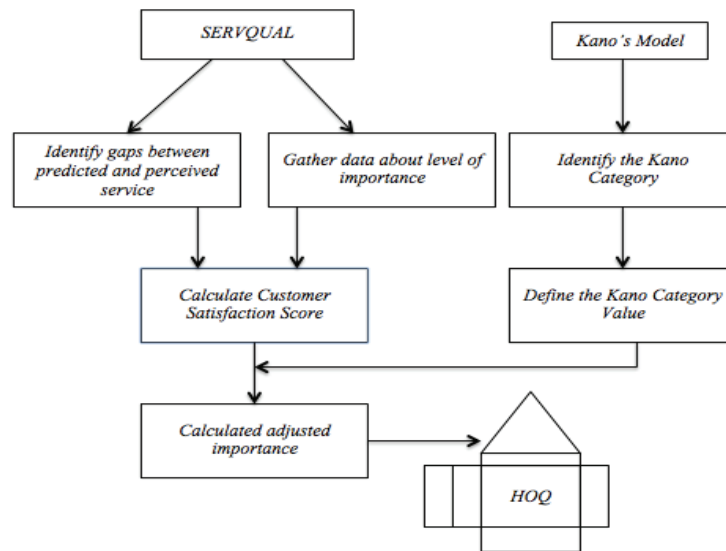

Figure 1: Chart of Servqual, Kano and QFD working principles (Tan, K.C & Pawitra, T.A. (2001)).

5. Results and Discussion

The validity test included content and construct validity. The instruments used in this study had been through the validation stage of expert judgment. The construct validity was measured using Bivariate Pearson in which all items were declared valid. The reliability test used the Alpha Reliability coefficient formula to test the items reliability that were considered valid (Arikunto, 2013). The instrument was declared reliable if the obtained alpha coefficient score was bigger than the table with the significance of 5%. The calculation results showed that all instruments in this study were realiable.

Based on the results of interviews and observations made, it can be identified 31 service practices of industrial practices that become Customer requirements in the e-KTP service. The identification is based on 5 components of service quality, namely: direct evidence (Tangibles), Reliability, Responsiveness (responsiveness), assurance (Assurance), and empathy (emphaty)

Based on the interviews and observations results, it can be identified that 31 service activities that had become the customer requirements of E-KTP service. The identification was based on 5 components of service quality consisting of direct evidence (Tangibles), Reliability, Responsiveness, assurance, and empathy.

TABLE 1: Expectation, performance, gap of each demension.

No	Dimension	Expectation	Performance	Gap
1	Tangible	4.23	3.31	-0.924
2	Reliability	4.25	3.30	-0.954
3	Responsiveness	4.22	3.26	-0.960
4	Assurance	4.22	3.29	-0.931
5	Empathy	4.28	3.31	-0.974
	Mean	4.24	3.29	-0.949

Based on the obtained data, it showed that the gap score by the attribute <0. It mean that the performance of service attributes on E-KTP was still below the expected value or expectation. If the performance value was lower than the expected value, there was a negative gap in the attribute. In other words, the quality of service still did not satisfy the community. The service can be considered satisfactory if there was a positive score gap. Meanwhile, if the score gap was 0, the quality of service would be in accordance with what was expected by the users.

Though the negative gap was small, or the minus value is not too large, it was still considered as unsatisfactory. The servqual adhered to the zero tolerance system in its implementation. It indicated that all attributes did not meet the satisfactory quality yet.

Based on the expectations and obtained assessments for each dimension, the classification of quality for each dimension can be seen in the following table.

TABLE 2: Service Quality.

No	Dimension	Expectation	Perfoemance	Q = P/E
1	*Tangible*	4.23	3.31	0.782
2	*Reliability*	4.25	3.30	0.776
3	*Responsiveness*	4.22	3.26	0.773
4	*Assurance*	4.22	3.29	0.780
5	*Empathy*	4.28	3.34	0.779
	Mean	4.24	3.30	0.778

The quality can be considered good if (Q) $\geq$ 1. However, Based on the calculation of the quality in each dimension from Table 2, the service in E-KTP was still bad. Therefore it is necessary to improve the service attributes. To make some improvements, it should be prioritized the attributes that can increase the customer satisfaction. Therefore, the next stage of service quality attributes of the industrial practice was analyzed using the Kano method.

In the Kano analysis model, it can be found the classification of service attributes, because, fundamentally, Kano Model classified by looking at the relationship between the customer satisfaction level towards its service attributes and the fulfillment level of its service attributes. The catagorization fall into 6 domains involving A (Attractive), O (One Dimensional), M (Must Be), I (Indifferent), Q (Questionable), and R (reverse). The results of Kano data processing showed that there were several attribute categories that appeared. In details, there were 18 attributes that were included in O category and 12 attributes belonged to M.

The integration of the Service Quality and the Kano method was to complement and cover the weaknesses of each method. Kano's model covered the weaknesses of linear assumptions that exist in the servqual method, on the other hand, servqual can provide an explanation on the attribute performances until the discovery of the score gap in each attribute. As proof, the Kano method showed that some assumptions of the customer satisfaction level would not be linear with the fulfillment level of service attributes needed by the customer, as analyzed in the servqual method. This assumption based on the Kano method is not totally correct because the assumption only applied to attributes with category of O. In addition, Kano model only focused on product or service attributes classification. The Kano model was not given a clear picture of the performance from the attributes and it would not find the score gap that can be used as a benificial reference.

By using the servqual method, it can be seen the performance of 69 service attributes with its score gap. With the Kano model, it can be revealed the attributes that should be developed and the strategies that should be developed referring to these results. The service attributes in category of A must be sustainable developed because this attribute is an innovative process. Meanwhile, the attributes that had the positive score with the category of M should be used as the strength, so that these attributes must be maintained to be accordance with the consumer expectations. It was a basic attribute that must meet the customer expectations, as well as service attributes that category of O must also maintain its progress.

However, the results of data processing showed that all existing service attributes had the negative score gap, and it was the weakness of the industrial practices implementation. The attributes that had the negative score gap with M category must be improved its quality to meets the consumer expectations. In the attributes with O category and the negative scores, these attributes must be improved to exceed the consumer desires.

The results of QFD Level one was the ranking of attributes based on the servqual analysis and Kano model.

No	Technical Response	AI	RI(%)
1	Responsiveness	396.22	17
2	Commitment	346.12	15
3	Assurance	440.87	19
4	Technical Rules	410.03	17
5	Reliability	255.49	11
6	Space comfort	204.36	8.8
7	Cleanliness	39.98	1.7
8	E-KTP infrastructure	213.64	9.2
Total		2324.72	100

The results of QFD level 1 indicated that the attribute with the highest importance value was the commitment of the the population and civil registration officers. In HOQ Level 2, the input was technical requirements and presentation score of technical parameters that became normalized load. The HOQ level 2 was used to translate design characteristics that met technical requirements. They were enforcement for bureaucratic ethics implementation, regulations affirmation on the application of professional ethics of civil servants, affirmation of standard operational procedure of E-KTP service, providing queue numbers and the queue order information, automatic queues calling, improving employee competency, maintaining routine E-KTP printing equipment, demanding employee uniforms, providing E-KTP service instructions, scheduling cleaning staff, providing trash bins close to waiting chairs, separating E-KTP services with other population services, providing comfortable waiting chairs with adequate capacity, installing air-conditioner, and entertainment facilities (TV).

The input in HOQ level 3 was the design characteristics and its presentation score that became normalized load. HOQ level 3 was used to translate requirements process that met design characteristics.

HOQ level 3 produced E-KTP service requirements as follows: records of violations, employee sanctions and awards for exemplary employees, registration of online queue numbers, queue audio visual devices, training in using E-KTP service machines to all employees, schaduled maintenance of E-KTP printing machine, regulations of employee uniforms, putting SOP of e-KTP services at strategic locations, checkthe list of cleaning staff activities, waste bins (at leaset 2), E-KTP service with its own room, soft and ergonomic waiting chairs, Air Conditioner in every corner of the room and 32 inch LCD TV. Moreover, the success parameters of the process were designed through QFD level

4. In this level, the input was the required process and its presentation score that became normalized load. HOQ level 4 was used to translate the the success parameters of the process. The matrix of HOQ Level 2 explained the required process and the success parameters. This matrix was based on the combination of data processing from the determination of load normalization to the interaction of design parameters. HOQ level 4 produced E-KTP service process parameters as follows: employees obedience on the bureaucratic ethics, their work based on professional ethics, their work based on the correct procedures, reducing waiting time for service, good order of services, employees training, smooth running of E-KTP equipment during service hours, neat appearance of E-KTP officers, the public understing on E-KTP service procedure, clean and tidy room, special room for E-KTP service, efficient queue system.

TABLE 4: The Design to Improve Service Quality.

Karakteristik Desain Usulan	Proses yang Dibutuhkan	Parameter Keberhasilan
Penegasan implementasi etika birokrasi	Catatan pelanggaran, sanksi pegawai dan Penghargaan untuk pegawai teladan	Pegawai Mematuhi Etika Birokrasi
Penegasan peraturan penerapan etika profesi pegawai negeri		Pegawai bekerja sesuai dengan etika profesi pegawai
Penegasan implementasi standar operasional prosedur pelayanan e - ktp		Pegawai bekerja dengan prosedur yang benar
Menyediakan nomor antrian untuk urutan pelayanan	Pendaftaran nomor antrian online	Waktu tunggu pelayanan berkurang
Memberikan informasi nomor antrian	Perangkat audio visual antrian	Pelayanan dilakukan dengan tertib
Pemanggilan antrian otomatis		
Meningkatkan kompetensi pegawai	Pelatihan penggunaan mesin pelayanan e-ktp kepada semua karyawan	Disdukcapil memiliki pegawai yang terlatih
Melakukan perawatan peralatan dan mesin cetak e - ktp secara rutin	Jadwal perawatan mesin cetak e - ktp	Perlatan pelayanan e-ktp tidak mengalami masalah saat jam pelayanan
Membuat peraturan seragam pegawai	Surat Edaran Peraturan seragam pegawai	Petugas e-ktp memiliki penampilan yang rapih
menyediakan petunjuk pelayanan e-ktp	Memasang SOP Pelayanan e-KTP ditempat strategis	Masyarakat memahami proses pelayanan e-ktp
Membuat penjadwalan petugas kebersihan	Cek list kegiatan petugas kebersihan	Ruangan pelayanan e-ktp selalu terlihat bersih dan rapih
Menyediakan tempat sampah dekat dengan kursi tunggu	Terdapat minimal 2 tempat sampah	
Tidak mencampur pelayanan e-ktp dengan layanan kependudukan yang lain	Pelayanan e-ktp diberikan ruangan sendiri	Ruangan khusus pelayanan e-ktp
Menyediakan kursi tunggu yang nyaman dengan kapasitas memadai	Kursi tunggu yang empuk dan ergonomis	Masyarakat tidak merasa jenuh pada saat mengantri
Menyediakan pendingin ruangan	Kipas angin pada setiap sudut ruangan	
Menyediakan fasilitas hiburan (TV)	TV LCD 32 inch	

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6. Conclusions and Suggestions

1. **Conclusions**: All available service attributes had a negative gap score where its was the weakness of E-KTP service in the Klaten Population and Civil Registration Agency. The attributes that have a negative score gap and M category based on the Kano method must be improved on its quality improved to meet the consumer expectations. Meanwhile, the attributes with O category and negative scores must be improved on its quality to exceed the consumer desires. To determine the success parameters of the proposed design, the required process was determined first to meet the design characteristics. The process requirements were determined through QFD level 3. After the required process was determined, the success parameters of the process can be determined to fulfill the service design characteristics. The success parameters of E-KTP service based on HOQ level 4 consisting of employees obedience on the bureaucratic ethics, their work based on professional ethics, their work based on the correct procedures, reducing waiting time for service, good order of services, employees training, smooth running of E-KTP equipment during service hours, neat appearance of E-KTP officers, the public understing on E-KTP service procedure, clean and tidy room, special room for E-KTP service, efficient queue system.

2. **Suggestions** : To increase community satisfaction with E-KTP services, the Klaten Population and Civil Registration Agency needs to make improvements in terms of employee discipline by enforcing employment regulations and imposing strict sanctions to employees who break the bureaucratic ethics and employment regulations. However, this research is not comprehensive yet because it only examines the service quality from the community point of view. For further research, it will be beneficial to investigate the internal performance of the Klaten Population and Civil Registration Agency according to the bureaucratic ethics guidence and employment regulations. This study create a conclusion on the proposed improvement of E-KTP services, therefore further evaluation on its implementation can be carried out in guarantee the community satisfaction.

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