Improving the Quality of Patent Registration Services: An Applicant Satisfaction Perspective at the Directorate General of Intellectual Property

Sukma Ayudya Pramesti1, Rezi Erdiansyah2
1,2Master Manajemen Program, Post Graduated School Universitas Tarumanegara, Jakarta, Indonesia
Corresponding E-mail: 1) pramestiayudya@gmail.com, 2) rezie@fikom.untar.ac.id

Abstract
Introduction/Main Objective: Good governance will create good implementation of public service functions as well. On the other hand, bad governance means that public service functions will not be carried out well. Background of the Problem: researched the influence of the quality of patent registration application services on patent applicant satisfaction with DJKI based on reability, responsive, assurance, emphaty dan tangible. Research gaps/Novelty: This research examines the influence of the quality of patent registration application services on satisfaction of patent applicants at DJKI based on reability, responsive, assurance, emphaty dan tangible. Research Methods: This type of research is quantitative research with a cross sectional approach. This research uses the SPSS application. Finding/Result: There is a positive and insignificant influence between the quality of patent registration application services on patent applicant satisfaction with DJKI based on a reliability p-value > 0.05. There is a positive and significant influence between the quality of patent registration application services on patent applicant satisfaction with DJKI based on responsive, assurance, emphaty dan tangible. Conclusions and implications: This research shows that there are 4 indicators of service quality that influence patent applicant satisfaction with DJKI, so this can be of concern to DJKI to increase patent applicant satisfaction with DJKI.

Keywords: Service Quality, Registered Paten, Reability, Responsive, Assurance, Emphaty, Tangible

1. INTRODUCTION
The administration of government is aimed at creating a public service function. Good governance tends to create good public service functions. On the other hand, bad governance means that public service functions will not be carried out well. The quality of public services is a main indicator in the implementation of good government, from the central government to regional governments. Even the Ministry of State Apparatus Empowerment and Bureaucratic Reform (KemenPANRB) encourages improving the quality of public services through awards for government agencies that carry out development and innovation in public services (Ahmad, 2018). The Directorate General of Intellectual Property (DJKI) as one of the government agencies that has Non-Tax State Revenue (PNBP) in the field of Intellectual Property has public services related to patent administration. From 1991 to 2022, the number of patent applications received by DJKI was 190,095. In detail, 82.94% of applications came from abroad and the other 17.06% came from within the country. Patents are the largest contributor to the percentage of PNBP revenues (around 80% of PNBP comes from Patent administration services) obtained by DJKI.

In DJKI there are Intellectual Property Rights (IPR) or Intellectual Property Rights which can be defined as the rights owned by a person to work that is developed creatively and receives protection. IPR is divided into 2 (two) parts, namely Copyright and Industrial Property Rights. Copyright is an exclusive right that is automatically granted to a person for the works created, while Industrial Property Rights consist of Patents, Brands, Geographical Indications, Industrial Designs, Integrated Circuit Layout Designs and Trade Secrets.
Law No.13 of 2016 concerning Patents explains that one of the industrial property rights is a patent. A patent is an exclusive right granted by the state to an inventor for the results of his invention in the field of technology for a certain period of time to implement the invention himself or give approval to another party to implement it. Inventor can be defined as a person who has an idea which is then put into production to produce an invention in the field of technology. Patent protection is very important for inventors and patent holders because it can motivate inventors to improve their work, both in quantity and quality to encourage the prosperity of the nation and state and create a healthy business climate. For this reason, the Indonesian Government legally promulgated Law Number 13 of 2016 concerning Patents which is a replacement for the previous Patent Law, namely Law Number 14 of 2001 (Modul Kekayaan Intelektual, 2020).

Patents are one of the backbones for developed countries which are based on Intellectual Property as a driving factor in their country’s economy. Meanwhile, in Indonesia, the authority that has the authority to administer and provide protection for Intellectual Property is under the control of the Ministry of Law and Human Rights, namely the DJKI. Service quality is the spearhead of services that must be implemented in government. According to Arianto (2018) service quality focuses on meeting needs and requirements, as well as on timeliness to meet customer expectations. Meanwhile, according to Aria (2020) service quality is an important component that must be considered in providing excellent service quality. Service quality is a central point for a company because it influences consumer satisfaction and consumer satisfaction will arise if the quality of service provided is good.

In the government, Law Number 25 of 2009 concerning Public Services has regulated how the government should provide services to the public, with the aim of maximizing government services so as to create a climate of excellent service in every government agency, especially regarding patent registration application services at the Directorate General of Intellectual Property. (DJKI) Ministry of Law and Human Rights. DJKI has implemented the program it carries out based on Minister of Law and Human Rights Regulation Number 7 of 2015 concerning the Strategic Plan of the Ministry of Law and Human Rights for 2015 – 2019 and Minister of Law and Human Rights Regulation Number M. HH-06. KP. 5. 03 of 2016 concerning Performance Targets for the Ministry of Law and Human Rights in 2016. The performance indicators are the percentage of intellectual property applications completed in accordance with applicable laws and regulations, the percentage of the public who access intellectual property information, the percentage of completed criminal acts in the field of intellectual property and the level of public satisfaction with intellectual property services.

With the existence of an Intellectual Property Information System that is integral and easily accessible to the public, DJKI should be able to improve services in accordance with the principles of public service so that it can support nation development and advance general welfare and it is hoped that there will be an increase in applications for intellectual property registration in Indonesia, but at the level of implementation, it turns out that there are still obstacles in providing excellent service so that efforts are needed to overcome them. Based on the explanation above, the author is interested in further research regarding "Analysis of the Quality of Patent Registration Application Services on Applicant Satisfaction at the Directorate General of Intellectual Property".
2. LITERATURE REVIEW

2.1 Satisfaction Theory

According to Tjiptono (2018), the word "satisfaction" comes from the Latin "satis" (meaning quite a lot, adequate) and "facio" (to do or make). In simple terms, satisfaction can be interpreted as an effort to fulfill something or make something adequate. According to Kotler and Keller (2018), highly satisfied consumers will usually remain loyal for a longer time, buy again when the company introduces new products and renews old products, talk good things about the company and its products to other people and not be too sensitive to price. However, on the other hand, if consumers are disappointed, it can have a negative impact on the company, namely reducing the number of consumers because consumers are no longer interested in using the services or products offered by a company, which will have an impact on reducing profits. According to Kotler and Keller (2018), there are 3 indicators of satisfaction, namely:

1. Complaint and suggestion handling system
   A consumer-oriented company will provide consumers with ample opportunities to submit suggestions and complaints, for example by providing suggestion boxes, comment cards and so on.

2. Reputational survey system
   In general, research on consumer satisfaction is carried out by conducting surveys through various media, whether by telephone, post or direct interviews.

3. System analysis
   The company will contact its customers or at least find out which customers have made transactions and stopped buying the product.

2.2 Service Quality Theory

According to Arianto (2018) service quality can be defined as focusing on meeting needs and requirements, as well as on timeliness to meet customer expectations. Meanwhile, according to Aria (2020) Service Quality is an important component that must be considered in providing excellent Service Quality. Service quality is a central point for a company because it influences consumer satisfaction and consumer satisfaction will arise if the quality of service provided is good. According to Tjiptono (2018), service quality is a measure of how well the level of service provided meets customer expectations. According to Kasmir (2017), service quality is defined as the actions or actions of a person or organization aimed at providing satisfaction to customers or employees.

According to Kotler and Keller (2018) there are five dimensions of service quality, namely:

1. Reliability, namely the company's ability to perform the promised services reliably and accurately.
2. Tangibles (Physical Evidence), namely the appearance of physical facilities, equipment, communication facilities and the appearance of the employee.
3. Responsiveness, namely the willingness to help customers and provide fast service.
4. Assurance, namely employee knowledge and politeness and the employee's ability to convey a sense of trust and confidence.
5. Empathy, namely attention, special attention given to customers.
2.3 Theory of Application For Patent Registration

- **Definition of Patent Registration Application**
  
  A Patent Registration Application is a service provided to the public who wishes to register an inventor's exclusive right to an invention in the field of technology for a certain period of time to implement it themselves or give approval to another party to implement the invention.

- **Regulations**
  1. Law Number 13 of 2016 concerning Patents;
  2. Republic of Indonesia Government Regulation Number 28 of 2019 concerning Tariffs and Services for Non-Tax State Revenue.

- **Requirements**
  1. Description of Patent Application in Indonesian;
  2. Claim;
  3. Abstract;
  4. Invention Drawings (PDF) and Drawings for Publication (JPG);
  5. Statement of Ownership of the Invention by the Inventor;
  6. Letter of Transfer of Rights (if the inventor and applicant are different or the applicant is a legal entity);
  7. Power of Attorney (if submitted through a consultant);
  8. UMK Certificate (if the applicant is a micro or small business);
  9. Decree on the Deed of Establishment (if the applicant is a government educational or R&D institution).

- **Application Procedure**
  1. Patent Registration Procedure

![Figure 1: Patent Registration Procedure](image-url)

![Figure 2: Patent Registration Process Business Flow](image2)


![Figure 3: Simple Patent Registration Process Business Flow](image3)
• **Patent Application Fees:**
  1. Patent Application
     a. UMKM: Rp. 350,000
     b. General: Rp. 1,250,000
  2. Simple Patent Application
     a. UMKM: Rp. 200,000
     b. General: Rp. 800,000

3. **RESEARCH METHODOLOGY**

This type of research is quantitative research with a cross sectional approach. This research will be carried out at DJKI in the DJKI Building, Ministry of Law and Human Rights, Jl. H.R. Rasuna Said Kav. 8-9 Kuningan, South Jakarta. This research was carried out from the time the author conducted a preliminary survey in April 2023 until data collection was followed by a results seminar. The population in this study were patent registration applicants at DJKI. The sampling technique used was accidental sampling because the researcher distributed questionnaires to each applicant for patent registration with the DJKI.

The instrument used for this research was a questionnaire. The data obtained in this research will be processed using statistical methods, because the data obtained is in the form of numbers and statistical methods can provide objective results. This data analysis method is assisted by using the SPSS Version 25.0 for Windows program. The selection of the research location, namely the United States as an importing country for shrimp commodities, was carried out deliberately (purposive sampling). This is because the United States is one of the largest shrimp importing countries in the world. The largest shrimp supplier countries in America are Indonesia, India, Ecuador, Mexico and Vietnam. The number of shrimp imports to the United States has fluctuated, tending to increase from Q1 2012 to Q4 2022.

4. **RESULTS**

4.1 **Partial Test Results (T-Test)**

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.479</td>
<td>1.369</td>
</tr>
<tr>
<td>X1</td>
<td>.185</td>
<td>.140</td>
</tr>
<tr>
<td>X2</td>
<td>.224</td>
<td>.112</td>
</tr>
<tr>
<td>X3</td>
<td>.314</td>
<td>.095</td>
</tr>
<tr>
<td>X4</td>
<td>.817</td>
<td>.137</td>
</tr>
<tr>
<td>X5</td>
<td>.444</td>
<td>.146</td>
</tr>
</tbody>
</table>

Based on the SPSS calculation results in table 4.9, the following conclusions can be drawn:

1. Reliability Variable (X1) on Applicant Satisfaction (Y)
It is known in table 4.9 that the p-value in the significance column is 0.189, which means it is greater than 0.05, so it can be explained that (Reliability) (X1) has a positive and insignificant effect on Applicant Satisfaction (Y).

2. Responsiveness Variable (X2) to Applicant Satisfaction (Y)
   It is known in table 4.9 that the p-value in the significance column is 0.049, which means it is smaller than 0.05, so it can be explained that Responsiveness (X2) has a positive and significant effect on Applicant Satisfaction (Y).

3. Assurance Variable (X3) on Applicant Satisfaction (Y)
   It is known in table 4.9 that the p-value in the significance column is 0.001, which means it is smaller than 0.05, so it can be explained that Assurance (X3) has a positive and significant effect on Applicant Satisfaction (Y).

4. Variable Empathy (X4) on Applicant Satisfaction (Y)
   It is known in table 4.9 that the p-value in the significance column is 0.000, which means it is smaller than 0.05, so it can be explained that Empathy (X4) has a positive and significant effect on Applicant Satisfaction (Y).

5. Tangible Variables (X5) on Applicant Satisfaction (Y)
   It is known in table 4.9 that the p-value in the significance column is 0.003, which means it is smaller than 0.05, so it can be explained that Tangible (X5) has a positive and significant effect on Applicant Satisfaction (Y).

4.2 Simultaneous Results (F-Test)

Table 2: Simultaneous Results (F-Test)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>6107.638</td>
<td>5</td>
<td>1221.528</td>
<td>195.095</td>
<td>.001*</td>
</tr>
<tr>
<td>Residual</td>
<td>557.247</td>
<td>89</td>
<td>6.261</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6664.884</td>
<td>94</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Y
b. Predictors: (Constant), X5, X3, X2, X1, X4

Source: SPSS, 25 2023

Based on the SPSS calculation results in table 4.10, it can be concluded that variables X1, X2, X3, X4 and X5 have a simultaneous effect on Variable Y because the significance value is 0.001 < 0.05.

4.3 Coefficient of Determination

Table 3: Coefficient of Determination

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.957*</td>
<td>.916</td>
<td>.912</td>
<td>2.50224</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), X5, X3, X2, X1, X4
b. Dependent Variable: Y

Source: Processed primary data (2023)

5. DISCUSSION

5.1 The Influence of the Quality of Patent Registration Application Services on Patent Applicant Satisfaction with DJKI Based on Reliability

The results of research on the influence of the quality of patent registration application services on patent applicant satisfaction with DJKI based on reliability show that the direction of the regression coefficient for the Reliability variable (X1) is positive, namely 0.185. If the Reliability variable (X1) increases by 1% then applicant satisfaction will increase by 0.185% assuming the other independent variables are constant. This illustrates that if Reliability (X1) increases then
applicant satisfaction will increase. The p-value in the significance column is 0.189, which means it is greater than 0.05, so it can be explained that (Reliability) (X1) has a positive and insignificant effect on Applicant Satisfaction (Y).

The results of this research are in line with research conducted by Riyadi (2019) with the research title Analysis of the Influence of Reliability, Responsiveness, Assurance, Empathy, Tangibles and Menu Diversity on Customer Satisfaction (Case Study of Storia Caffe Di Sampit). The results show that Reliability has no effect towards customer satisfaction. Reliability is related to promises being kept according to service schedules, the ability to provide timely and correct services, accurate diagnoses, providing skilled treatment and care, and uncomplicated service to patients. The influence in this research is because the higher the dimension of reliability provided by the health center, the higher the satisfaction felt by the patient. Improving the quality of services provided by community health centers as service providers, one of which focuses on reliability, is given to applicants. The results of this research have not had a real impact on applicant satisfaction, meaning that in general there are still customers who are dissatisfied with the quality of DJKI services with the reliability dimension. This is because the DJKI has not provided services in accordance with the applicant’s expectations, especially the lack of timeliness when serving patent applications.

5.2 The Influence of the Quality of Patent Registration Application Services on Patent Applicant Satisfaction with DJKI Based on Responsiveness

The results of research on the influence of the quality of patent registration application services on satisfaction of patent applicants at DJKI based on responsiveness show that the direction of the regression coefficient for the Responsiveness variable (X2) is positive, namely 0.224. If the Responsiveness variable (X2) increases by 1% then applicant satisfaction will increase by 0.224% assuming the other independent variables are constant. This illustrates that if Responsiveness (X2) increases then applicant satisfaction will increase. The p-value in the significance column was found to be 0.049, which means it is smaller than 0.05, so it can be explained that Responsiveness (X2) has a positive and significant effect on Applicant Satisfaction (Y). These results are in line with the results of Agung’s (2018) research with the title Analysis The Influence Of Service Quality On Customer Satisfaction Of Domestic Postal Parcels At Banjarmasin Post Office, the results of which show that the Responsiveness variable influences Consumer Satisfaction with PT Post-Package Services. Indonesian Post at Banjarmasin Post Office. The same results were also obtained from research conducted by Udjo (2020) entitled The Impact of Service Quality on Satisfaction of Bank Customers: The Saudi Arabian Case, the results of which show that the Responsiveness variable has an effect on customer satisfaction.

Responsiveness is the ability of officers to help and provide fast and appropriate services. Responsiveness is one of the determining factors for the progress of a system because if the responsiveness provided by officers is satisfactory, the patent applicant will recommend it to relatives or other people if they want to register a patent. The influence in this research is because the better the responsiveness provided by the officer, the higher the satisfaction felt by the patent applicant. This could happen because of the experience of the patent applicant who has used patent registration services before, or because the responsiveness of the officer's service that the patent applicant expects is comparable to his expectations.

5.3 The Influence of the Quality of Patent Registration Application Services on Patent Applicant Satisfaction with DJKI Based on Assurance

The results of research on the influence of the quality of patent registration application services on patent applicant satisfaction with DJKI based on assurance show that the direction of the regression coefficient for the Assurance variable (X3) is positive, namely 0.314. If the
Assurance variable (X3) increases by 1% then applicant satisfaction will increase by 0.314% assuming the other independent variables are constant. This illustrates that if the guarantee (X3) increases, the applicant's satisfaction will increase. The p-value in the significance column was found to be 0.001, which means it is smaller than 0.05, so it can be explained that Assurance (X3) has a positive and significant effect on Applicant Satisfaction (Y).

The results of this research are in line with research conducted by Udjo (2020) entitled The Impact of Service Quality on Satisfaction of Bank Customers: The Saudi Arabian Case, the results of which show that the Assurance variable has an effect on customer satisfaction. Diaz (2020) also carried out the same results with his research title The influence of Service Quality on Customer Satisfaction at Workshop PT Wahana Sun Motor Branch Puri Anjasmoro. The results showed that Assurance had an effect on customer satisfaction. There is an influence of guarantees in this research because the better the guarantee provided, the higher the satisfaction felt by the patent applicant. The existence of security guarantees, information and data will make patent applicants feel safe so that they will no longer have any doubts about registering a patent. Guarantee (assurance) in research is the knowledge, politeness and ability of officers to foster, help and give patent applicants a sense of trust in DJKI. This includes several components, including communication, credibility, security, competence and courtesy.

5.4 The Influence of the Quality of Patent Registration Application Services on Patent Applicant Satisfaction at DJKI Based on Emphaty

The results of research on the influence of the quality of patent registration application services on patent applicant satisfaction with DJKI based on empathy show that the direction of the regression coefficient for the Empathy variable (X4) is positive, namely 0.817. If the Empathy variable (X4) increases by 1%, applicant satisfaction will increase by 0.817% assuming the other independent variables are constant. This illustrates that if empathy (X4) increases then applicant satisfaction will increase. The p-value in the significance column is 0.000, which means it is smaller than 0.05, so it can be explained that Empathy (X4) has a positive and significant effect on Applicant Satisfaction (Y).

The results of this research are in line with research conducted by Malathi (2022) entitled Customer Satisfaction on Service Quality Dimensions in Airlines, the results of which show that there is an influence between the empathy variable and customer satisfaction. The same results were also obtained in Diaz's (2020) research with the research title The influence of Service Quality on Customer Satisfaction at Workshop PT Wahana Sun Motor Branch Puri Anjasmoro. The results showed that empathy had an effect on customer satisfaction. The influence in this research is because the better the empathy provided, the higher the satisfaction felt by the patent applicant. Having empathy from officers will make patent applicants feel safe so that they will no longer have any doubts about registering a patent because it is filled with people who have empathy for patent applicants. The empathy aspect in service is an assessment of service quality as seen from the empathy of officers in providing services. The empathy aspect in service is one aspect that can influence satisfaction, because this aspect shows the awareness of officers in providing the best service in order to increase satisfaction.

5.5 The Influence of the Quality of Patent Registration Application Services on Patent Applicant Satisfaction with DJKI Based on Tangible

The results of research on the influence of the quality of patent registration application services on satisfaction of patent applicants at DJKI based on tangibles show that the direction of the regression coefficient for the Tangible variable (X5) is positive, namely 0.444. If the Tangible variable (X5) increases by 1% then applicant satisfaction will increase by 0.444% assuming the other independent variables are constant. This illustrates that if Tangible (X5) increases then applicant satisfaction will increase. The p-value in the significance column is 0.003, which means it is smaller than 0.05, so it can be explained that Tangible (X5) has a positive and significant effect
on Applicant Satisfaction (Y). The results of this research are in line with research conducted by Agung (2018) with the research title Analysis The Influence Of Service Quality On Customer Satisfaction Of Domestic Postal Parcels At Banjarmasin Post Office. The results show that Tangible variables influence consumer satisfaction. The same results were also obtained in Nimsith's (2017) research entitled Impact of service quality on Customer Satisfaction: Special Reference to Amana Bank PLC in Eastern Province in Sri Lanka. The results showed that Tangible variables had an effect on customer satisfaction. From the results of this research, it can be seen that tangible assessments of service quality can influence the satisfaction of patent applicants. For this reason, in an effort to increase the satisfaction of patent applicants, it is necessary to have the support of facilities, equipment and supplies as well as the presence of adequate staff to be able to meet the needs and expectations of patent applicants.

6. CONCLUSION AND RECOMMENDATION

1. CONCLUSION
   From the results of the research that has been carried out, the following conclusions were obtained in this study:
   1. There is a positive and insignificant influence between the quality of patent registration application services on patent applicant satisfaction with DJKI based on reliability.
   2. There is a positive and significant influence between the quality of patent registration application services on patent applicant satisfaction with DJKI based on responsiveness.
   3. There is a positive and significant influence between the quality of patent registration application services on patent applicant satisfaction with DJKI based on assurance.
   4. There is a positive and significant influence between the quality of patent registration application services on patent applicant satisfaction with DJKI based on empathy.
   5. There is a positive and significant influence between the quality of patent registration application services on patent applicant satisfaction with DJKI based on tangibles.

2. RECOMMENDATION
   From the research results and conclusions in the research, the suggestions that researchers can give are as follows:
   1. For the Directorate General of Intellectual Property (DJKI)
      From the research results which show that every aspect of service influences the satisfaction of patent applicants with DJKI, it is recommended for DJKI to continue to improve the quality of service to patent applicants by providing maximum service to each patent applicant, answering all complaints submitted by patent applicants.
   2. For Further Researchers
      For future researchers, it is hoped that they can continue their research by using other variables outside of the variables that have been researched in order to obtain more varied research results related to patent applicant satisfaction with DJKI.
   3. For Patent Applicants
      For patent applicants, if they receive less than optimal service from officers, they should be able to provide suggestions at the complaint site provided by DJKI for evaluation so that the incident they experience does not happen again in the future.
REFERENCES


Udjo Eseroghene Franklin (2020). The Impact of Service Quality on Satisfaction of Bank Customers: The Saudi Arabian Case


