

## The Role of Data Quality and User Experience in Increasing User Satisfaction in the Jember Regency One Data Portal Application

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### Abstract

This research aims to explain the influence of data quality and experience on user satisfaction with the Data Application used in Jember Regency. The total population in the study was 11,667 who were State Civil Apparatus employees in the Jember Regency Government. The number of samples was determined as 117 people. The sampling method in this research uses purposive judgmental sampling, namely by determining certain criteria which aims to produce a sample that can logically be considered representative of the population based on the researcher's assessment. This research uses descriptive analysis, testing measuring instruments in the form of testing the validity and reliability of data, and testing research hypotheses. The research results show that the quality of data provided by the Jember Regency Satu Data Portal can have a very significant positive impact on user satisfaction. The user experience variable turns out to have a positive and significant influence on user satisfaction of the Jember Regency Satu Data Portal.

### Keywords:

Data quality; User experience; User satisfaction; One data portal.

## 1. INTRODUCTION

The infrastructure for implementing One Data Indonesia in Jember Regency has begun to be developed. One important infrastructure is a web portal application. For the data collection process, the Jember Regency Communication and Informatics Service as data guardian has developed and used the One Data Portal Application for Jember Regency as a follow-up to Presidential Regulation Number 39 of 2019 concerning One Indonesian Data and Jember Regent Regulation Number 9 of 2022 concerning One Indonesian Data for Jember Regency. This application has been used since 2022 and will continue to be developed. The Jember Regency One Data Portal application involves the active role of regional apparatus organizations in Jember Regency. Each regional apparatus organization assigns its employees as administrators in the Jember Regency One Data Portal Application. Their role is very important in producing data in the Jember Regency One Data Portal Application on an ongoing basis.

Based on initial observations from interviews with the Head of the Smart City and Statistics Division of the Jember Regency Communication and Information Service, it was revealed that the provision of technical guidance to regional apparatus organizations had been carried out optimally. In addition, the involvement of the Jember Regency Central Statistics Agency as Data Supervisor has been carried out routinely every year, but this has apparently still not been able to encourage the achievement of the Jember Regency One Data target. This is supported by the achievement of data targets collected from 2022 to 2023 as illustrated by the fact that in 2023 the Jember Regency One Data performance target by the Regional Apparatus Organizations in Jember Regency mostly did not reach 50%. So it can be concluded that in the last 2 (two) years the performance of Regional Apparatus Organizations has not been able to reach the specified targets. Therefore, the Jember Regency One Data Portal Application needs to be tested using user satisfaction as a measure of the success of implementing the information system. Data user satisfaction must always be maintained so that users continue to use the services of the data provider. User satisfaction can increase due to good experience and data quality.

According to Kotler (2015), user satisfaction is a person's feeling of happiness or disappointment when comparing his or her impression of the performance or results of a product in mind against his or her expectations. End user satisfaction is an effective characteristic of a specific computer application from people who deal with the application directly. The greater the level of user satisfaction with an information system, the higher the user's comfort and loyalty in using the services provided by the information system. A high level of user satisfaction with an information system indicates that the information system has succeeded in meeting the expectations and needs of its users in carrying out an activity within it. User satisfaction can provide many improvements, including user experience and data (information) quality.

One factor that can also increase user satisfaction is data (information) quality. According to Mosley (2008), data quality can be interpreted as the level of data which states that the data is accurate, complete, timely, consistent and in accordance with all relevant and business regulatory requirements. It is very important to ensure data quality during the data management process. Data quality is a series of actions that determine whether data can be understood independently and can be reused. Data reuse means that data users can use the data at a future date without specifying what it might be used for specifically. Previous research states that there is a positive and significant influence between data completeness and user satisfaction (Ramadayani et al., 2022). Research conducted by Michel & Cocula (2017), Rakhmadian et al., (2017) states that the quality of information or data can also have an impact on user satisfaction. Buana & Wirawati (2018), Dwijulianti & Anggrainie (2023), Tulodo & Solichin (2019) also discuss the relationship between information (data) quality and user satisfaction.

The user experience factor is also an interesting thing in increasing user satisfaction. The International Standard on Ergonomics of Human System Interaction, ISO 9241-210 (2019) defines user experience as people's perceptions and responses resulting from the use and/or anticipation of use of a product, system or service. User experience is what is felt by someone who has experienced services for all service categories. Users who have experience using certain services or services will be able to talk about their experiences in using any service, including in this case the use of information systems. This user experience will be an important issue related to user satisfaction. Research Hidayatuloh & Aziati (2020), Budiarti et al. (2022), Rifky & Wibisono (2017) is research that links user experience with systems that can provide customer satisfaction. Meanwhile research from Fazri et al. (2022), Cazabon et al. (2020), Badran & Al-Haddad (2018), Fitria et al. (2021), Hendra et al. (2017) also discusses application user experience issues that can provide additional user satisfaction.

Based on the problems found in the Jember Regency Communication and Informatics Service which is experiencing the problem of not achieving the targets that have been set, and also related to the results of research on the concept of data or information quality with user experience which is linked to user satisfaction, the aim of this research is to explain how the quality of the data presented by the data application in Jember Regency and also the experience of data users regarding user satisfaction with the Data Application in Jember Regency.

### **1.1. Management Information System**

According to Davis (1999), a management information system can be defined as an integrated human or machine system for presenting information to support operations, management and decision-making functions in an organization or company. A management information system is an information system that produces output results using input and various processes needed to fulfill certain objectives in a management activity. According to Jogiyanto (2009), an information system can be defined as a system that is a combination of people, facilities, technology, media, procedures, and controls that are used to obtain important communication channels, process certain types of routine transactions, provide signals to management and others to important internal and external events and provide a basis of information for astute decision makers within a company or organization.

### **1.2. User Satisfaction**

According to Kotler (2015), user satisfaction is a person's feeling of happiness or disappointment when comparing his or her impression of the performance or results of a product in mind against his or her expectations. User satisfaction is defined by how high a system meets and exceeds user expectations (Tjiptono, 2011). According to Qomariah (2016) satisfaction can be interpreted as the response and feedback that users receive after using the product or service provided by the service provider.

### **1.3. Data/Information Quality**

According to Mosley (2008), data quality can be interpreted as the level of data which states that the data is accurate, complete, timely, consistent and in accordance with all relevant and business regulatory requirements. It is very important to ensure data quality during the data management process. Data accuracy and reliability are key factors for executives to be able to trust data and make the right decisions. If data quality practices are poor, there will be significant impacts. The quality of the data an organization collects can have a major impact on how useful that data is in driving business decisions. Being aware of the most important data quality characteristics and utilizing the right data quality tools are some of the ways

organizations can avoid being misled by poor quality data. There are 6 dimensions of data quality which are important considerations in determining data quality. The 6 dimensions are as follows: accuracy, completeness, consistency, freshness, validity, uniqueness.

#### 1.4. User Experience

The International Standard on Ergonomics of Human System Interaction, ISO 9241-210 (2019) defines user experience as people's perceptions and responses resulting from the use and/or anticipation of use of a product, system or service. The response includes all user emotions, beliefs, preferences, perceptions, physical and psychological responses, behaviors and achievements that occur before, during and after use (ISO 9241-210, 2019).

#### 1.5. Conceptual Framework

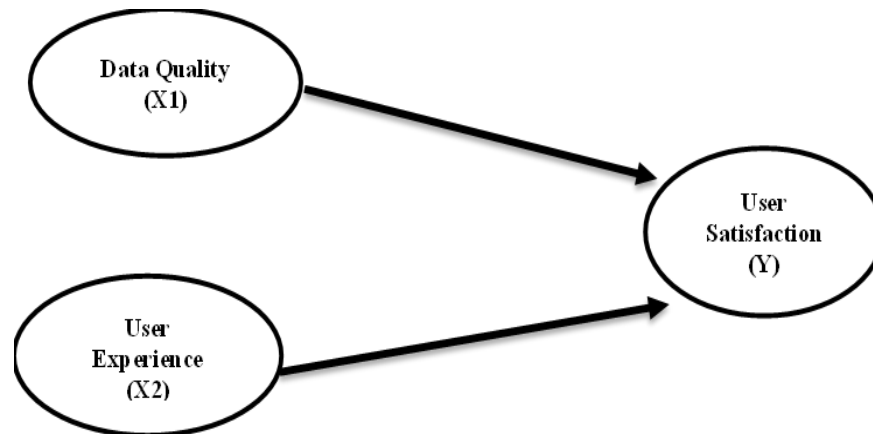


Figure 1: Conceptual Framework

Research hypothesis

- a. Data/information quality has a positive impact on user satisfaction.
- b. User experience has a positive impact on user satisfaction.

## 2. RESEARCH METHOD

This research uses a quantitative descriptive design. According to Ghazali (2013) quantitative descriptive research can be categorized as research that uses certain samples to obtain data which is then used inferential methods to make a conclusion. The aim of this research is to determine the impact of user experience and data quality on user satisfaction on the Jember Regency One Data Portal. The total population in the study was 11,667 who were State Civil Apparatus employees in the Jember Regency Government. The number of samples was determined as 117 people. The sampling method in this research uses purposive judgmental sampling, namely by determining certain criteria which aims to produce a sample that can logically be considered representative of the population based on the researcher's assessment. Thus, to answer the research objectives, the analysis used is descriptive analysis, analysis of data reliability and validity tests and direct influence tests.

## 3. RESULTS AND DISCUSSION

### 3.1. Results of Descriptive Statistical Analysis of Respondents

Based on gender, the calculation results show that the number of male employees is greater than female employees, namely 81 male employees and 36 female employees. However, this does not automatically provide differences in the tasks/work carried out because gender is not differentiated in performance measurement. Based on the age of the respondents, it is known that the age of data users of the Jember Regency One Data Portal Application, respondents aged 20 - 30 years amounted to 37.6% or as many as 44 people, aged between 31 - 40 years amounted to 23.9% or as many as 28 people, ages between 41 - 50 years old was 35% or 41 people, then those aged >50 years were 3.5% or 4 people.

### 3.2. Validity Test Results

The results of the data validity test and data reliability test after data analysis are presented in Table 1 below.

Table 1. Data Validity Test Results

Variable	Item	Construct Validity Value	Results
Quality Data (X1)	X1.1	0,863	Valid
	X1.2	0,904	Valid
	X1.3	0,863	Valid
	X1.4	0,855	Valid
User Experience (X2)	X2.1	0,836	Valid
	X2.2	0,761	Valid
	X2.3	0,710	Valid
	X2.4	0,880	Valid
	X2.5	0,773	Valid
User Satisfaction (Y)	Y1.1	0,769	Valid
	Y1.2	0,776	Valid
	Y1.3	0,711	Valid
	Y1.4	0,724	Valid
	Y1.5	0,780	Valid

Based on the data presented in Table 1, it can be concluded that the validity value for all constructs is above 0.7 so that all constructs meet the validity criteria for a construct. Thus all constructs are declared valid.

### 3.3. Reliability Test Results

The results of the research data reliability test for each variable in this study are presented in Table 2, below.

Table 2. Cronbach's Alpha value

Research Variable	Cronbach Alpha Value
Data Quality (X1)	0,894
User Experience (X2)	0,852
User Satisfaction (Y)	0,808

Table 2 shows all Cronbach's alpha values for each variable in this study with values above 0.6, so it can be concluded that all indicators stated are reliable.

### 3.4. Direct Influence Test

To determine the impact of the independent variable on the dependent variable, it is necessary to carry out a direct influence test. The results of the direct influence test are presented in Table 3, below.

Tabel 3. Nilai Path Coefficients

Relationship Between Variables	Variable Coefficient Value	P-Values
Data Quality (X1) → User Satisfaction (Y)	0,278	0,002
User Experience (X2) → User Satisfaction (Y)	0,417	0,000

### 3.5. Conclusion

#### 3.5.1. The Effect of Data Quality on User Satisfaction

The calculation results show that data quality has a significant positive effect on user satisfaction. This is proven by the path coefficient value which shows that the coefficient value is 0.278, with a significance value of 0.002. Thus, the relationship between data quality and user satisfaction is significantly positive. Thus, H1 in this study is accepted. This is because the indicators related to data quality have been able to provide satisfaction to users of the Jember Regency One Data Portal Application. In this case, if the Jember Regency One Data Portal Application has good data quality, it will certainly provide positive user satisfaction as well. An individual can receive and process information depending on the abilities of each individual. However, quality data can also increase data user satisfaction. Based on the results of theoretical and empirical studies, it is known that data quality is a series of actions that determine whether data can be understood independently so that it can be reused. Data reuse means that data users can use the data at a future date without specifying what it might be used for specifically. The results of this research are

consistent with previous research conducted by (Rakhmadian et al., 2017), (Buana & Wirawati, 2018), which found that data/information quality has a significant positive influence on user satisfaction.

### 3.5.2. The Influence of User Experience on User Satisfaction

User experience has a significant positive effect on user satisfaction, based on the path coefficient value which shows a value of 0.417, with a p value of 0.000. Thus, in this research, H2 is accepted and shows that user experience has a positive and significant influence on user satisfaction. This is because there are user experience indicators related to user satisfaction of the Jember Regency One Data Portal Application. Indicators of user experience are perceived ease of use, perceived usefulness, attitudes towards use, behavioral intention to use and actual use of the technology. In this case, after the user feels a positive experience using the Jember Regency One Data Portal Application, the system quality and data quality will tend to increase user satisfaction. If a product or system has good and modern features, if the target user does not feel satisfaction and comfort in interacting with the product, the level of user experience will be low. Furthermore, what drives the data user experience is the existence of needs that must be met. User experience as something that includes user convenience to user involvement and visual appeal. User experience relates to the psychological aspects of a user's interaction with a product. The results of this research are consistent with previous research, namely research Hidayatulloh & Aziati (2020), Budiarti et al. (2022), Hendra et al. (2017), Rifky & Wibisono (2017), Fazri et al. (2022), Cazabon et al. (2020), Badran & Al-Haddad (2018), Fitria et al. (2021) who say that user experience has a significant positive effect on user satisfaction.

## 4. CONCLUSION

Research related to user satisfaction with this data has been carried out and has resulted in implications for the development of Marketing Management management theory. The practical implications that can be contributed from this research are increasing user satisfaction with data provided by the government. It is recommended that data updates be carried out so that data users get accurate information related to government data and information in Jember Regency.

The results of testing the first hypothesis found that data quality significantly positively affects user satisfaction of the Jember Regency One Data Portal Application. In this way, the quality of the data (information) produced by the Jember Regency One Data Portal Application is running well so that it can be maintained or even improved regarding the completeness of the data/information so that it continues to provide satisfaction to all data/information users.

The results of testing the second hypothesis found that user experience significantly positively affects user satisfaction with the Jember Regency One Data Portal Application. In this way, users feel the benefits when using the Jember Regency One Data Portal Application, so the Jember Regency One Data Portal Application must continue to strive to improve its features to provide satisfaction to users.

## REFERENCES

- Badran, O., & Al-Haddad, S. (2018). The Impact of Software User Experience on Customer Satisfaction. *Journal of Management Information and Decision Sciences*, 21(1), 5806. <https://journal.unj.ac.id/unj/index.php/jbm/article/view/30152/13382>
- Buana, I. M. M., & Wirawati, N. G. P. (2018). IPengaruh Kualitas Sistem Informasi, Kualitas Informasi, dan Perceived Usefulness Pada Kepuasan Pengguna Sistem Informasi Akuntansi. *E-Jurnal Akuntansi*, 22, 683. <https://doi.org/10.24843/eja.2018.v22.i01.p26>
- Budiarti, A. T., Wahyudi, F., & Ratnasari, N. (2022). Analisis Pengaruh User Experience Terhadap Kepuasan Pengguna Pada Aplikasi Gojek Menggunakan UX Honeycomb. *JUSIFOR: Jurnal Sistem Informasi Dan Informatika*, 1(2), 104–111. <https://doi.org/10.33379/jusifor.v1i2.1634>
- Cazabon, D., Pande, T., Sen, P., Daftary, A., Arsenault, C., Bhatnagar, H., Brien, K. O., & Pai, M. (2020). User experience and patient satisfaction with tuberculosis care in low- and middle-income countries : A systematic review. *J Clin Tuberc Other Mycobact Dis*, 19, 100154. <https://doi.org/10.1016/j.jctube.2020.100154>
- Davis, G. B. (1999). *Kerangka Dasar Sistem Informasi Manajemen Bagian I: Pengantar*. Diterjemahkan oleh Andreas S. Adiwardana. Cetakan Kesebelas. PT. Ikrar Mandiriabadi.
- Dwijulianti, F., & Anggrainie, N. (2023). Pengaruh E-Service Quality, E-Trust, Kelengkapan Fitur, Kemudahan Penggunaan, Keamanan Data, Dan Persepsi Manfaat Terhadap Kepuasan Pengguna



- Aplikasi Mobile Jkn. Jurnal Ekonomi, Manajemen Dan Akuntansi, 2(5), 1–14. <https://10.0.208.115/buss.v2i3.86>
- Fazri, N., Maulidiyah, A., Singasatia, D., & Sunandar, M. A. (2022). Analysis of User Experience Effect on Users of VLive Mobile Application Using the SCSi Model Analisis Pengaruh User Experience Terhadap Kepuasan Pengguna Mobile Application VLive Menggunakan Model SCSi. MALCOM: Indonesian Journal of Machine Learning and Computer Science, 2(October), 28–34.
- Fitria, D. N. T., Yohana, C., & Saidani, B. (2021). Pengaruh Pengalaman Pelanggan Terhadap Niat Membeli Kembali Dengan Kepuasan Pelanggan Sebagai Variabel Intervening: Studi Pada Pengguna E-Commerce X di DKI Jakarta Dafara. Jurnal Bisnis, Manajemen, Dan Keuangan, 2(2), 592–610. <https://journal.unj.ac.id/unj/index.php/jbmk/article/view/30152/13382>
- Ghozali, I. (2013). Aplikasi Analisis Multivariat dengan Program IBM SPSS 21 Update PLS Regresi . . BP Universitas Diponegoro.
- Hendra, T., Djawahir, A. H., & Djazuli, A. (2017). Pengaruh Nilai, Kualitas Pelayanan, Pengalaman Pelanggan Terhadap Kepuasan dan Loyalitas Pelanggan (Studi Kasus Pada Giant Supermarket Sawojajar, Kota Malang). Jurnal Bisnis Dan Manajemen, 4(2), 129–141. <https://doi.org/https://doi.org/10.26905/jbm.v4i2.1694>
- Hidayatuloh, S., & Aziati, Y. (2020). Analisis Pengaruh User Experience Terhadap Kepuasan Pengguna Mobile Application E-Commerce Shopee Menggunakan Model Delone & Mclean. Tekinfo, 21(1), 73–83. <https://journals.upi-yai.ac.id/index.php/TEKINFO/article/view/1142/932>
- Jogiyanto. (2009). Sistem Teknologi Informasi. Andi.
- Kotler, P. (2015). Marketing an Introducing Twelfth Edition. Pearson Education, Inc.
- Michel, S., & Cocula, F. (2017). Impact of the Three is Qualities on User Satisfaction in an Information-intensive Sector. Electronic Journal of Information Systems Evaluation, 20(2), pp. 85-101. <https://academic-publishing.org/index.php/ejise/article/view/145>
- Mosley, M. (2008). Dictionary of Data Management. Technics Publications.
- Qomariah, N. (2016). Marketing Adactive Strategy. Cahaya Ilmu. [https://www.researchgate.net/publication/326623130\\_Marketing\\_Adactive\\_Strategy](https://www.researchgate.net/publication/326623130_Marketing_Adactive_Strategy)
- Rakhmadian, M., Hidayatullah, S., & Respati, H. (2017). Analisis Kualitas Sistem Dan Kualitas Informasi Terhadap Kepuasan Pemakai Sistem Informasi Akademik Dosen. Seminar Nasional Sistem Informasi, September, 665–675.
- Ramayani, F., Chamidah, S., & Wahyuningsih, D. W. (2022). Pengaruh Complete Features, Kemudahan, Dan Keamanan Terhadap Kepuasan Pengguna Zoom Meeting Pada Mahasiswa Prodi Manajemen Universitas Muhammadiyah Ponorogo. Bussman Journal: Indonesian Journal of Business and Management, 2(3), 633–647. <https://doi.org/10.53363/buss.v2i3.86>
- Rifky, A., & Wibisono, N. (2017). Pengaruh Kualitas Layanan , Biaya Transaksi dan Nilai Pengalaman terhadap Kepuasan dan Loyalitas Pengguna Aplikasi Online Mobile Game. 1264–1273.
- Tjiptono, F. (2011). Strategi Pemasaran. Andi.
- Tulodo, B. A. R., & Solichin, A. (2019). Analisis Pengaruh Kualitas Sistem, Kualitas Informasi dan Perceived Usefulness terhadap Kepuasan Pengguna Aplikasi Care dalam Upaya Peningkatan Kinerja Karyawan (Studi Kasus PT. Malacca Trust Wuwungan Insurance, Tbk.). Jurnal Riset Manajemen Sains Indonesia (JRMSI), 10(1), 25–43. <https://doi.org/10.21009/JRMSI.010.1.02>