

ANALYSIS OF USER SATISFACTION OF MYSOOLTAN APPLICATION AS SINGLE DIGITAL TOUCH USING PIECES FRAMEWORK

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Abstract: This research uses the PIECES framework to analyze user satisfaction with the MySooltan application as a single digital touch for Micro, Small, and Medium Enterprises (MSMEs). The framework was chosen because it has been proven empirically to evaluate information system user satisfaction to see opportunities and improvements in information system development. The sample of this research are users of the MySooltan application, namely MSMEs in Labuan Bajo City. The total sample is 102 respondents. Data was collected using a Google Form questionnaire distributed from October to November 2022 and measured using a Likert scale calculation. The evaluation results found that MSMEs, assisted by Rumah BUMN in Labuan Bajo City, were very satisfied using the MySooltan application during the pandemic. However, PT Telkom still needs to improve the guarantee of confidentiality and protection of user data so that MSMEs can use this application optimally.

Keywords: information system; MSMEs; Mysooltan application; PIECES; user satisfaction

Abstrak: Tujuan riset ini adalah untuk melakukan analisis kepuasan pengguna aplikasi MySooltan sebagai *single digital touch* Usaha Mikro, Kecil, dan Menengah (UMKM) menggunakan PIECES *framework*. Metode ini dipilih karena telah terbukti secara empiris dapat digunakan untuk mengevaluasi kepuasan pengguna sistem informasi untuk melihat peluang dan perbaikan dari sistem informasi yang dikembangkan. Sampel riset ini adalah pengguna aplikasi MySooltan, yaitu UMKM di Kota Labuan Bajo. Total sampel sebanyak 102 responden. Data dikumpulkan menggunakan kuesioner *Google Form* yang disebar dari bulan Oktober hingga November 2022 dan diukur menggunakan perhitungan skala likert. Hasil evaluasi menemukan secara keseluruhan, UMKM binaan Rumah BUMN di Kota Labuan Bajo sangat puas untuk menggunakan aplikasi MySooltan selama pandemi. Namun demikian, PT Telkom masih perlu meningkatkan jaminan kerahasiaan dan perlindungan data pengguna, agar aplikasi ini dapat digunakan secara optimal.

Kata kunci: aplikasi MySooltan; kepuasan pengguna; PIECES; sistem informasi; UMKM

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are the country's largest driving sector for national economic development [1]. However, since the Covid-19 pandemic, MSMEs have become a sector that has received a heavy hit. MSMEs profits have fallen dramatically because production costs have continued to increase, but sales frequency has declined [2]. The most significant decline in sales was experienced by MSMEs which still relied on physical stores, direct sales, and resellers due to the implementation of large-scale social restriction policies. This condition cannot be allowed. MSMEs need new business strategies to survive, one of which is using digital technology [3][4].

To transform the MSMEs business model, from conventional to digital, PT. Telkom Indonesia (Persero) Tbk launched MySooltan based on mobile Android, iOS, and a single digital touch website for MSMEs. MySooltan is a solution for MSMEs to run their business during a pandemic[5]. Solutions and services that MySooltan can provide for digital business management, as well as facilitating MSMEs marketing and sales activities, include connectivity solutions (sooltanNet), point of sales (sooltanKasir), digital store management (PaDi UMKM), payment services using QR Code (sooltanPay), business training through sooltanBelajar and sooltanEvent, and provision of capital assistance with easy access as a solution to limited capital.

User satisfaction is often a measure of the success or failure of a system. Poor system quality causes a lack of user loyalty, then the application will be rejected[6]. System quality encourages

users to use it [7]. Several methods were developed to measure user satisfaction, one of which is the PIECES framework. PIECES analysis is essential before developing an information system and evaluating the system created to see opportunities for improvement [8].

Previous research on the analysis of information system user satisfaction using the PIECES framework has been carried out a lot, such as research [7], [9], [10], [11], [12], [13]. A study [7] found that Google Classroom users were delighted with using the application during online learning. Research [9] found that users of the Cizgi Rent A Car application were very satisfied using this application to make car rental transactions online. Research [10] found that MyIndihome users in Balikpapan are confident because this application provides quality services. Research [11] found that Whatsapp user satisfaction as a knowledge-sharing medium is a benchmark that determines the level of success in implementing or using Whatsapp. Research [12] analyzes the use of the M-BCA application and the results of the analysis using the PIECES method can provide recommendations for future development of the M-BCA application. Research [13] found that Gofood service users on the Gojek application were satisfied with the service and generated positive responses. Previous research has yet to examine MySooltan user satisfaction, so an analysis of user satisfaction for this application is necessary.

PIECES framework was chosen because this framework can identify problems in existing information systems, and the identification results can produce new things that can be followed up for system development[6][14]. In addition, this method is also effective for

in-depth system evaluation [10][11]. The research was conducted at MSMEs in Labuan Bajo City, East Nusa Tenggara. During the pandemic, MSMEs there were fostered by Rumah BUMN (State Owned Enterprises). Rumah BUMN requires MSMEs to use MySooltan to transform MSME business processes from conventional to digital.

There are three research contributions, first, for the development of knowledge in the field of Information Systems. The research results provide evidence of the effectiveness of the PIECES framework for evaluating the implementation of information systems in organizations. Second, for PT Telkom. The research results can be used as material for improving MySooltan services, especially in the Labuan Bajo area. Third, for MSMEs. The results of this research can provide recommendations to other regional MSMEs to use MySooltan.

METHODS

This research uses a quantitative descriptive method to provide an overview and describe the results [15]. This research analyzes MySooltan user satisfaction. The selection of this research sample used a purposive sampling method with two criteria. First, MySooltan users were assisted by Rumah BUMN, namely MSMEs in Labuan Bajo City, East Nusa Tenggara. Second, respondents who filled out the questionnaire question items completely. The research stages are presented in image 1.

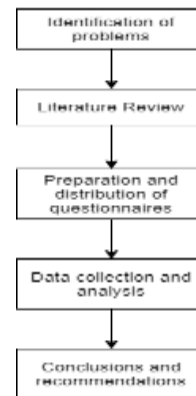


Image 1. Research Stages

This research stage, among others:

1. Identification of problems by observing the MySooltan system. At this stage, data collection was also carried out for MSMEs assisted by Rumah BUMN in Labuan Bajo City.
2. Literature study to search for references to previous research articles on information system user satisfaction, from journals, books, the internet, news, and other sources.
3. Preparation and distribution of questionnaires. The research questionnaire was developed using the PIECES framework with six domains: performance, information and data, economics, control and security, efficiency, and service [16]. Questionnaires were distributed online using Google Forms[17].
4. Data collection and analysis. This research uses a Likert scale, like research [8], with a score of 1 to a score of 5. Score 1 for Strongly Disagree (STS), score 2 for Disagree (TS), score 3 for Doubtful (RR), score 4 for Agree (S), and score 5 for Strongly Agree (SS). The average satisfaction level of MySooltan users is calculated using the following formula.

$$RK = \frac{JSK}{IK} \dots\dots\dots(1)$$

Information: RK is the average satisfaction, JSK is the total score of the

questionnaires, and JK is the number of questionnaires. After determining the average satisfaction level in the PIECES variable, the next step is determining the user satisfaction level. The level of user satisfaction uses a scale from Kaplan and Norton [11]. The table of rating intervals for user satisfaction levels is presented in Table 1.

Table 1. Satisfaction Level Criteria Conditions [8]

Scale	Rating Category
1,00 – 1,79	Very Dissatisfied
1,80 – 2,59	Not Satisfied
2,60 – 3,39	Quite Satisfied
3,40 – 4,19	Satisfied
4,20 – 5,00	Very Satisfied

5. Conclusions and recommendations. At this stage, conclusions will be drawn based on the results of the data analysis.

RESULTS AND DISCUSSION

Respondents to this research are MySooltan users, especially Micro, Small, and Medium Enterprises (MSMEs) assisted by Rumah BUMN in Labuan Bajo City. Data were collected for two months, from October to November 2022, via an online questionnaire via the Google form. The total number of respondents was 102. Profiles of respondents based on the business sector are presented in Table 2.

Table 2. Respondent Profile

Business Fields	Respondents
Culinary	60
Fashion & Craft	33
Agriculture	2
Farm	1
Property Rental	3
Groceries	1
Laundry Service	1
Cosmetics	1

Profiles of respondents from the service side, including PaDi UMKM service users, there were 47 respondents,

SooltanKasir, there 102 respondents, and SooltanPay, there were 101 respondents. Satisfaction analysis was carried out using the PIECES framework [18]. The results of the calculation of each variable are presented as follows.

Performance

A list of MySooltan user satisfaction statements in terms of performance is presented in Table 3. The average satisfaction level of MySooltan application users in terms of performance is calculated (2).

$$RK = \frac{(5 \cdot 276) + (4 \cdot 234) + (3 \cdot 2) + (2 \cdot 58) + (1 \cdot 42)}{(276 + 234 + 2 + 58 + 42)} \quad (2)$$

$$RK = \frac{2480}{612} = 4,05$$

Based on calculation (2), the satisfaction level of MySooltan users for the performance variable is 4.05. This means that the user is satisfied with the application's performance. Application users find it easy to access the application because of its attractive and easy-to-understand interface. The choice of colors that are not flashy, namely the dominant red and white, and the neatly arranged layout of each menu feature make users feel comfortable. The MySooltan application also works optimally on the user's device. Users feel that the application can respond to several commands, such as requests or cancellations, in a short time. The menus in the MySooltan application can display information instantly and rarely have errors.

Information and Data

A list of MySooltan user satisfaction statements in terms of information and data is presented in Table 4. The average satisfaction level of MySooltan application users in terms of information and data is calculated (3).

$$RK = \frac{\frac{(5 \cdot 227) + (4 \cdot 180) + (3 \cdot 1) + (2 \cdot 0) + (2 \cdot 0)}{(227 + 180 + 1 + 0 + 0)}}{\frac{(5 \cdot 227) + (4 \cdot 180) + (3 \cdot 1) + (2 \cdot 0) + (2 \cdot 0)}{(227 + 180 + 1 + 0 + 0)}} \quad (3)$$

$$RK = \frac{1858}{408} = 4,55$$

Based on calculation (3), the satisfaction level of the MySooltan application users for information and data variables is 4.55. This means that users are delighted with the information and data generated by this application. The user considers that MySooltan has information and data stored according to what the user input. Output information and data generated according to user expectations. Users find the information and data presented by this application easy to learn and understand because there is a tutorial for using the application for new users.

Economics

A list of MySooltan user satisfaction statements from an economics standpoint is presented in Table 5. From an economics perspective, the average satisfaction level of MySooltan application users is calculated (4).

$$RK = \frac{\frac{(5 \cdot 195) + (4 \cdot 97) + (3 \cdot 14) + (2 \cdot 0) + (1 \cdot 0)}{(195 + 97 + 14 + 0 + 0)}}{\frac{(5 \cdot 195) + (4 \cdot 97) + (3 \cdot 14) + (2 \cdot 0) + (1 \cdot 0)}{(195 + 97 + 14 + 0 + 0)}} \quad (4)$$

$$= \frac{1405}{306} = 4,59$$

Based on calculations (4), the satisfaction level of MySooltan users for the economics variable is 4.59. This means that users are delighted with the economic side generated by this application. This application can reduce costs and time in handling and reporting transactions. Using digital store management service features (PaDi UMKM) makes it easier for MSMEs to market their products on the platform. MSMEs can become suppliers to get regular customers, namely BUMN employees. Buyers and sellers interact online, thus saving costs and time

compared to conventional methods.

Users also rate the point of sales service (SooltanKasir) as greatly facilitating business operations. These features make financial reporting, inventory management, and business customers easy. MSMEs are helped because inventory control is carried out according to category and price. The amount of inventory can be controlled at any time and can minimize the risk of unavailable goods. The features for calculating purchases and payments and printing receipts from this application speed up transaction handling and reduce queues. The QR Code (SooltanPay) service makes it easy for users to accept payments. Transactions take place in real-time, that is, they can be received at any time, and transactions are recorded automatically in sales reports. However, some users still need to be convinced that MySooltan can make any changes to business management.

Control and Security

A list of MySooltan user satisfaction statements from a control and security perspective is presented in Table 6. The average satisfaction level of MySooltan users from a control and security perspective is calculated (5).

$$RK = \frac{\frac{(5 \cdot 19) + (4 \cdot 46) + (3 \cdot 36) + (2 \cdot 1) + (1 \cdot 0)}{(19 + 46 + 36 + 1 + 0)}}{\frac{(5 \cdot 19) + (4 \cdot 46) + (3 \cdot 36) + (2 \cdot 1) + (1 \cdot 0)}{(19 + 46 + 36 + 1 + 0)}} \quad (5)$$

$$RK = \frac{389}{102} = 3,81$$

Based on calculations (5), the satisfaction level of MySooltan users for control and security variables is 3.81. This means that users are satisfied with the control and security of this application. However, some users still need clarification and disagree with the guarantee of confidentiality and data protection. The rise of cases of leaked application personal data is the cause. The

MySooltan service requires personal data during registration in the form of the name, address, email, telephone number, and bank account. This condition makes some users doubt the data security protection PT Telkom.

Efficiency

A list of satisfaction statements from MySooltan users regarding efficiency is presented in Table 7. The average satisfaction level of MySooltan users in terms of efficiency is calculated (6)

$$\begin{aligned}
 RK &= \frac{(5 \cdot 259) + (4 \cdot 136) + (3 \cdot 13) + (2 \cdot 1) + (1 \cdot 0)}{(259 + 136 + 13 + 1 + 0)} \\
 &= \frac{1880}{409} = 4,59
 \end{aligned}
 \tag{6}$$

Based on calculations (6), the satisfaction level of MySooltan users for the efficiency variable is 4.59. This means users are satisfied with the efficiency of this application. According to users, this application helps their business to go digital. MSMEs feel that business management, starting from managing stock and recording and reporting transactions, is more accessible. Mobile and website versions, making the

application accessible anytime and anywhere. However, some users still need clarification on this application's function in supporting business. This is because there are still MSMEs business activities that this application, such as shipping goods, cannot accommodate.

Service

A list of MySooltan user satisfaction statements from the service side is presented in Table 8. The average satisfaction level of MySooltan users from the service variable side is calculated (7).

$$\begin{aligned}
 RK &= \frac{(5 \cdot 99) + (4 \cdot 100) + (3 \cdot 5) + (2 \cdot 0) + (1 \cdot 0)}{(99 + 100 + 5 + 0 + 0)} \\
 &= \frac{910}{204} = 4,46
 \end{aligned}
 \tag{7}$$

Based on calculations (7), the satisfaction level of MySooltan users for the service variable is 4.46. This means that the assisted MSMEs feel that the digital services are following what users want and need. This condition makes MSMEs there use this application.

Table 3. The results of calculating the level of satisfaction on the performance variable

No	Statement	Respondents				
		SS	S	RR	TS	STS
1	The MySooltan app is easy to access.	67	35	0	0	0
2	The MySooltan application has an attractive and easy-to-understand interface.	51	51	0	0	0
3	The MySooltan application works optimally on your device.	51	51	0	0	0
4	The MySooltan application can respond to several commands, such as request and cancellation orders, in a relatively short time without any problems.	51	51	0	0	0
5	The menus available in the MySooltan application can display information instantly.	56	46	0	0	0
6	The MySooltan application has experienced an error when used.	0	0	2	58	42
	Amount	276	234	2	58	42

Table 4. The results of calculating the level of satisfaction on the variable information and data

No	Statement	Respondents				
		SS 5	S 4	RR 3	TS 2	STS 1
1	The information and data presented on the available menus are appropriate.	50	51	1	0	0
2	The MySooltan application generates reliable or trustworthy information.	41	61	0	0	0
3	The data stored in the MySooltan application has been saved according to what was entered into the application.	61	41	0	0	0
4	The MySooltan application provides information that is easy to learn and understand	75	27	0	0	0
Amount		227	180	1	0	0

Table 5. The results of calculating the level of satisfaction with economics variables

No	Statement	Respondents				
		SS 5	S 4	RR 3	TS 2	STS 1
1	The MySooltan application can reduce costs and time incurred by companies in the interest of sales compared to conventional methods.	76	26	0	0	0
2	The costs incurred to access the MySooltan application are pretty cheap and affordable.	80	21	1	0	0
3	The MySooltan application provides a significant change in terms of business development and growth.	39	50	13	0	0
Amount		195	97	14	0	0

Table 6. The results of calculating the level of satisfaction with the control and security variables

No	Statements	Respondents				
		SS 5	S 4	RR 3	TS 2	STS 1
1	User and transaction data in the MySooltan application are guaranteed to be confidential and protected.	19	46	36	1	0
Amount		19	46	36	1	0

Table 7. The results of calculating the level of satisfaction on the efficiency variable

No	Statements	Respondents				
		SS 5	S 4	RR 3	TS 2	STS 1
1	The MySooltan application provides benefits for MSME players to go digital.	73	29	1	0	0
2	The MySooltan application can be used in the entire sales activity process.	40	50	11	1	0
3	The MySooltan app makes getting work done easy.	65	37	0	0	0
4	The MySooltan application provides easy transactions through mobile applications and websites.	81	20	1	0	0
Amount		259	136	13	1	0

Table 8. The results of calculating the level of satisfaction on the service variable

No	Statements	Respondents				
		SS	S	RR	TS	STS
		5	4	3	2	1
1	The MySooltan application provides digital services according to what users want and need	54	47	1	0	0
2	The MySooltan application can provide satisfaction for you as a user.	45	53	4	0	0
	Amount	99	100	5	0	0

Table 9. The average level of satisfaction using the MySooltan application

Variable	The average level of satisfaction	Information
<i>Performance</i>	4,05	Satisfied
<i>Information and Data</i>	4,55	Very Satisfied
<i>Economics</i>	4,59	Very Satisfied
<i>Control and Security</i>	3,81	Satisfied
<i>Efficiency</i>	4,59	Very Satisfied
<i>Service</i>	4,46	Very Satisfied
Amount	4,34	Very Satisfied

Table 9 summarizes the calculation of the average user satisfaction level of the MySooltan application for all PIECES variables. The average satisfaction level of MySooltan users is 4.34. This means that, overall, MSMEs there are very satisfied when using MySooltan to run their business during the pandemic. This application helps MSMEs to digitize their business, so they can survive the pandemic and enter the global market.

CONCLUSION

This research aims to analyze user satisfaction, namely UMKM assisted by Rumah BUMN in Labuan Bajo City for the MySooltan application during a pandemic using the PIECES framework. This research analyzes six domains: performance, information and data, economics, control, security, efficiency,

and service. The test results found an average value of 4.34. Overall, the assisted MSMEs are satisfied with using MySooltan during the pandemic. However, some users are still doubtful about the guarantee of confidentiality and protection of user data, so they have not used this application optimally.

This research has limitations. First, the respondents to this research were only users of PaDi UMKM, sooltanKasir, and sooltanPay services, even though there are still many features of the MySooltan application whose user satisfaction levels have not been measured. Therefore, future research can evaluate users of all MySooltan features to get more comprehensive evaluation results. Second, the number of respondents is limited. The return rate for the questionnaires in this research was low, even though a large sample size was needed to represent the population. Therefore, future research is expected to

increase the number of respondents by visiting respondents directly to evaluate the satisfaction level of using MySooltan.

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