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Development of PT SIER Accounting Information Systems: The Importance of User Participation and Satisfaction

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ABSTRACT:
Rapid changes and developments affect information systems (including accounting information systems). These changes and developments are visible in managerial needs, perceptions, business environment, and accounting information technology. This requires an effective internal and external information system so management can detect effectively when conditions change and require a strategic response. Using accounting information systems is expected to greatly benefit the highly competitive business world. The determining factor for the success of information system development is important. Because some users at PT. SIER (Persero) is not satisfied with the information produced because the information created does not follow the decision-making needs, so the presentation of the resulting report is less accurate and not timely. Therefore, this research examines the influence of top management support, user participation, and user communication on user satisfaction in developing an accounting information system. Data were analyzed with a population of 53 managers and assistant managers at PT. SIER (Persero) used a census sampling technique or saturated sampling of 53 managers and assistant managers, and the data analysis technique used in this research was the multiple linear regression statistical test. The conclusion that can be drawn from the multiple linear regression statistical test is that top management support, user participation, and user communication positively affect user satisfaction in accounting information system developers at PT. SIER (Persero), so that the research hypothesis is proven true.

Keywords: *Developing accounting information systems, user-developer communication, user participation, user satisfaction, top management support.*

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INTRODUCTION

Rapid changes and developments are currently affecting information systems (including accounting information systems). These changes and developments are visible in managerial needs and perceptions, in the business environment, and in accounting information technology. For this reason, an effective internal and external information system is needed so that management has the knowledge to detect effectively when changes in conditions require a strategic response (Hertati & Safkaur, 2020; Dewi et al., 2022).

The use of accounting information systems is expected to provide great benefits to the highly competitive business world, it is not surprising that decisions regarding information system investment become an important matter in organizations (Setianingsih & Indriantoro, 1998; Wahyuni et al., 2023) and attention to factors determining the success of information system development is an important thing. Information systems develop over the life of a company, which means that new information systems will replace old systems if these old systems are no longer able to meet the company's needs, which continue to grow and change. Because every information system has a limited life cycle, system development is a cyclical activity consisting of several stages, starting with system planning and ending with system implementation.

The planning and design stage of information systems should pay more attention to human factors, because if at this stage only the role of technology is paid attention to, then new problems will arise from human factors such as the emergence of dissatisfaction at work which of course will be very detrimental to the organization. The function of an information system in an organization is as a tool to help achieve goals through providing information. The most important role in an organization remains humans as decision makers. The role of technology in an information system, in essence, is an information system as a substitute for human work (Setianingsih & Indriantoro, 1998; Erstiawan & Soebijono, 2018).

The success of information system development is very dependent on the conformity of expectations between system analysts, users, sponsors and customers (Ishak et al., 2022). Information system development requires developed planning and implementation (resistance to change). Because changing from a manual system to a computerized system not only involves technological changes but also behavioral and organizational changes. To avoid rejection of the system being developed, participation from users is required. User participation in each information system developer will certainly influence the level of user satisfaction of the system being developed (Setianingsih & Indriantoro, 1998: 193; Afiana et al., 2022).

A system cannot be said to be successful if the system user cannot accept it or even if the system can reduce the user's morale (Setianingsih & Indriantoro, 1998; Ariyani & Maghfiroh, 2022). So, it can be said that the success or failure of the information system being developed can be measured by the level of acceptance and level of user satisfaction with the system. If system users feel dissatisfied and cannot even accept the system being developed then this can be said to be a failure for the information system being developed (Erstiawan & Soebijono, 2018; Afiana et al., 2022).

Top managers of a company are executives at the top of the company's organization who are responsible for the survival and success of the company. In a large company, top managers can be strategists, organizational builders, and personal leaders. Besides that, top managers not only function as givers of orders but function as good mediators and motivators who have skills in educating and motivating employees as well as evaluating their work. Given its very important role as a company strategy developer, top management support is an important factor in the application of information technology and influences the success of information system development and more specifically information system planning (Febrianti et al., 2020).

Top management support and involvement plays an important role in every system development cycle and successful implementation of information systems. Such support is important not only in the allocation of resources necessary for such development. However, it is important to give a strong signal to employees that the changes being made are important. Apart from that, it also has the power and influence to socialize information system development, which allows users to participate in every stage of system development and this will influence user satisfaction. Therefore, user participation in system development will increase with support from top management (Puspitawati & Wisdayanti, 2020; Zen & Sitanggang, 2023). Apart from top management support, user communication can also influence user satisfaction. This relationship needs to be carried out at different phases of the information system development process. If users communicate effectively, it will facilitate the exchange of information, which is very important for determining system requirements and the success of

information system development efforts. The company's organizational structure, whether decentralized or centralized, will also influence the level of need for information that needs to be provided within a company. Differences in organizational structures will result in differences in the need for information because the tasks and responsibilities are different (Sumitro, 2014).

PT. Surabaya Industrial Estate Rungkut (Persero) is a state company which operates in the rental sector, providing industrial land (factories) along with infrastructure facilities that support industrial areas and also renting out ready-to-use factory buildings to support/implementing government policies and programs in the field of national economy and development, especially in the field of industrial estate development in the broadest sense. To achieve this goal, PT. SIER (Persero) develops information systems as a tool to help achieve goals by providing information for users.

PT. SIER (Persero) has three accounting information system subsystems: a transaction processing system (daily business), a general ledger/financial reporting system that produces financial reports, such as profit/loss reports, balance sheets, cash flows and tax returns, and a management reporting system. The software design process is divided into process design and database design. The process design from the use case diagram stage involves the users involved in the system, which are the financial accounting department and the director. Because the existing input data can be entered by the financial accounting department and the director can print reports, the weakness of this system is that it is implemented only on a few computers. This is because the existing system design is designed only for the current system requirements. Meanwhile, the database is a Physical Data Model designed for the accounting information system database. In this plan, there are 14 accounts, namely Identity, Customer, Vendor, Login, Unit, Location, Trans_Type, Temp_Transaction, Transaction, Accumulation_Transaction, Master, Balance Sheet, Profit_Loss, and Capital_Change.

However, information system users at PT. SIER (Persero), some of them are not satisfied with the development of the accounting information system produced because the information system produced is only on a few computers. In the end, the information provided is inaccurate and not timely, so they cannot carry out main activities effectively and efficiently even though this information is needed for decision-making such as budgets, performance reports, accountability reports, as well as increasing work efficiency in the finance department. User dissatisfaction with PT. SIER (Persero) can be caused by the possibility that top management support and communication between users are still not able to increase user participation to provide the best input in developing information systems, so users are not satisfied with the results of the information provided.

Research regarding the influence of top management support, participation, and communication on user satisfaction has also been conducted (Setianingsih & Indriantoro, 1998; Herdilah et al., 2023). The results of this research show that there is a positive influence between top management and user participation on user satisfaction (Herdilah et al., 2023), concluding that user participation in information system development positively influences user satisfaction. These two opinions support the findings of McKeen et al. (1994), which state that user participation has a positive relationship with user satisfaction. Following the problem background and problem formulation stated above, in general, this research aims to empirically test and analyze the influence of top management support variables, user participation and user communication on user satisfaction in the development of accounting information systems.

LITERATURE REVIEW

User Satisfaction in Accounting Information System Development

Lau (2004) and Sanga & Dince (2022) state that user satisfaction expresses the suitability between a person's expectations and the results they obtain because they participated in developing the information system. User involvement in system development is a user-led approach (Wheeler et al., 2024). This approach involves users in system development projects. Basically, in this approach, a small group in a system development project is given the responsibility to lead the project and represent the user community in determining requirements, testing, training and system implementation.

The success of information system development is not only determined by how the information system can process information well but is also determined by its suitability to the work environment. Even though technically the system is brilliant, it cannot be said to be successful if the system users cannot accept it or even if the system can reduce the user's morale (Setianingsih & Indriantoro, 1998; Sanga & Dince, 2022). User understanding of the information system will determine the success of an information system, whereas user ignorance or anxiety about the new system can cause failure in

information system development. Increasing user understanding of the system will influence the success of the information system being developed (Setianingsih & Indriantoro, 1998; Wheeler et al., 2024).

Top Management Support and User Satisfaction in Accounting Information Systems Development

Theories that support the relationship between top management support and user satisfaction in the development of accounting information systems:

- Group Theory
  The basis for developing group theory in leadership is rooted in social psychology. This theory states that for a group to achieve its goals, there must be a positive exchange between the leader and his followers. This theory also shows that leaders who consider and help their followers have a positive influence on attitudes, satisfaction, and work performance. Leaders can provide leadership support to subordinates (Ginting, 2023).
- Path-Goal Theory by Robert J. House (House, 1971). In essence, Path-Goal Theory attempts to explain the influence of leadership behavior on the motivation, satisfaction and work implementation of subordinates. The theory developed includes four types of leadership styles (directive leadership, supportive leadership, participative leadership, and achievement-oriented leadership) that can occur and be used by the same leader in different situations.

Two of the situational factors that have been identified so far are the personal characteristics of subordinates. For the first situation, the Path-Goal Theory provides an assessment that the leader's behavior will be accepted by subordinates if the subordinates see this behavior as a source that will immediately provide satisfaction or as an instrument for future satisfaction. Meanwhile, in the second situational factor, this theory states that the leader's behavior can be a motivational factor for subordinates and this behavior can satisfy the compliance of the subordinates' environment which is needed to make work implementation effective (Steffens et al., 2021). One of the four styles above and by considering these situational factors, it can be concluded that the leader will try to influence his subordinates and motivate them by directing them to clarify their tasks in achieving goals, satisfaction and effective work implementation.

Path-Goal Theory also states that the job of leadership is to create a work environment through structure, support, and rewards that help achieve organizational goals (Davis & Newstrom, 1992: 154; Maharani et al., 2023). From these theories and opinions, it can be concluded that there is a positive relationship between top management support and user satisfaction with the development of accounting information systems as research conducted by Setianingsih & Indriantoro (1998) found evidence that there is a positive and significant relationship between top management support and user satisfaction. accounting information system with research conducted on 134 users (managers) of information systems from 32 companies located in Korea. The results show that user participation is significantly related to the success of information systems where there is strong top management support at every stage of information system development (Sanga & Dince, 2022; Steffens et al., 2021; Febrianti et al., 2020).

H1: Top management support influences user satisfaction in developing accounting information systems

User Participation and User Satisfaction in Accounting Information System Development

In 1957, McGregor (Anggraini, 2008) wrote Theory Y as a theory supporting participation. Theory Y originates from rejecting the assumptions of theory X, which were determined by McGregor himself. Theory Y suggests that (among other things):

1. Measuring physical and mental effort in work is natural and the same as in play. People will practice commanding and controlling themselves to achieve the goals they have achieved.
2. Theory Y which suggests that the ability to achieve a goal is related to the rewards or prizes given if the goal is achieved. People will learn not only to accept responsibility; they will even seek it.
3. In certain circumstances, a Scanlon plan is recommended, where workers are given prizes or rewards if they succeed in reducing costs below an agreed-upon upper limit. This plan features a workers' commission that participates in devising new ways to reduce costs regarding the final product through cost-cutting savings plans.

Based on McGregor's Y theory, if it is connected to the user participation variable, it can be drawn on itself to achieve the participation goal. Participation encourages people to accept responsibility for group

activities and is a form of individual involvement in information system development activities aimed at achieving satisfaction with the information users (Yusop & Khalid, 2023). If in the development of an information system users are invited to participate, it will have a good influence on the organization. This can happen because users are directly involved in using the information system and users know more about what is needed in an information system (Lau, 2004).

Based on McGregor's Y theory and research conducted by Yusop & Khalid (2023), it can be concluded that by inviting users to participate, users can express their wishes regarding the information system development process (Lau, 2004). If these user desires can be input and implemented in the information system development process, then this can have quite a good influence. The relationship between participation and user satisfaction, McKeen et al. (1994) have conducted research on eight large organizations, with varying degrees of end user participation. From a total of 151 respondents, it shows that participation has a significant positive relationship with user satisfaction.

H1: User participation influences user satisfaction in developing accounting information systems

User Communication and User Satisfaction in Accounting Information Systems Development

The theory that underlies the influence of user-developer communication on user satisfaction is Balance Theory by Newcom in 1961 (Mukarom, 2020). This theory states that people are attracted to each other on the basis of similar attitudes towards generally relevant objects and goals. A group will be productive if its members have skills, good personalities and receive support from management and can improve company performance. The ERG (Existence, Relatedness, Growth) theory is a motivation theory. The ERG theory originated from Clayton Alderfer in 1972 (Arezah, 2024), who introduced three core groups of needs, namely the need for existence, the need for relatedness, and the need for development (growth). Among these three needs, the one that can shape the effectiveness of communication and cooperation is the need for relatedness, namely a need to establish relationships with others, have social relationships and collaborate with other people (Arezah, 2024). This need is an interpersonal need, which can provide satisfaction in interacting in the work environment.

The relationship between users and developers is always symbiotic (McKeen et al, 1994; Setianingsih & Indriantoro (1998). Users have complete information and understanding about the dynamics of the business environment, and users need to convey this understanding to the developer so that the developer will then transform it into the information system that will be developed. Setianingsih & Indriantoro (1998) and Yusop & Khalid (2023) revealed that there is a significant relationship between effective communication and successful system development. Developer-user communication can influence user satisfaction. This relationship needs to be made at different phases of the system development process. In this situation, users and developers communicate effectively to facilitate the exchange of information which is essential for the discovery of system requirements and the success of system development efforts (McKeen et al, 1994; Setianingsih & Indriantoro, 1998; Mukarom, 2020). Based on this theory, it can be concluded that to realize effective communication, there is a need for interaction and cooperation between individuals, so that if this interaction and cooperation can run well and in accordance with expectations, it will be achieved in a work or group environment (Arezah, 2024).

H3: User communication influences user satisfaction in developing accounting information systems

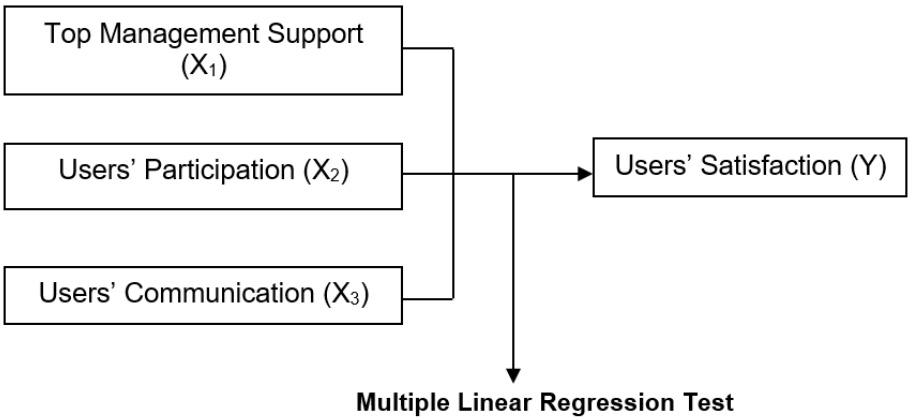

Figure 1. Research Framework

RESEARCH METHOD

This research is quantitative research with primary data. Data was obtained through a questionnaire aimed at all employees of PT SIER Surabaya. The sample used was accidental sampling, using all questionnaires that were returned and could be processed, namely 53 questionnaires. Questionnaires were distributed by giving them directly to PT SIER Surabaya to be distributed to their employees. The data obtained was processed using multiple linear regression analysis to prove the research hypothesis. Before being processed with multiple linear regression, the data was confirmed valid and reliable, free from normality, heteroscedasticity, multicollinearity and autocorrelation.

RESULTS AND DISCUSSION

Results

Validity Test

Validity shows the extent to which the measuring tool (questionnaire) measures what is desired. Validity tests were carried out on each question item in the questionnaire, which formed certain variables; in this research, the variables were top management support, user participation, user communication and user satisfaction in the development of the Accounting Information System. Whether the measuring instrument is valid or not can be tested by correlating the score obtained on each question item with the total score obtained from the sum of all question scores. If the resulting significance value is <0.05 (α=5%), then it can be said that the measuring tool has validity (Ghozali, 2018: 57). The validity test results for each variable are in Table 1 to Table 4.

Table 1. Validity Test Results of Top Management Support

Statement	*Pearson*	Sig.	Description
$X_{1.1}$	0.666	0.001	Valid
$X_{1.2}$	0.754	0.000	Valid
$X_{1.3}$	0.848	0.000	Valid
$X_{1.4}$	0.518	0.011	Valid
$X_{1.5}$	0.763	0.000	Valid
$X_{1.6}$	0.715	0.000	Valid

Source: Data processed

Based on Table 1, all questions on the top management support variable have a Pearson correlation significance value of <0.05. Thus, the six questions that form the top management support variable are valid and can be used in research.

Table 2. Validity Test Results of User Participation

Statement	*Pearson*	Sig.	Description
$X_{2.1}$	0.755	0.000	Valid
$X_{2.2}$	0.313	0.146	Not Valid
$X_{2.3}$	0.702	0.000	Valid
$X_{2.4}$	0.748	0.000	Valid
$X_{2.5}$	0.756	0.000	Valid
$X_{2.6}$	0.808	0.000	Valid
$X_{2.7}$	0.711	0.000	Valid
$X_{2.8}$	0.724	0.000	Valid
$X_{2.9}$	0.750	0.000	Valid
$X_{2.10}$	0.862	0.000	Valid

Source: Data processed

Based on Table 2, one question on the user participation variable is invalid because it has a Pearson correlation significance value > 0.05, namely question X2.2. Thus, question X2.2 was declared invalid and not used in research, while the other nine questions were declared valid (Pearson correlation significance < 0.05) and were used in research.

Table 3. Validity Test Results for User-Developer Communication

Statement	*Pearson*	Sig.	Description
$X_{3.1}$	-0.007	0.975	Not Valid
$X_{3.2}$	0.797	0.000	Valid
$X_{3.3}$	0.859	0.000	Valid
$X_{3.4}$	0.701	0.000	Valid
$X_{3.5}$	0.749	0.000	Valid
$X_{3.6}$	0.651	0.001	Valid
$X_{3.7}$	0.774	0.000	Valid
$X_{3.8}$	0.589	0.003	Valid
$X_{3.9}$	0.732	0.000	Valid
$X_{3.10}$	0.056	0.800	Not Valid

Source: Data processed

Based on Table 3, two questions on the user communication variable are invalid because they have a Pearson correlation significance value of > 0.05, namely questions X3.1 and X3.10. Thus, questions X3.1 and

Table 4. Validity Test Results of User Satisfaction in Accounting Information System Development

Statement	*Pearson*	Sig.	Description
Y_1	0.520	0.011	Valid
Y_2	0.748	0.000	Valid
Y_3	0.838	0.000	Valid
Y_4	0.770	0.000	Valid

Source: Data processed

Based on Table 4, all questions on the user satisfaction variable in the development of the Accounting Information System have a Pearson correlation significance value of <0.05. Thus, the four questions that form the user satisfaction variable in developing an Accounting Information System are valid and used in research.

Reliability Test

After the validity test is carried out, the reliability test is then carried out. Reliability shows that the measuring instrument used is quite accurate, stable or consistent in measuring what it wants to measure. Reliability testing uses the Cronbach Alpha value, a questionnaire is said to be reliable if it has a Cronbach Alpha value > 0.60 (Ghozali, 2018: 60). In the reliability test, valid questions were used, while invalid questions were not used (see Table 5).

Table 5. Reliability Test Results for Research Variables

Variables	*Cronbach Alpha*	*Description*
Top Management Support (X_1)	0.795	Reliable
User Participation (X_2)	0.909	Reliable
User-Developer Communication (X_3)	0.875	Reliable
User Satisfaction (Y)	0.685	Reliable

Source: Data processed

Based on Table 5, the Cronbach Alpha value for the four variables is greater than 0.60, this means that the question items that form the research variables are declared reliable.

Normality Test
According to Ghozali (2018: 65), to find out whether the data follows a normal distribution, various methods can be used, including the Kolmogorov Smirnov method and the Shapiro Wilk method. If the significance value resulting from the normality test is > 0.05, then the data distribution is normal (see Table 6).

Table 6. Normality Test Results

Variables	Sig. Kolmogorov Smirnov	Description
Top Management Support (X_1)	0.218	Normal
User Participation (X_2)	0.336	Normal
User-Developer Communication (X_3)	0.124	Normal
User Satisfaction (Y)	0.764	Normal

Source: Data processed

Based on Table 6, all variables are normal, with significant values of more than 0.05.

Classic Assumption Test
Autocorrelation
Autocorrelation shows that the residuals (confounding errors) are not independent from one observation to another. A good regression model is a regression that is free from autocorrelation. The existence of autocorrelation in regression can be determined by assessing the Durbin Watson magnitude. An observation is said to have no autocorrelation if the Durbin Watson value is between dU and 4-dU (Ghozali, 2018: 68). Based on Table 7 Durbin Watson with a sample size of n = 53 and a number of independent variables k = 3, the values for dL = 1.08 and dU = 1.66 are obtained.

Table 7. Autocorrelation Test Results

Model	Durbin-Watson
1	2.069

Source: Data processed

Based on Table 7, the Durbin Watson value obtained at 2.069 is located between dU (1.66) and 4-dU (2.34) or in the area of no autocorrelation, so the assumption that no autocorrelation occurs can be fulfilled.

Multicollinearity
Multicollinearity shows that the independent variables contained in the model have a perfect or near-perfect correlation (relationship). A good regression model should not correlate with independent variables. Tolerance values and variance inflation factor (VIF) values are used to detect the presence or absence of multicollinearity. If the tolerance value is > 0.10 or the same as VIF < 10, then multicollinearity does not occur (Ghozali, 2018: 92). Table 8 shows the results of hypothesis testing to obtain tolerance and VIF values.

Table 8. Multicollinearity Test Results

Variables	*Tolerance*	VIF
Top Management Support (X_1)	0.716	1.397
User Participation (X_2)	0.816	1.225
User-Developer Communication (X_3)	0.851	1.175

Source: Data processed

Based on Table 8, the tolerance value for each independent variable shows a value greater than 0.1 and the VIF value is all less than 10. Thus it can be concluded that the resulting regression model does not indicate high multicollinearity or that the assumption that multicollinearity does not occur is fulfilled.

Heteroscedasticity
Heteroscedasticity shows that the variance of the variables in the model is not the same (constant). A good regression model is a regression model that does not occur heteroscedasticity. The method used to test whether heteroscedasticity occurs or not is Spearman Rank correlation, namely by correlating the residuals with the independent variables. If the Spearman Rank correlation produces a significance value > 0.05 (α=5%), then heteroscedasticity does not occur (see Table 9).

Table 9. Heteroscedasticity Test Results

Variables	*Rank Spearman Correlation*
Top Management Support (X_1)	0.976
User Participation (X_2)	0.716
User-Developer Communication (X_3)	0.762

Source: Data processed

Based on the results in Table 9, the significance value of the Spearman Rank correlation between the residuals and the variables top management support, user participation, and user-developer communication is all greater than 0.05, so it can be concluded that heteroscedasticity does not occur or that the assumption of no heteroscedasticity is met.

Multiple Linear Regression Analysis
The results of testing the classical assumptions of regression analysis show that the assumptions underlying the regression analysis have been fulfilled, so the regression results cannot be interpreted biasedly. Multiple linear regression analysis was carried out to empirically test and analyze the influence of top management support variables, user participation, and user communication on user satisfaction in developing the Accounting Information System at PT. SIER (Persero).

Table 10. Multiple Linear Regression Coefficient Values

Variables	*Unstandardized Coefficient*
	B
Constanta	0.247
Top Management Support (X_1)	0.275
User Participation (X_2)	0.319
User-Developer Communication (X_3)	0.265

Source: Data processed

Based on table 10, the following regression equation can be created:

$$Y = 0.247 + 0.275\,X1 + 0.319\,X2 + 0.265\,X3 \quad (1)$$

The explanation of each resulting regression coefficient is as follows:

1) β0 = Constant = 0.247
   Shows the level of user satisfaction in developing the Accounting Information System. This means that if top management support, user participation, and user-developer communication are constant, then user satisfaction in developing the Accounting Information System at PT. SIER (Persero) is 0.247.
2) β1 = Regression coefficient for X1 = 0.275
   This means that if top management support rises one level, then user satisfaction in developing the Accounting Information System at PT. SIER (Persero) will increase by 0.275 assuming user participation and user-developer communication are constant.
3) β2 = Regression coefficient for X2 = 0.319
   This means that if user participation increases by one level, then user satisfaction in developing the Accounting Information System at PT. SIER (Persero) will increase by 0.319 assuming top management support and user-developer communication are constant.
4) β3 = Regression coefficient for X3 = 0.265

This means that if user communication increases by one level, then user satisfaction in developing the Accounting Information System at PT. SIER (Persero) will increase by 0.265 assuming top management support and user participation are constant.

Model Fit Test

To test whether the resulting regression model is suitable for determining the influence of X1, the regression between the variables top management support, user participation, and user communication on user satisfaction in the development of the Accounting Information System produces a significance value for the F test in Table 11.

Table 11. F Test Results

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.139	3	1.046	5.042	0.010
Residual	3.943	19	0.208		
Total	7.082	22			

Source: Data processed

The F test results in Table 11, between the variables top management support, user participation and user communication on user satisfaction in the development of the Accounting Information System, produce a significance value for the F test of 0.010 < 0.05. This shows that the resulting regression model is suitable for determining the influence of top management support, user participation and user communication on user satisfaction in developing the Accounting Information System at PT. SIER (Persero).

Coefficient of Determination

The following are the coefficient of determination (R Square) and correlation values (R) obtained from the regression between top management support, user participation and user communication on user satisfaction in the development of the Accounting Information System.

Table 12. Determination Coefficient (R Square) and Correlation (R) Values

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.666	0.443	0.355	0.45537

Source: Data processed

Based on Table 12, the coefficient of determination (R Square) shows 0.443, indicating changes in user satisfaction in developing the Accounting Information System at PT. SIER (Persero) can be explained by the variables top management support, user participation and user communication of 44.3%, while the remaining 55.7% is explained by other factors not discussed in this research. Table 12 also shows the correlation value (R) obtained at 0.666, where the value is close to 1. This shows that there is a strong correlation (relationship) between the variables top management support (X1), user participation (X2), and user communication (X3) on user satisfaction in the development of the Accounting Information System (Y). So, it can be concluded that top management support, user participation and communication influence user satisfaction in the development of the Accounting Information System at PT. SIER (Persero).

Top management support, user participation and communication positively affect user satisfaction in the development of the Accounting Information System at PT. SIER (Persero) is indicated by the positive regression coefficient values, namely 0.275, 0.319 and 0.265, respectively (see Table 13). This means that the higher the level of top management support, user participation and user-developer communication, the higher the level of user satisfaction in developing the Accounting Information System at PT. SIER (Persero). Based on these results, the research hypothesis assumes that top management support, user participation, and user communication positively affect user satisfaction in the development of Accounting Information Systems at PT. SIER (Persero), proven to be true. The variables between top management support, user participation, and user-developer communication have the most influence on user satisfaction in the development of the Accounting Information System at PT. SIER (Persero) is user participation. This conclusion is based on the largest beta (standardized coefficient) value, 0.319. For more details, see Table 13.

Table 13. Beta Values

Variables	*Standardized Coefficient* Beta
Top Management Support (X_1)	0.275
User Participation (X_2)	0.319
User-Developer Communication (X_3)	0.265

Source: Data processed

Table 13, the variables that have the most influence on user satisfaction in developing the Accounting Information System at PT. SIER (Persero) is user participation, then top management support and user communication.

Discussion

Top management support influences user satisfaction in developing accounting information systems

According to Path-Goal Theory, one of the main tasks of leadership is to create a conducive work environment through structure, support and providing rewards that can help achieve organizational goals (Davis & Newstrom, 1992: 154; Maharani et al., 2023). This theory emphasizes the importance of the leader's role in facilitating employee performance by providing clear direction, providing adequate support, and recognizing and appreciating their contributions. From several theories and opinions that have been presented, it can be concluded that there is a positive relationship between top management support and user satisfaction in developing accounting information systems. For example, research conducted by Setianingsih & Indriantoro (1998) found evidence of a positive and significant relationship between top management support and user satisfaction with accounting information systems. This research involved 134 users (managers) of information systems from 32 companies located in Korea. This research shows that user participation is significantly related to information system success, especially when there is strong support from top management at every stage of information system development (Sanga & Dince, 2022; Steffens et al., 2021).

In other words, top management support not only increases user satisfaction but also contributes to the overall success of the accounting information system. This support can provide adequate resources, relevant training, and ongoing monitoring and feedback. Therefore, the successful development and implementation of an accounting information system is highly dependent on the commitment and involvement of top management, which in turn will increase the effectiveness and efficiency of the organization as a whole (Wardhani et al., 2023; Sihotang et al., 2024).

User participation influences user satisfaction in developing accounting information systems

Based on McGregor's Y theory and research conducted by Yusop & Khalid (2023), it can be concluded that by involving users in the information system development process, they can convey their wants and needs directly (Lau, 2004). When user desires are accommodated and implemented in information system development, this can produce a significant positive impact. User participation not only ensures that the system being developed meets their needs but also increases their sense of ownership and responsibility for the system.

The relationship between user participation and satisfaction has been studied by McKeen et al. (1994), who researched eight large organizations with varying levels of end-user participation. The research results of the 151 respondents who participated showed that user participation had a significant positive relationship with their satisfaction. Active participation allows users to provide valuable input, making the resulting system more effective and efficient in meeting operational needs. Overall, these findings confirm the importance of user participation in information system development (Zen & Sitanggang, 2023). By involving users from the planning stage to implementation, organizations can ensure that the system developed meets technical needs and is well received and used by users. This will ultimately increase the success and effectiveness of the information system implemented (Semarajana et al., 2022).

User-developer communication influences user satisfaction in developing accounting information systems

The relationship between end users and information system developers is symbiotic, meaning that both parties depend on each other to achieve common goals. Users have a deep understanding of the needs and dynamics of their business environment, including operational processes, information needs and

challenges faced. This knowledge is essential for developers responsible for designing and implementing effective and efficient information systems. Developers, on the other hand, have the technical and methodological skills necessary to transform users' business understanding into information systems that can support daily operations and strategic decision making. In this process, developers need clear and detailed input from users to ensure that the system being developed truly meets business needs.

Effective communication between users and developers is the key to successful information system development. Research by Setianingsih & Indriantoro (1998) and Yusop & Khalid (2023) emphasizes that good communication can influence user satisfaction and the overall success of the information system. Effective communication enables the exchange of essential information necessary to identify system requirements and ensure that both parties properly understand all requirements. Effective communication at every stage of information systems development, from planning to implementation, ensures that users feel heard and their needs are met. Research by McKeen et al. (1994) shows that active user participation in system development has a significant positive relationship with their satisfaction. This is because users involved in the development process are more likely to feel that the system meets their expectations and is easier to use in their daily work.

Existing theories conclude that to realize effective communication, good interaction and cooperation is needed between the individuals involved. Good interactions include regular meetings, open discussions, and constructive feedback. Solid cooperation ensures all parties work towards the same goals and overcome common challenges. In information system development, good interaction between users and developers includes user participation in system testing, providing input on the design, and collaborating in solving technical problems. This collaboration improves the quality of the system being developed and increases the user's sense of ownership and responsibility for the system (Putri et al., 2022; Inayah, 2024).

CONCLUSION

Several conclusions can be drawn based on the research that has been carried out and the discussion of research results in the previous chapter. The hypothesis proposed is that top management support, user participation, and user communication positively affect user satisfaction when developing accounting information systems at PT. SIER (Persero) has been proven to be true. A symbiotic relationship between users and developers and effective communication is very important in developing information systems. Through good interaction and collaboration, users and developers can ensure that the system developed meets business needs and increases user satisfaction. Top management support and active user participation in each stage of system development also play an important role in the success of information systems. This research examines the influence of top management support, user participation, and communication on user satisfaction in developing accounting information systems at PT. SIER (Persero). The research results show that top management support, user participation, and effective communication are positively and significantly related to user satisfaction. This emphasizes the importance of involving various parties in each stage of information system development to achieve optimal results and satisfy all stakeholders.

This study has several limitations that need to be noted. First, this research was only conducted on one company, namely PT. SIER (Persero), so the results may not be generalizable to other companies or other industrial sectors. Second, the data used in this research is quantitative and may not capture the deeper nuances and context of user experiences. Third, this research only considers three main variables, so other factors that were not identified in this research might influence user satisfaction. Fourth, this research uses a multiple linear regression test, which may not be appropriate to apply to causal relationships with primary data. Therefore, several suggestions can be given for developing accounting information systems in the future. First, companies must ensure consistent support from top management in every stage of system development to provide clear direction and adequate resources. Second, user participation should be increased by involving them from the planning stage to implementation to ensure the system developed meets their needs. Third, facilitate open and effective communication between users and developers to identify and resolve problems early and increase user satisfaction. Fourth, use an appropriate alta test for primary data, such as SEM (Structural Equation Model) or PLS (Partial Least Square).

This research has important implications for companies, managers, and information systems developers. Top management support and active user participation can increase the success of

information system development and user satisfaction. In addition, effective communication can speed up the development process and reduce errors that can occur. Companies that successfully implement these findings can improve the operational efficiency and effectiveness of their information systems, which will ultimately positively impact overall company performance. This research enriches the literature regarding the relationship between top management support, user participation, and communication on user satisfaction in the accounting information system development context. By using motivation theories such as Path-Goal Theory, ERG Theory, and Balance Theory, this research provides new insights into the importance of user involvement and effective communication in achieving information system success. From a practical perspective, the findings of this research can be used by companies to develop more effective information system development strategies. Managers can use the results of this research as a guide to improve their support and facilitate better participation and communication with system users. For policymakers, this research highlights the importance of establishing policies that support top management involvement and user participation in information systems development. Policies that support communication training and collaboration between teams are also important to ensure the success of information systems development projects.

Abbreviations
ERG (Existence, Relatedness, Growth) theory, PT SIER (PT. Surabaya Industrial Estate Rungkut) (Persero), SEM (Structural Equation Model), PLS (Partial Least Square).

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