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ANALYSIS OF ECONOMIC VALUE FROM THE SERVICE MANAGEMENT SYSTEM (SMS) IMPLEMENTATION IN THE IT SECTOR USING ISO FRAMEWORK

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ABSTRACT

To examine the economic value of the service management system implementation in IT sector using ISO framework. A descriptive statistic research method was adopted in this study. A simple random sampling technique is used to collect the data from 15 IT companies. The sample size for 15 IT companies is 405 responses. Further, mean and standard deviation, correlation and regression were calculated. It was found that Strong commitment from top officials was required on that timely allocation of money was the key area of this implementation project which highly influenced the overall service management system. Further, the company always show that ISO/IEC 20000 implementation will ensure better service quality to customers, and company invested a lot of money initially in this implementation project are moderate influenced the overall service management system. Then, Clients never wanted to degrade their service delivery standard is negatively influenced the overall service management system.

Keywords: *Economic Value, Service Management System, IT Company, ISO*

INTRODUCTION

Implementing an SMS in a structured way brings many benefits to an organization such as greater efficiencies and improved customer relations, but it should not be an added burden, Clare Naden (2019). Service Desk Plus is a service management solution that combines IT service management, IT asset management, and CMDB with enterprise service management capabilities for departments including HR, facilities, and finance. Available both on-premises and in the cloud, ServiceDesk Plus is the ideal choice for organizations looking for a scalable, secure, and extensible IT and enterprise service management solution with a proportionate ROI. Imam Asrowardi et al., (2018) Information technology plays an increasingly important role in developing the structure and functions of public and private sectors. Service measurement plays an important role in IT service management (ITSM) that is one of the subfields of Services Computing science. ITSM is a big part of service science, a science field that combines computer science, operation research

engineering, business strategy, management science, and organizational theory. Performance measurement from each of IT services is absolutely needed and is important in the continuous development of ITSM. This research provides good technical knowledge about the measuring ITSM with some requirements. Information technology is about not only hardware, software, communication infrastructure and communication infrastructure but also how to manage services. Information technology plays an increasingly important role in developing the structure and functions of public and private sectors. Almost billion of money are being spent on the procurement of new technology with the aim to improve IT organization (Service delivery) as well as the quality of services delivered to customers. Although IT service often brings benefits to an organization, its implementation sometimes does fail.

OBJECTIVES OF THE STUDY

- To analyse the employee's opinion towards the service management system implementation in IT sector.
- To test the relationship between economic value from the service management system and overall service management system.
- To analyse the factors influencing economic value from the service management system.

HYPOTHESIS OF THE STUDY

H_o: There is no relationship between economic value from the service management system and overall service management system

H_o: There is no factors influencing economic value from the service management system

RESEARCH METHODOLOGY

To examine the economic value from the service management system implementation in IT sector using ISO framework. Descriptive statistic research method was adopted in this study. Simple random sampling technique is used to collect the data from the IT company. The sample size for 15 companies with 27 Respondents from each company is 405 responses. Further, mean and standard deviation, correlation and regression were calculated.

ANALYSIS AND INTERPRETATION

Table-1: The Service Management System Implementation in IT Sector

s.no	Service Management System Statements	Mean	S.D
1.	Understanding industry best practices and believing in the benefits by IT Support teams	3.87	2
2.	Top Management needs to be well aware of the benefits as well as clear understanding of ISO 20K.	4.21	2
3.	Project and IT Managers are well aware of the implementation of ISO 20K and agreed on its operational benefits.	4.17	2

4.	Your company invested a lot of money initially in this implementation project	4.12	2
5.	There were several teams who worked together and responsibility was shared by one another which created a positive vibe for the implementation project.	4.26	2
6.	Changed processes and procedures and alignment with these changes were very crucial for IT people for this project	4.27	2
7.	Strong monitoring and guidance from ISO core team was really required on that time for successful implementation	4.13	2
8.	Everybody has to play dual role or extra work.	4.28	2
9.	They took this very important responsibility and helped every service owner to roll out this standard easily.	4.07	2
10.	Clients never wanted to degrade their service delivery standard	4.05	2
11.	Your company always show that ISO 20K implementation will ensure better service quality to customers	4.13	2
12.	The employee's extra effort, willingness and training to learn new things helped this implementation a lot	4.11	2
13.	Your company need to take approval from the client to perform any new activities	4.16	2.1
14.	Management was focused on not only short-term benefits but also long-term benefits after the implementation period	4.24	1.9
15.	Strong commitment from top officials was required on that timely allocation of money was key area of this implementation project	4.08	2
16.	There were many standards and policies running in your organization such as ISO 27001, CMMI or others.	4.19	2
17.	Service Process owner's effort was very important for the implementation of ISO 20K	3.81	2
18.	Your management performed a cost-benefit analysis (CBA) and as is analysis before the implementation of ISO 20000	4.09	2
19.	Maintaining all the standards, processes and policies by the concerned team	3.98	2.1
20.	Logging of incidents to ensure different Corrective and Preventive Action (CAPA) is taken	4.18	2
21.	overall service management system	3.98	2

Source: Primary Data Computed.

Table-1 shows the service management system implementation in IT sector. Mean and standards deviation values are calculated from the data. The mean value raged from 3.00 to 4.00. The corresponding standards deviation values are 1.00 to 2.00. The mean values are understanding industry best practices and believing in the benefits by it support teams (3.87), top management needs to be well aware of the benefits as well as clear understanding of iso 20k (4.21), project and

it managers are well aware of the implementation of iso 20k and agreed on its operational benefits (4.17), company invested a lot of money initially in this implementation project (4.12), there were several teams who worked together and responsibility was shared by one another which created a positive vibe for the implementation project (4.26), changed processes and procedures and alignment with these changes were very crucial for it people for this project (4.27), strong monitoring and guidance from iso core team was really required on that time for successful implementation (4.13), everybody has to play dual role or extra work (4.28), they took this very important responsibility and helped every service owners to roll out this standard easily (4.07), clients never wanted to degrade their service delivery standard (4.05), company always tried to show that iso 20k implementation will ensure better service quality to customers (4.13), the employees extra effort, willingness and training to learn new things helped this implementation a lot (4.11), your company need to take approval from the client to perform any new activities and it was really a hassle for it support people during the implementation of iso 20k (4.16), management was focused on not only short-term benefits but also long-term benefits after the implementation period (4.24), strong commitment from top officials was very much required on that time and timely allocation of money with proper financial planning was key area of this implementation project (4.08), there were many standards and policies running in your organization such as iso 27001, CMMI or others (4.19), service process owner‘s effort was very important for the implementation of iso 20k (3.81), your management performed a cost-benefit analysis (cba) and as is analysis before the implementation of iso 20000 (4.09), maintaining all the standards, processes and policies by the concerned team (3.98), logging of incidents to ensure different corrective and preventive action is taken (4.18), and overall service management system (3.98). It is found that customers are given high level opinion towards the service management system implementation in IT sector.

Table-2: Relationship Between Economic Value from the Service Management System and overall Service Management System (SMS)

s.no	Service Management System	Overall SMS	
		R-values	P-Values
1.	Understanding industry best practices and believing in the benefits by IT Support teams	0.772	0.014*
2.	Top Management needs to be well aware of the benefits as well as clear understanding of ISO 20K.	0.926	0.004*
3.	Project and IT Managers are well aware of the implementation of ISO 20K and agreed on its operational benefits.	0.856	0.009*
4.	Your company invested a lot of money initially in this implementation project	0.098	0.080*
5.	There were several teams who worked together and responsibility was shared by one another which created a positive vibe for the implementation project.	0.731	0.017*

6.	Changed processes and procedures and alignment with these changes were very crucial for IT people for this project	0.784	0.013*
7.	Strong monitoring and guidance from ISO core team was really required on that time for successful implementation	0.742	0.016*
8.	Everybody has to play dual role or extra work.	0.911	0.005*
9.	They took this very important responsibility and helped every service owner to roll out this standard easily.	0.938	0.004*
10.	Clients never wanted to degrade their service delivery standard	0.137	0.072*
11.	Your company always show that ISO 20K implementation will ensure better service quality to customers	0.077	0.086*
12.	The employee's extra effort, willingness and training to learn new things helped this implementation a lot	0.686	0.020*
13.	Your company need to take approval from the client to perform any new activities	0.977	0.001*
14.	Management was focused on not only short-term benefits but also long-term benefits after the implementation period	0.414	0.040*
15.	Strong commitment from top officials was required on that timely allocation of money was key area of this implementation project	0.486	0.034*
16.	There were many standards and policies running in your organization such as ISO 27001, CMMI or others.	0.079	0.085*
17.	Service Process owner 's effort was very important for the implementation of ISO 20K	0.272	0.053*
18.	Your management performed a cost-benefit analysis (CBA) and as is analysis before the implementation of ISO 20000	0.611	0.025*
19.	Maintaining all the standards, processes and policies by the concerned team	0.592	0.026*
20.	Logging of incidents to ensure different Corrective and Preventive Action (CAPA) is taken	0.835	0.010*

Source: Primary data; * Significant level.

H_o: To test the relationship between economic value from the service management system and overall service management system

Table-2 explains the relationship between economic value from the service management system and overall service management system. Pearson correlation was applied to find out among the variables. The correlation values observed that understanding industry best practices and believing in the benefits by it support teams (0.772), top management needs to be well aware of the benefits as well as clear understanding of iso 20k (0.926), project and it managers are well aware of the implementation of iso 20k and agreed on its operational benefits (0.856), company invested a lot of money initially in this implementation project (0.098), there were several teams who worked together and responsibility was shared by one another which created a positive vibe

for the implementation project (0.731), changed processes and procedures and alignment with these changes were very crucial for it people for this project (0.784), strong monitoring and guidance from iso core team was really required on that time for successful implementation (0.742), everybody has to play dual role or extra work (0.911), they took this very important responsibility and helped every service owner to roll out this standard easily (0.938), clients never wanted to degrade their service delivery standard (0.137), company always show that iso 20k implementation will ensure better service quality to customers (0.077), the employee's extra effort, willingness and training to learn new things helped this implementation a lot (0.686), your company need to take approval from the client to perform any new activities (0.977), management was focused on not only short-term benefits but also long-term benefits after the implementation period (0.414), strong commitment from top officials was required on that timely allocation of money was key area of this implementation project (0.486), there were many standards and policies running in your organization such as ISO 27001, CMMI (0.079), service process owner 's effort was very important for the implementation of ISO 20k (0.272), your management performed a cost-benefit analysis and as is analysis before the implementation of iso 20000 (0.611), maintaining all the standards, processes and policies by the concerned team (0.592), logging of incidents to ensure different corrective and preventive action is taken (0.835) are related to overall service management System. P-values are significant so hypothesis is rejected. It is found that the strong relationship Between Economic Value from the Service Management System and overall Service Management System**.**

Table-3 Factors influencing economic value from the service management system

R	R Square	Adjusted R Square	F-value	P-Value
0.789	0.622	0.588	12.04356	0.014*

Service Management System	Unstandardized Coefficients		Standardized Coefficients	t	Sig Value
	B	Std. Error	Beta		
(Constant)	3.483	0.674	-	5.164	0.000*
Understanding industry best practices and believing in the benefits by IT Support teams	-0.03	0.051	-0.03	-0.6	0.55
Top Management needs to be well aware of the benefits as well as clear understanding of ISO 20K.	0.005	0.05	0.005	0.108	0.914
Project and IT Managers are well aware of the implementation of ISO 20K and agreed on its operational benefits.	-0.02	0.051	-0.018	-0.36	0.721
Your company invested a lot of money initially in this implementation project	0.086	0.05	0.085	1.702	0.040*

There were several teams who worked together and responsibility was shared by one another which created a positive vibe for the implementation project.	0.014	0.05	0.014	0.271	0.786
Changed processes and procedures and alignment with these changes were very crucial for IT people for this project	0	0.05	0	0.003	0.998
Strong monitoring and guidance from ISO core team was really required on that time for successful implementation	0.02	0.05	0.02	0.393	0.695
Everybody has to play dual role or extra work.	-0.02	0.051	-0.015	-0.29	0.771
They took this very important responsibility and helped every service owner to roll out this standard easily.	-0.01	0.05	-0.01	-0.2	0.843
Clients never wanted to degrade their service delivery standard	-0.09	0.051	-0.091	-1.82	0.030*
Your company always show that ISO 20K implementation will ensure better service quality to customers	0.093	0.052	0.09	1.795	0.043*
The employee's extra effort, willingness and training to learn new things helped this implementation a lot	-0.04	0.052	-0.037	-0.74	0.463
Your company need to take approval from the client to perform any new activities	-0.02	0.05	-0.022	-0.43	0.67
Management was focused on not only short-term benefits but also long-term benefits after the implementation period	0.04	0.054	0.038	0.742	0.459
Strong commitment from top officials was required on that timely allocation of money was key area of this implementation project	0.618	0.091	0.618	0.35	0.027*
There were many standards and policies running in your organization such as ISO 27001, CMMI or others.	0.084	0.051	0.084	1.639	0.102
Service Process owner's effort was very important for the implementation of ISO 20K	-0.07	0.051	-0.071	-1.4	0.164
Your management performed a cost-benefit analysis (CBA) and as is analysis before the implementation of ISO 20000	0.03	0.051	0.029	0.58	0.562
Maintaining all the standards, processes and policies by the concerned team	0.011	0.049	0.011	0.214	0.831

Logging of incidents to ensure different Corrective and Preventive Action (CAPA) is taken	0.006	0.05	0.006	0.13	0.897

Source: Primary data; * Significant level.

Table-3 explains the factors influencing economic value from the service management system. Here, economic value from the service management system is considered as an independent variables and overall service management system is treated as a dependent variable.

H_o: There is no factors influencing economic value from the service management

Regression analysis is applied to know the effect of exploratory variables on the dependent variable. The adjusted r-square value is found to be 0.588. It is inferred that the independent variables are influenced at 0.588 levels. It is found that the independent variables influenced at 58.8 percent towards the overall service management system. The p-value is 0.014. Hence, the hypothesis is rejected.

The unstandardized co-efficient beta value indicates the strength of relationship between dependent and exploratory variables. It is expressed by the equation as follows;

Overall service management system = 3.483 + 0.618 (Strong commitment from top officials was required on that timely allocation of money was key area of this implementation project) + 0.093 (company always show that ISO 20K implementation will ensure better service quality to customers) + 0.086 (company invested a lot of money initially in this implementation project) - 0.093 (Clients never wanted to degrade their service delivery standard)

It is found that Strong commitment from top officials was required on that timely allocation of money was key area of this implementation project is highly influenced the overall service management system. Further, company always show that ISO 20K implementation will ensure better service quality to customers, and company invested a lot of money initially in this implementation project are moderate influenced the overall service management system. Then, Clients never wanted to degrade their service delivery standard is negatively influenced the overall service management system.

CONCLUSION

Implementing a Service Management System (SMS) in the IT sector enhances operational efficiency, streamlining workflows and ensuring quicker response times. Customer satisfaction improves as services become more reliable and tailored to user needs. Optimized resource utilization leads to cost savings and increased productivity. Proactive monitoring enables early problem detection, reducing downtime and improving overall service quality. Improved communication and collaboration among IT teams foster a cohesive work environment. Adherence to best practices, often based on ITIL standards, ensures standardized and consistent processes. Measurable performance metrics provide data-driven insights for continuous improvement. Increased organizational agility allows for better adaptation to changing business needs. Regulatory compliance is addressed, vital in industries with specific standards. Evaluating return on investment highlights financial and non-financial benefits, solidifying the strategic value of

SMS implementation. In this paper suggest the metrics in each service processes enables organizations to predict a direction for active process enhancement and to identify if the goal of process can achieve.

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