https://doi.org/10.31871/IJNTR.8.6.10
International Journal of New Technology and Research (IJNTR)
ISSN: 2454-4116, Volume-8, Issue-6, June 2022 Pages 21-28

The Influence of Management Quality and Innovation Strategy on Operational Performance through Information Technology as an Intervening Variable at LPDB KUMKM

Yones William, Rosalendro Eddy Nugroho

***Abstract*—The use of technology is useful to encourage the emergence of new innovations in the implementation of corporate action strategies. Innovation is a way out for LPDB-KUMKM to adapt the organization's circumstances to dynamic external environmental issues. Information technology is increasingly being used to measure, understand and improve the quality of sustainable organizational management by increasing awareness of the concept of quality, improving services and reducing costs that arise in the process of obtaining quality management. LPDB-KUMKM continues to strive to make various innovations by designing a core micro financing system, which is a system to monitor the process of distributing revolving funds at revolving fund management institutions in Indonesia.**

This study uses purposive sampling with the number of samples used as many as 261 LPDB-KUMKM employees, while the analysis technique uses structural equation modeling analysis. The research results obtained are: (1) the quality of management has an effect on information technology; (2) the innovation strategy has an effect on information technology; (3) management quality has an effect on operational performance; (4) innovation strategy has an effect on operational performance; and (5) information technology has no effect on operational performance.

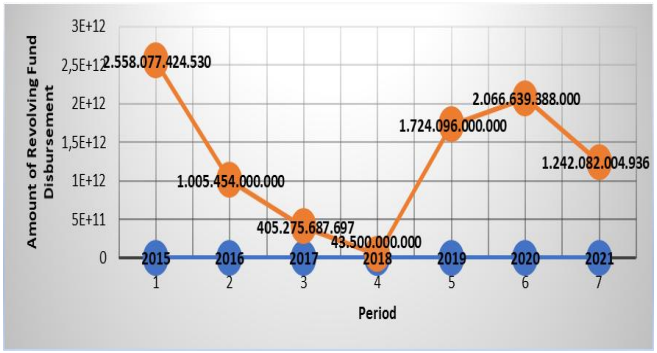
***Index Terms*- management quality, innovation strategy, information technology, operational performance, LPDB-KUMKM.**

I. INTRODUCTION

Now we are entering the fourth industrial resolution called industry 4.0 where computers and automation are coming together in a new way. Era 4.0 has become an industrial concept that affects digitalization and virtualization in various organizational domains, where most organizations and operations tend to be service-oriented rather than product-oriented. With technological advances, integration and automation processes can be carried out very quickly, as well as the digitization process and public service processes can be carried out more effectively and efficiently, (Ganbold, 2020; Bi et al, 2013; Peng et al, 2016; Li et al. al, 2016).

Utilization of information technology for public organizations is used to obtain, process and transmit information to support organizational decision-making processes and also to facilitate communication, coordination and collaboration between other public organizations and as a channel for the public to obtain public services, (Hsu, 2013; Fuchs et al. al, 2018; Bhakoo & Choi, 2013; Cragg & Mcnamara, 2013). With collaboration between public organizations and supported by relational view theory, organizations will apply their information technology, not only for internal integration but also to support external integration efforts between other public organizations (Ochoa et al, 2017; Fuchs et al, 2018; Yu et al, 2018).

The phenomenon of implementing the innovation strategy that has been carried out by LPDB-KUMKM management throughout the 2021 period recorded efficiency, one of which is official travel. The average cost value before is Rp.174,427,060 and after is Rp.164,810,446 or a decrease of 5.51% (Directorate of Finance in 2021; LAKIP LPDB-KUMKM 2021). This indicates that the phenomenon of implementing an effective innovation strategy is proven to increase budget efficiency by up to 6%. In relation to the management quality phenomenon, the organization has reshuffled its structural officers in 2019, namely two directors from banking who came in to replace the previous officials. This policy has a direct impact on the achievement of revolving fund distribution as shown in the data below.



Graph 1. Distribution of Revolving Funds for the 2015-2021 Period

Based on Graph 1 above, it can be explained that the recorded amount of revolving fund distribution of Rp. 2,558,077,424,530 was in the maturity phase then entered the decline phase until it touched its lowest point in the 2018 period of Rp. 43,500,000,000. Furthermore, the researcher wants to prove that the refresh of the new structural officers at

Yones William, Master of Management Program, Universitas Mercu Buana, Jakarta, Indonesia
Rosalendro Eddy Nugroho, Master of Management Program, Universitas Mercu Buana, Jakarta, Indonesia

the beginning of 2019 can actually give color to the new management quality and have an impact on a significant increase in operational performance.

The implementation of the organizational policies above to increase the number of revolving fund disbursements was very significant starting in the 2019 period of Rp. 1,724,096,000,000 (entering the growth phase) then increasing again in 2020 to reach Rp. 2,066,639,388,000 or experiencing growth again. when compared to the 2017 period, which was 410% (yoy). Utilization of information technology can encourage the implementation of effective and efficient innovation strategies, so as to provide added value to the performance of public organizations holistically. The more information technology that is used, the more innovations made and can also improve the operational performance of public organizations (Rahmadari, 2019; Naidoo, 2018; Adietya, 2017; Kitsios, 2016).

The implementation of targeted innovation strategies can improve organizational operational performance and innovation strategies are needed to avoid saturation within the organization (Ulfa, 2021; Fufung, 2020; Utami, 2020; and Alsadi, 2017). Furthermore, Mukti (2016) found that leadership orientation was quite significant in influencing the innovation strategy carried out related to process innovation, internal and external sources of innovation as well as the level of investment made by public organizations.

Innovation is a way out for organizations to adjust organizational circumstances to dynamic external environmental issues, (Cottam, 2011). Kowo (2018), finds the dimensions of process innovation that can best explain its effect on operational performance, including the company's ability to modify public services. On the other hand, Kyuga Na (2019) actually found that process innovation did show significance but the direction of its influence was actually negative on improving the operational performance of public organizations.

II. LITERATURE REVIEW

Terziovski & Samson (2010), defines operational performance as the organization's ability to transform products that are able to satisfy customers. Operational performance as an improvement in the organization's response to dynamic external environmental issues, (Flynn et al, 2010). Ketokivi & Schroeder (2019), said that operational performance has several dimensions including product quality, process quality, productivity and efficiency. Arda et al (2018), mentions several indicators that can be used to measure operational performance, namely increasing organizational competitiveness, increasing general performance, decreasing the labor turnover ratio, increasing new product development competencies, accelerating the new product development process, improve the competence of new product development by utilizing investment in research and development as well as new products or increase the consideration of changing customer needs in the service development process.

Jaafreh & Al-abedallat (2013), defines quality management as a set of management practices and styles that organizations can adopt in an effort to improve competitiveness and overall performance. Quality management is relevant to organizations that are oriented towards increasing customer satisfaction and productivity (Zu, 2009), finance and innovation performance (Anil & Satish, 2019). The dimensions of management quality consist of leadership, strategic planning processes, quality assurance of outputs, important innovations, information and analysis, utilization of human resources, customer satisfaction and quality results, (Yan et al, 2019; Udofia, 2021). Management quality can be measured using indicators of top management commitment, focus on customers, involvement of organizational personnel, continuous improvement and management relationships, (Jayalath, 2017; ISO, 2003). 2015; Abbas, 2020; Negron, 2020).

West & Far (2012), defines innovation strategy as the application and introduction of new ideas, products, procedures and processes to units that implement them and are designed to provide benefits to the organization. The dimensions of the innovation strategy consist of process innovation, product innovation, internal and external sources and implementation of innovation, (Rahmasari, 2019; Utami, 2020). Innovation strategy can be measured using several indicators such as implementation of research and development results, introduction of new and innovative products, level of flexibility and advanced technology, level of organization and human resource management, use of information technology, allocation of financing resources for innovation, innovation transfer process, partnerships and cooperation, awareness of innovation and application of innovation techniques and tools, (Sabadka, 2012).

Sutabri (2014), defines information technology as a technology used to manage data including processing, obtaining, compiling, storing, manipulating data in various ways to produce quality information, namely accurate and timely information used for organizational purposes in the decision-making process. decision. Galbold (2020) said that information technology consists of cross-functional application capacity (internal organization) cross-stakeholder capacity (inter-organizational) and data consistency as the purpose of application control. Several indicators such as hardware, software, infrastructure, information specialists and information users can be used to measure information technology (Sutanta, 2013).

A. Formulation of The Problem

1. Regarding operational performance, the service focus is not optimal because LPDB-KUMKM serves all types of needs of prospective partners with quite varied types of business with a level of risk that is adjusted to the complexity of risk mitigation of financing loans.
2. Regarding the quality of management, there is no specific team that carries out change of management with clear strategic parameter measurements and the lack of management commitment in improving the quality of management on an ongoing basis.
3. Regarding the innovation strategy, the lack of structured entrepreneurial motivation in developing services is one thing that needs to be instilled in all management lines.
4. Regarding information technology, the CMFS system has not yet been integrated as an integral internal application of the organization in reviewing the feasibility analysis to distributing revolving funds to organizational partners.

B. Research Purposes

1. The influence of management quality on information technology.
2. The effect of innovation strategy on information technology.
3. The influence of management quality on operational performance.
4. The effect of the invasion strategy on operational performance.
5. The effect of information technology on operational performance.

III. METHOD

The method used in this research is quantitative. The scope of the variables in this study consisted of operational performance as an endogenous variable; management quality and innovation strategy as exogenous variables; and information technology as an intervening variable. The sampling technique used purposive sampling with judgment non-probability sampling method and used a sample of 261 LPDB-KUMKM employees. Meanwhile, the analysis technique uses structural equation modeling analysis with the help of statistical software for windows AMOS version 24. The research design built in this study is as follows.

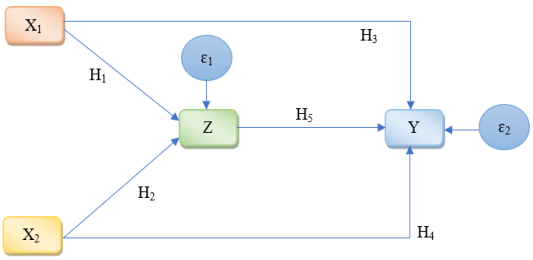


Figure 1. Research Design

Information:
X_1 : Quality management
X_2 : Innovation strategy
Z : Information technology
Y : Operational performance

V. RESULT AND DISCUSSION

A. Confirmatory Factor Analysis Validity

It is said that the construct variables can reflect the latent variable if the critical ratio value is 1.96 with a significance probability of 0.05. As for the results obtained, it is known that the overall construct variables in each latent variable can reflect the variables of management quality, innovation strategy, information technology and operational performance very well. So it can be interpreted that the distribution of the data in this study has a very good level of validity.

Table 1. Regression Weights

Construct			Estimate	S.E	C.R	P	Label
B25	<---	MQ	1,000				
B22	<---	MQ	1,499	,158	9,474	***	par_1
B21	<---	MQ	1,140	,130	8,744	***	par_2
B20	<---	MQ	1,584	,166	9,525	***	par_3
B19	<---	MQ	1,571	,167	9,416	***	par_4
B16	<---	MQ	1,432	,153	9,354	***	par_5
B46	<---	IT	1,000				
B48	<---	IT	1,139	,071	15,950	***	par_6
B49	<---	IT	1,143	,074	15,484	***	par_7
B51	<---	IT	1,007	,070	14,414	***	par_8
B52	<---	IT	1,073	,071	15,198	***	par_9
B53	<---	IT	1,020	,069	14,699	***	par_10
B54	<---	IT	1,099	,074	14,805	***	par_11
B55	<---	IT	1,110	,073	15,276	***	par_12
B57	<---	IT	1,042	,071	14,763	***	par_13
B28	<---	MQ	1,244	,134	9,299	***	par_14
B29	<---	MQ	1,344	,143	9,400	***	par_15
B40	<---	IS	1,000				
B39	<---	IS	,830	,067	12,465	***	par_16
B38	<---	IS	,881	,064	13,856	***	par_17
B37	<---	IS	,947	,062	15,190	***	par_18
B36	<---	IS	,990	,063	15,627	***	par_19
B35	<---	IS	1,002	,066	15,257	***	par_20
B34	<---	IS	1,000	,064	15,611	***	par_21
B33	<---	IS	,989	,064	15,361	***	par_22
B41	<---	IS	,947	,071	13,270	***	par_23
B42	<---	IS	,860	,063	13,563	***	par_24
B44	<---	IS	1,073	,071	15,027	***	par_25
B1	<---	OP	1,000				
B2	<---	OP	,905	,086	10,534	***	par_26
B6	<---	OP	,796	,089	8,921	***	par_27
B7	<---	OP	,804	,088	9,156	***	par_28
B8	<---	OP	,775	,081	9,549	***	par_29
B9	<---	OP	1,201	,108	11,114	***	par_30
B10	<---	OP	1,260	,114	11,051	***	par_31
B11	<---	OP	1,033	,103	10,079	***	par_32
B12	<---	OP	1,276	,133	9,561	***	par_33
B13	<---	OP	1,113	,116	9,559	***	par_34
B14	<---	OP	,972	,095	10,237	***	par_35
B15	<---	OP	,963	,091	10,617	***	par_36

B. Convergent Validity

The variance validity test with confirmatory factor analysis was used to measure the level of ability of the construct variables to reflect the latent variables in each research variable. It is said that convergent validity has a high proportional variance value if the value of the loading factor or standardized loading estimated is 0.5.

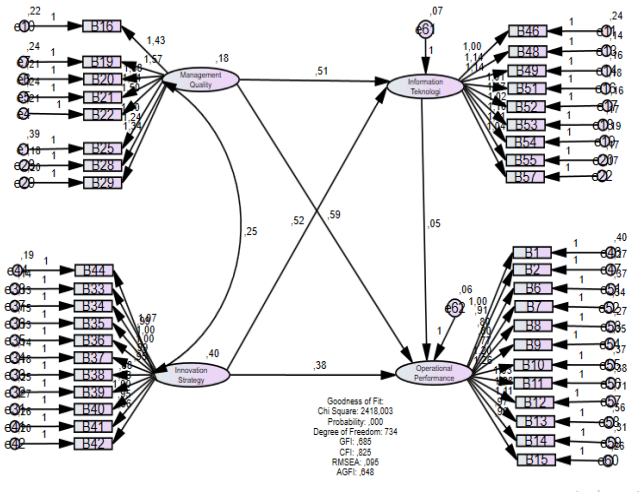


Figure 1. Confirmatory Factor Analysis

It can be interpreted that each of the construct variables in this study can reflect the latent variables of management quality, innovation strategy, information technology and operational performance very well.

C. Average Variance Extracted (AVE)

It is said that the research data is valid if the average value of AVE is 0.5. Based on the test results, the AVE value is greater than the value 0.5. This indicates that the average value of the construct variable can reflect the latent variable very well.

Table 2. Validity of Average Variance Extracted

Latent Variable	AVE
Management Quality	0.6
Innovation Strategy	0.7
Information Technology	0.7
Operational Performance	0.5

D. Construct Reliability

Used to test the reliability and consistency of research data. It is said to meet the reliability criteria if the construct reliability value has a value of 0.7. Based on the test results, the construct reliability value is greater than 0.7. It can be interpreted that the mean value of each construct variable can reflect the latent variable very well.

Table 3. Construct Reliability

Latent Variable	CR
Management Quality	0.8
Innovation Strategy	0.8
Information Technology	0.8
Operational Performance	0.7

E. Discriminant Validity

This test is used to measure how far a latent variable is really different from other latent variables. It is said to be different if the square root value of AVE the correlation value between latent variables. Based on the test results, it is known that the square root value of AVE the correlation value of exogenous variables. This indicates that the variables of management quality and innovation strategy have a very strong correlation value. The reason is that whether or not the quality of management is good is influenced by the management response in understanding, adapting and taking advantage of the dynamic development of the external environment, resulting in the performance of new work innovations.

Table 4. Discriminant Validity Matrix

	Management Quality	Innovation Strategy
Management Quality	**0.582**	0.942
Innovation Strategy	0.942	**0.666**

F. Assessment of Normality

This test is carried out using the critical ratio skewness criterion of CR ± 2.58 at a significance level of 1%. It is said that the data has a normal distribution if the value is below the absolute value of 2.58% (Hair et al in Ghozali, 2013). Based on the test results, it is known that the critical value of the skewness ratio for each indicator is in the range of ± 2.58. Likewise, the value of multivariate normality is 143.861 critical ratio of 0.58. This indicates that the data has a univariate or multivariate normal distribution.

Table 4. Assessment of Normality

Variable	min	max	skew	c.r.	kurtosis	c.r.
B15	2,000	5,000	-,412	-2,694	-,222	-,728
B14	1,000	5,000	-,692	-4,532	,854	2,793
B13	1,000	5,000	-,505	-3,302	-,129	-,423
B12	1,000	5,000	-,962	-6,298	,261	,855
B11	1,000	5,000	-,793	-5,191	,369	1,208
B10	1,000	5,000	-,917	-6,002	,782	2,561
B9	1,000	5,000	-,869	-5,684	,552	1,806
B8	1,000	5,000	-1,112	-7,278	2,078	6,801
B7	1,000	5,000	-1,193	-7,807	1,677	5,487
B6	1,000	5,000	-1,263	-8,266	2,315	7,575
B2	1,000	5,000	-1,168	-7,643	1,513	4,952
B1	1,000	5,000	-1,404	-9,186	2,185	7,149
B44	1,000	5,000	-1,134	-7,423	1,916	6,270
B42	1,000	5,000	-,965	-6,318	1,685	5,514
B41	1,000	5,000	-,999	-6,540	1,601	5,240
B33	1,000	5,000	-,998	-6,530	1,614	5,281
B34	1,000	5,000	-,689	-4,508	,703	2,302
B35	1,000	5,000	-,841	-5,502	1,022	3,344
B36	1,000	5,000	-,897	-5,873	1,408	4,606
B37	1,000	5,000	-,973	-6,370	1,681	5,500
B38	1,000	5,000	-1,090	-7,135	1,878	6,147
B39	1,000	5,000	-1,142	-7,474	1,646	5,386
B40	1,000	5,000	-,934	-6,113	1,029	3,367
B29	1,000	5,000	-,866	-5,665	1,201	3,929
B28	1,000	5,000	-,832	-5,444	1,493	4,885
B57	1,000	5,000	-1,053	-6,893	1,935	6,334
B55	1,000	5,000	-,795	-5,201	,654	2,140
B54	1,000	5,000	-1,035	-6,774	1,161	3,798
B53	1,000	5,000	-,858	-5,616	1,085	3,551
B52	1,000	5,000	-1,018	-6,664	1,243	4,066
B51	1,000	5,000	-,817	-5,349	,971	3,179
B49	1,000	5,000	-,870	-5,696	1,081	3,537
B48	1,000	5,000	-,807	-5,280	,521	1,705
B46	1,000	5,000	-1,110	-7,262	1,860	6,085
B16	1,000	5,000	-1,203	-7,872	1,987	6,501
B19	1,000	5,000	-,950	-6,216	1,274	4,169
B20	1,000	5,000	-,900	-5,889	1,022	3,345
B21	1,000	5,000	-1,334	-8,730	3,362	11,003
B22	1,000	5,000	-1,119	-7,322	1,750	5,725
B25	1,000	5,000	-,898	-5,878	1,064	3,481
Multivariate					1040,341	143,861

G. Goodness of Fit Index Model

Used to determine whether the model built has met the fit criteria or not. To find out this test, several conformity indices and cut-off values are needed which are then used in testing a model.

Table 5. Goodness of Fit Index

No	*Goodness of Fit Index*	*Cut-Off Value*	Result Analysis	Evaluation Model
1	*Chi-Square*	*Value of the chi square distribution, df* 734, *sig* 5% = ≤ 811,263	2.418,003	Marginal
2	*Significance probability*	≥ 0,05	0,00	Marginal
3	*GFI*	≥ 0,90	0,69	Marginal
4	*AGFI*	≥ 0,90	0,65	Marginal
5	*IFI*	≥ 0,90	0,83	Marginal
6	*TLI*	≥ 0,90	0,81	Marginal
7	*CFI*	≥ 0,90	0,83	Marginal
8	*NFI*	≥ 0,90	0,77	Marginal
9	*RMSEA*	≤ 0,08	0,09	Marginal
10	*CMIN/ DF*	≤ 2,00	3,294	Marginal

H. Outlier Mahalanobis Distance

Used to test an observation condition of data that has unique characteristics that look very different from other observations and appear in the form of extreme values for both a variable and a combination of variables. Outlier testing in this study uses the chi square value at the degree of freedom level of 40, namely the number of indicators at the 0.010 significance level so that the tchi-square table value, df 40, sig 0.01 is 63.691. Based on the test results, the Mahanobis distance value at 100 observation numbers all has a value below 63,691. It can be interpreted that there are no outlier symptoms and the data pattern spreads along the X and Y axes.

Table 6. Outlier Mahalanobis Distance

Observation number	Mahalanobis d-squared	p1	p2
50	63,272	,011	,000
179	61,081	,017	,000
225	60,909	,018	,000
22	60,174	,021	,000
35	59,985	,022	,000
104	59,779	,023	,000
58	59,599	,024	,000
133	59,363	,025	,000
199	58,432	,030	,000
226	57,788	,034	,000
57	57,206	,038	,000
13	57,135	,039	,000
250	57,105	,039	,000
68	56,338	,045	,000
73	56,333	,045	,000
202	56,158	,046	,000
100	55,378	,054	,000
98	55,040	,057	,000
88	54,647	,061	,000
236	54,498	,063	,000
125	54,241	,066	,000
122	53,929	,070	,000
86	53,340	,077	,000
51	53,257	,078	,000
192	53,250	,078	,000
233	53,166	,079	,000
241	53,098	,080	,000
45	53,067	,081	,000
147	52,982	,082	,000
33	51,034	,113	,000
141	50,962	,115	,000
190	50,568	,122	,000
44	50,223	,129	,000
136	49,938	,135	,000
87	49,843	,137	,000
132	49,705	,140	,000
43	49,625	,142	,000
209	49,282	,149	,000
246	48,220	,175	,000
200	48,070	,178	,000
148	47,790	,186	,000
111	47,205	,202	,000
214	47,070	,206	,000
81	46,755	,215	,000
189	46,749	,215	,000
36	46,598	,219	,000
72	45,643	,249	,000
17	45,440	,256	,000

I. Hypothesis Test

The hypothesis can be accepted (Ha = accepted) if the critical ratio criteria 1.96 at a significance level of 0.05. The results of hypothesis testing in the study can be presented below.

Table 7. Research Hypothesis Testing

Regression Weights			Estimate	S.E.	C.R.	P
MQ	--->	IT	,514	,203	2,530	,011
IS	--->	IT	,524	,134	3,912	***
IT	--->	OP	,055	,091	,603	,547
MQ	--->	OP	,591	,219	2,703	,007
IS	--->	OP	,385	,144	2,664	,008

The statistical equation is as follows:

1. OP = 0,591 MQ + 0,385 IS + 0,055 IT
   a. Management quality has a critical ratio value of 2.703 1.96 with a probability significance value of 0.007 significance of 0.05. The decision was to reject Ho and accept Ha. It can be interpreted that the management quality variable has a significant influence on operational performance. The results of this study are in accordance with the results of research conducted by Udofia et al (2021), Liu & Lin (2020), Sharma (2019), Jayalath et al (2019) and Nugroho (2016) which said that management quality had a significant influence on operational performance.
   b. The innovation strategy has a critical ratio value of 2.664 1.96 with a significance probability value of 0.008 a significance of 0.05. The decision was to reject Ho and accept Ha. It can be interpreted that the innovation strategy variable has a significant influence on operational performance. The results of this study are in accordance with the results of research conducted by Bolatan et al (2021), Nasutra (2021), Ulfa et al (2021), Fufung (2020), Utami (2020), Naidoo (2018), Adietya (2017) and Alsadi (2017) which says that the innovation strategy has a significant influence on operational performance.
   c. Information technology has a critical ratio value of 0.603 1.96 with a significance probability value of 0.547 significance of 0.05. The decision is to accept Ho and reject Ha. It can be interpreted that the

information technology variable does not have a significant effect on operational performance. The results of this study are in accordance with the results of research conducted by Ganbold (2020), but differ from the results of research conducted by Maiga (2017) and Salaam (2017).

2. IT = 0,514 MQ + 0,524 OP
   a. Quality management has a critical ratio value of 2.530 1.96 with a significance probability value of 0.011 a significance of 0.05. The decision was to reject Ho and accept Ha. It can be interpreted that the quality of management variable has a significant influence on information technology. The results of this study are in accordance with the results of research conducted by Santos et al (2021) and Wai et al (2021), which say that management quality has a significant influence on information technology.
   b. The innovation strategy has a critical ratio value of 3.912 1.96 with a significance probability value of **** or 0.001 significance of 0.05. The decision was to reject Ho and accept Ha. It can be interpreted that the innovation strategy variable has a significant influence on information technology. The results of this study are in accordance with the results of research conducted by Teixeira et al (2020), Rahmasari (2019) and Kitsios et al (2016), which say that innovation strategies have a significant influence on information technology.

The following are the results of testing the direct influence, indirect effect and total effect as presented below.

Table 8. Direct, Indirect and Total Effect

Variable	Direct Effect	Indirect Effect	Total Effect
Management Quality	0.591	0.028	0.619
Innovation Strategy	0.385	0.029	0.414
Information Technology	0.055	0.000	0.055

It can be explained that the management quality variable on operational performance has a direct influence value of 0.591, an indirect effect of 0.028 and a total effect of 0.619. The innovation strategy variable on operational performance has a direct influence value of 0.385, an indirect effect of 0.029 and a total effect of 0.414. Meanwhile, the information technology variable on operational performance has a direct influence value of 0.055, an indirect effect of 0.000 and a total effect of 0.055.

Thus, it can be interpreted that the use of information technology variables as intervening variables can indirectly increase the direction of the causal influence of management quality and innovation strategy on operational performance variables. This means that the information technology variable is a good intervening variable in increasing the direction of the causal effect of exogenous variables on endogenous variables in this research model.

The following is a summary of the results of hypothesis testing and a comparison of the research results that the researchers got with the relevant research results and the researchers used in this study.

Table 9. Summary of Hypothesis Testing Results

No	Hypothesis	Conclusion
1	Management quality on information technology	Accepted
2	Innovation strategy on information technology	Accepted
3	Management quality on operational performance	Accepted
4	Innovation strategy on operational performance	Accepted
5	Information technology on operational performance	Rejected

Table 10. Comparison of Research Results with Previous Research Results

No	Researcher	MQ-IT	IS-IT	MQ-OP	IS-OP	IT-OP
1	Yones (2022)	cr.2,530 sig.0,011	cr.3,912 sig.0,001	cr.2,703 sig.0,007	cr.2,664 sig.0,008	cr.0,603 sig.0,547
2	Bolatan (2021)	-	-	-	sig.0,000	-
3	Santos (2021)	Sig.0,001	-	-	-	-
4	Nasutra (2021)	-	-	-	sig.0,001	-
5	Udofia (2021)	-	-	sig.0,000	-	-
6	Ulfa (2021)	-	-	-	sig.0,000	-
7	Ilangakoon (2021)	-	-	-	-	sig.0,019
8	Wai (2021)	Sig.0,004	-	-	-	-
9	Fufung (2020)	-	cr.8,550 sig.0,000	-	cr.2,890 sig.0,001	-
10	Utami (2020)	-	-	-	sig.0,000	-
11	Ganbold (2020)	-	-	-	-	cr.1,656 sig.0,049
12	Taghizadeh (2020)	-	cr.6,570 sig.0,001	-	cr.3,674 sig.0,001	-
13	Sharma (2019)	-	-	cr.4,070 sig.0,000	-	-
14	Rahmasari (2019)	-	-	-	-	Sig.0,001
15	Alkahdi (2019)	-	-	sig.0,000	-	-
16	Naidoo (2018)	-	Sig.0,001	-	Sig.0,001	-
17	Adietya (2017)	-	-	-	cr.2,235 sig.0,025	cr.2,045 sig.0,041
18	Alsadi (2017)	-	-	-	sig.0,021	-
19	Jayalath (2017)	-	-	sig.0,000	-	-
20	Salaam (2017)	-	-	-	-	cr.2,229 sig.0,005
21	Mukti (2016)	-	-	-	sig.0,031	-
22	Kitsios (2016)	-	Sig.0,001	-	-	-
23	Nugroho (2016)	-	-	sig.0,000	-	-

J. Discussion of Research Results

1. The Effect of Management Quality on Information Technology

Information technology makes it easy for the public to be able to access information anywhere and anytime, besides that other benefits are also obtained when the LPDB-KUMKM organization can monitor any changes or strategies to respond to the challenges of external environmental issues, (Cakmak & Tas, 2012; Aslizadeh, 2014; Caesar, 2015). Such as the development of database integration in support of the SIKP (Program Credit Information System), the development of the CMFS system to accelerate the process of distributing revolving funds (DB) and the implementation of OTS (On the Spot) in the internal process of DB distribution.

2. The Influence of Innovation Strategy on Information Technology

Communication, informed decisions about the technology to use and the definition of the innovation concept for the organization are needed to develop an innovation strategy. Three types of service innovation strategies emerged focused on service creation, service distribution and customer engagement. Because basically, the use of information technology for LPDB-KUMKM organizations is used to obtain, process and transmit information to support organizational decision-making processes and also to facilitate communication, coordination and collaboration between other public organizations and as a channel for the community to obtain public services, (Hsu, 2013; Fuchs et al, 2018, Bhakoo & Choi, 2013; Cragg & McNamara, 2013).

3. The Effect of Management Quality on Operational Performance

One of the management improvement efforts that have been carried out, such as service improvement, is increasing service quality standards, increasing service time standards and service cost efficiency. In addition, building a work culture that refers to the core values of EPICS (excellence, professionalism, integrity, customer focus and synergy) in all LPDB MSME organizational activities. Quality management as a set of management practices and styles in improving competitiveness and organizational operational performance, (Jaafreh & Al-Abedallat, 2013). further Liu (2020), said the intellectual capital owned by the organization can indirectly contribute to improvements in reducing operational costs.

4. The Influence of Innovation Strategy on Operational Performance

The implementation of targeted innovation strategies can improve organizational operational performance, innovation strategies are needed so that there is no saturation in the organization (Ulfa, 2021, Fufung, 2020; Utami, 2020). Innovation is a solution for organizations to adjust organizational circumstances to dynamic external environmental issues, (Cottam, 2011). The innovation strategy is said to be successful if the product received by the customer can generate profits for the organization. This is because the innovation strategy is used to increase productivity in every operational activity, production process, product quality and value, (Adietya, 2017; Tiedd et al, 2015) using the six sigma, kaizen, 5S approach or method which is proven to improve process performance, process time and operational productivity holistically, (Nugroho & Mukhsin, 2019).

5. The Effect of Information Technology on Operational Performance

This indicates that the use of technology for LPDB-KUMKM organizations is still not optimally applied in an effort to obtain, process and send information quickly and accurately to support the decision-making process, (Hsu, 2013; Fuchs et al, 2018; Choi, 2013). Thus, the not yet optimal use of information technology within the LPDB-KUMKM organization does not have an impact on increasing the organization's operational performance significantly. Whereas the core of the function of information technology is the creation of efficiency to reduce operational waste (Moghavveni, 2012; Gareau, 2014).

VI. CONCLUSION

The results of statistical tests show that several determinant factors such as management quality variables, innovation strategies and information technology can explain the variation in their effects on operational performance variables. In path I, the management quality variable becomes the most dominant variable in explaining its influence on the operational performance variable. While in path II, the innovation strategy variable is the most dominant in explaining the variation of its influence on the information technology variable. However, the information technology variable has no effect on the operational performance variable. It can be interpreted that the information technology variable is not a good intervening variable in explaining the direction of the causal influence of the quality management variable and innovation strategy on operational performance partially.

LPDB-KUMKM in improving the quality of management needs to strengthen and build a work culture by referring to the core values of EPICS (excellence, professionalism, integrity, customer focus and synergy). Development in the implementation of techno-preneuers development strategies and entrepreneurial incubator activities by creating cooperative start-ups and MSMEs also needs to be carried out in a sustainable manner. In addition, efforts to modernize the management of BLU and BIOS as well as the implementation of OTS in the internal process of DB distribution are expected to be able to integrate one system with other systems. This is done in order to improve the operational performance of the organization holistically.

REFERENCES

[1] A. James, “Impact of Total Quality Management on Corporate Green Performance Through the Mediating Role of Corporate Social Responsibility,” Journal of Cleaner Production, 24 (2), 2020, 1-12.

[2] A. Matsui, “The Impact of Lean Practices on Mass Customization and Competitive Performance of Mass-Customizing Plants,” The 20th Annual Production and Operations Management Society (POMS) Conference Proceedings, Orlando, 2019, 1-30.

[3] A. Phan, “The Relationship Between Just in Time Production and Human Resource Management and Their Impact on Competitive Performance,” Yokohama Business Review, 18(2), 2010, 27-57.

[4] A. Rasha Zuhair., A. Bahjat Abdullah, “Lean Management and Operational Performance in Healthcare,” International Journal of Productivity and Performance Management, 69 (1), 2019, 1-21, https://emeraldinsight.com/1741-0401.htm, DOI.10.1108/IJPPM-09-2018-0342.

[5] A. Ghnamat., Kho, “The Effects of Quality Management Practices on Customer Satisfaction and Innovation: A Perspective from Jordan” International Journal of Productivity and Quality Management, 8(4): 2011, 398-415.

[6] A. Ahmad., Abdallah., Agung., Dahiyat, Sofyan, “The Mediating Role of Product and Process Innovation on The Relationship Between Knowledge Management and Operational Performance in Manufacturing Companies in Jordan,” Business Process Management Journal, 2017, 1-19.

[7] A. Satish, “TQM Practices and Its Performance Effects-An Integrated Model,” International Journal of Quality and Reliability Management, 2019, DOI.10.1108/IJQRM-10-2018-0266.

[8] Arda. Bayrakter., Tatoglu, “How to Integrated Quality and Environment Management Practices Affect Firm Performance?

Mediating Roles of Quality Performance and Environmental Proactivity," Environ Journal, 28(1), 2018, 64-78.
[9] B. Van., Choi, Tom, "The Iron Cage Exposed: Institutional Preassures and Heterogeneity Across the Healthcare Supply Chain," Journal of Operations Management, 31 (6), 2013, 432-449.
[10] Bi. Rolad., D. Richard., K. Boulton., S. Kevin, "Developing Organizational Agility Through IT and Supply Chain Capability," Journal of Global Information Management, 21(4), 2013, 38-55.
[11] B. Gulin Idil Sonmezturk, "How Does Innovation Affect Financial and Operational Performance?" Journal of Business and Economic Management, 9(4), 2012, 124-133, DOI.10.15413/jbem.2021.0107. Academia Publishing.
[12] C. Philip., T. Edward, "The Use of Information Technology on Gaining Competitive Advantage in Turkish Contractor Firms," World Applied Sciences Journal, 18(2), 2012, 274-285.
[13] C. Linton., Chen, "Service Regime: An Empirical Analysis of Innovation Patterns in Service Firms," Technological Forecasting and Social Change, 79(10), 2012, 1569-1582.
[14] C. Jon., Ensor., B. Calvin, "A Benchmark Study of Strategic Commitment to Innovation," European Journal of Innovation Management, 4(2), 2011, 88-94.
[15] C. Thomas., McNamara, Thomas, "An ICT Based Framework to Improve Global Supply Chain Integration for Final Assembly SMES," Journal of Enterprise Information Management, 31(5), 2013, 634-657.
[16] D. Richard, "Organization Theory and Design (Thirteenth Edition)," 2021, Boston USA: Cengage Learning Inc.
[17] F. Craig., B. Daniel., Lienland Bottom., K. Fitcher, "The Role of IT in Automotive Supplier Supply Chains," Journal of Enterprise Information Management, 31(1), 2018, 64-88.
[18] G. Odkhishig., Y. Matsui., Kristianm Rotaru, "Effect of Information Technology-Enabled Supply Chain Integration on Firms Operational Performance," Journal of Enterprise Information Management, 34(3), 2020, 948-989. DOI.10.1108/JEM-10-2019-0332, Emerald Publishing Limited 1741-0398.
[19] G. Scott, "The Development of Guidelines for Implementing Information Technology to Promote Food Security,". 4(1), 2014, 273-285.
[20] H. Mary Jo., Ann, L. Cunliffe, Organization Theory (Modern, Symbolic and Postmodern Perspective) Third Edition, 2013, United Kingdom: Oxford University Press.
[21] H. Render, Operational Management, New Jersey, 2011, Pearson International Edition.
[22] J. Al-abedallat, "The Effect of Quality Management Practices on Organizational Performance in Jordan: An Empirical Study," International Journal of Financial Research, 4 (1), 2013, 93-109.
[23] K. Fotis., Marua Kamariotou, "The Impact of Information Technology and the Alignment Between Business and Service Innovation Strategy on Service Innovation Performance," Management Science and Applications (ICIMSA) Journal, 5 (1), 2016, 247-251.
[24] M. Stuart, "Competitive Advantages Throught It Innovation Adoption by SMES" Journal Social Technologies, 7564 (1), 2012, 24-39.
[25] Negron, "Relationship Between Quality Management Practices, Performance and Maturity Quality Management, a Contingency Approach," Quality Management Journal, 27(4), 2012, 215-228.
[26] P. Abdallah., Matsui, "Quality Management Practices and Competitive Performance: Empirical Evidence from Japanes Manufacturing Companies," International Journal of Production Economics" 133 (2), 2011, 518-529.
[27] T. Samson, "The Link Between Total Quality Management Practices and Organizational Performance" Journal of Operations Management, 16 (3), 2010, 1-18.
[28] Z. Xian., R. Fredendall, "Mapping the Critical Links Between Organizational Culture and TQM/ Six Sigma Practises," International Journal of Production Economic" 123 (1), 2010, 88-106

Yones William is currently student in Master Program in Post-Graduate Management from Universitas Mercu Buana Jakarta.

Rosalendro is curently a fulltime senior lecturer in Master Program in Post-Graduate Management from Universitas Mercu Buana Jakarta. He holds a Bachelor of Science degree in Chemical Engineering from Gadjah Mada University, Master of Management from Universitas Satyagama Jakarta, and PhD in Management from Bogor Agriculture University. He has taught courses in operation management, supply chain management, enterprise resource planning and managerial economic.