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**RELATIONSHIP BETWEEN THE USE OF MANAGEMENT INFORMATION SYSTEMS AND EMPLOYEE JOB PERFORMANCE: EVIDENCE FROM KENINDIA ASSURANCE COMPANY LIMITED****Owino Phyllis Osodo****Beatrice Jemaiyo**The Catholic University of Eastern Africa

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**ABSTRACT:** *Organizations are continually changing their information systems in order to keep up with the ever-changing business environment and, more importantly, to stay competitive. These changes do affect employee performance, either positively or negatively. Management information systems (MIS) should facilitate planning, especially in large organizations where managers often do not have a good personal touch with the scene of operations. In this regard, therefore, a good management information system helps to decentralize authority to enable effective management of organizational processes to be undertaken making control easier. MIS should facilitate coordination by integrating specialized activities and keeping each department or function of the organization aware of the problems of the other departments. Based on a study of Kenindia Assurance Company in Kenya, this paper examines the influence of management information as a strategic tool of management on employee performance. The respondents of the study were the branch managers, underwriting officers, claims and legal managers, information technology managers and operations managers. The study adopted a qualitative research design. Data was collected through interviews and questionnaires. Inferential statistics and parametric methods, like the Likert and Ordinal scale, were used to analyse data. The study findings revealed that the use of MIS had enhanced access to resources and employee satisfaction. The results of the study indicate that the new IS tends to cause fear and anxiety among employees who think that the system is out to take their jobs. This is also attributed to confusion of responsibilities and duties of IS among employees. In addition, some of the senior officials in management feel that information systems usurp their power and authority. However, from the study findings, it is clear that employees generally improve their performance whenever IS are used. Based on the results of the case study at Kenindia Assurance Ltd., it is recommended that MIS should be used as a strategic tool to improve employee performance. Managers must have appropriate managerial skills in order to stipulate their core functions of management such as coordinating, directing, controlling, organizing and planning. Moreover, the increase in financial gains owing to improved employee performance should be a motivator to some managers to relinquish their fears that IS are meant to usurp their official powers rather than enhance organizational performance.*

**KEYWORDS:** Management Information Systems, Employee Job Performance, Kenindia Assurance Company Limited

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**INTRODUCTION**

According to O'Brien (2003), information systems are as vital as the study of accounting, human resource, finance, operations management and other major business functions. Information systems

have three important dimensions, namely the organizational, managerial and technical dimensions. Laudon and Laudon (2006) argue that there is a need to balance these three important dimensions in order to improve performance. Lucey (2005) defines Management Information Systems (MIS) as a term that is synonymous with computer based data processing. Many authors of MIS books lay emphasis on topics such as system analysis, file design and other technical aspects of computer based systems. MIS is seen as processing of data, that is, the routine facts and figures of the organization, into information vital for decision-making. They are qualitatively different from data processing systems and the involvement of the management is vital to the success of MIS design. Data from the external and internal sources is converted to information which can then be communicated in an appropriate form to managers at various levels to aid in decision-making that is timely and effective for planning, directing and controlling the activities of the organization for which they are responsible. The emphasis of MIS is on the use of information systems not on the production of information. Organizations infuse information systems into their operations so as to improve competitiveness and facilitate business growth and success (Fisher & Kenny, 2000).

### **The Role of the Information Systems**

Laudon and Laudon (2006) that information systems play the role of supporting business operations, managerial decisions and the support for the strategic advantage. A manager's responsibility is to make sense out of the situations within the organization, make decisions and formulate action to solve organization problems. Managers look into challenges and come up with strategies for responding to those challenges. Exercising leadership is thus a function for managers; they allocate both human and financial resources to coordinate performance for the organization. Information systems transform businesses into virtual offices whereby the organizations occupy minimal physical space, with space and time shifts. Time shifts refer to business being conducted formally rather than in a narrow work day. Space shifts means that work takes place within national boundaries. Laudon and Laudon (2006) refer to a digital firm as one that can have significant business relationships with customers, suppliers and employees that are digitally enabled and mediated.

An important new role for information systems is the concept of strategic role for information systems. In this concept, information technology is an integral component of business processes, products and services that help the company gain a competitive advantage in the global market place (O'Brien, 2003).

### **Systems Performance**

O'Brien (1998) contends that an information system is important for control of performance. It should provide feedback that can be monitored and evaluated to determine if the system is achieving the established or set standards. A good system is one that is adjustable so that appropriate information is produced and provided to end users. Individual performance measures should be relevant to the organization's objectives. People and systems should work together to ensure desirable outcomes are achieved. Information systems, therefore, form part of an effective performance management. Performance has to be reported in such a way that it serves the purpose of an end user. The senior management and the executives receive a small number of performance indicators. For example, about 20% to 30% of regular reports are received by managers for their daily decision-making. Senior managers should ensure that resources available are adequate for

additional analysis if necessary, which should include the requisite skills so that the management can be able to understand and use the information from reports to answer questions.

### **Kenindia Assurance Company Limited**

Kenindia Assurance Company was started in 1978, when several insurance companies like New India Assurance Company, Oriental Insurance Company Limited, United India Insurance Company and Life Insurance Corporation, came together to form Kenindia Assurance Company Limited. The principal shareholders after 1979 were Life Insurance Corporation of India, General Insurance Corporation Of India, New India Assurance Limited, Oriental Insurance Company Limited and National Insurance Company Limited.

Kenindia at present has twelve branches; of these, six are in Nairobi and the others are in various parts of the country. It has a branch in Tanzania known as Tanzindia. This company was the first insurance company to pass the three billion mark in terms of underwriting profits in Kenya and at the same time the one to record a huge loss in terms of net profitability. Their corporate governance is driven by the philosophy of discipline, systems and processes that ensure the business is done in a transparent manner with the aim of improving shareholder value. The strategy of the Company is to have in place an effective system of corporate governance and ensure that its business activities are conducted in accordance with the generally accepted principles and best practices of corporate governance and business ethics.

The idea of globalization has been a subject of debates for decade while now. Those opposed to globalization within organizations often argue for a restricted and controlled market to protect the organizations in the emerging nations. Those for globalization argue that a larger market and the need to stay relevant and competitive to counter the traditional methods of running organizations are essential. The advent of Internet and intranet systems has triggered changes in information technology, within the ever changing economies, and information is a vital resource for decision-making. However, there is a lot of confusion on how information should be managed within organizations.

At Kenindia Assurance Company Ltd., the management changed the underwriting systems software to an intranet worked system in the year 2000. In 2005, the Company changed the underwriting system software to an internetworked system. This was meant to ensure that branches and the head office were connected enabling fast communication speed. Email services were also introduced to enhance communication speed with customers, suppliers and other stakeholders. The table below highlights the performance of the organization in terms of percentage growth, underwriting surplus or deficit, earnings per share and the management, all of which give a glimpse of the impact of systems changes over the last ten years. There was no general overall improvement in premium growth, with underwriting deficit in the year 2006, a reduction in earnings per share and inconsistent tent expenses where employee performance should have a significant impact.

**Table 1: Kenindia Company Financial performance (extract)**

Years	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999
Percentage Premium growth	(7.41)	1.78	7.67	10.48	22.71	3.78	(0.56)	(15.71)	9.29	7.27
Management expenses (in millions)	393	413	350	389	341	319	325	305	313	297
Underwriting surplus/deficit (in millions)	58	(598)	(13)	61	57	31	22	10	(28)	10
Earnings per share (EPS)	34.67	0	3.78	30.26	28.44	34.66	36.32	17.18	20	23.97

Source: Kenindia Company Annual Accounts (1999-2008)

### Statement of the Problem

A clear understanding of management information, the existence of well planned MIS department and a strategic plan within which MIS is adequately addressed is expected to ensure that benefits envisaged are realized and its management motivated. Strategic management of information has triggered the need to improve responsiveness of growth on diversified product portfolios targeted at satisfying different market needs and improving performance. It is with this background that the managements employ information systems as a strategic tool to improve employee performance. The study, therefore, sought to establish the extent to employee job performance at Kenindia Assurance Company Ltd. was influenced by the implementation of management information systems.

### MATERIALS AND METHODS

The study sought to assess the impact of the use of MIS as a strategic tool of management on employee performance using a case study method. The case study method was appropriate for the study because performance, especially among business oriented organizations, is context-sensitive. Certain socio-political, economic and environmental factors are often characterized by secrecy due to competition imperatives. The case study methodology, therefore, allowed subtle information and trends, casual relationships and other observable phenomena to be discerned within specific operations of the company under study.

The target population comprised all the branch managers, top level managers and employees of Kenindia Assurance Company Ltd. This was categorised into: top level management with a population of 12; branch managers whose population was 30, and 256 employees.

**Table 2: Number of employees**

<b>EMPLOYEES</b>	<b>NO. OF EMPLOYEES</b>
Top managers	12
Branch managers	30
Underwriters	112
Claims and legal officers	50
Finance and operations officers	70
Information technology officers	26
<b>TOTAL</b>	<b>300</b>

This study selected 30 respondents from the target population, with 1 top manager, 3 branch managers, 12 underwriters, 5 claims and legal managers, 7 operations managers and 2 information technology managers. The study used purposive sampling. Nairobi was chosen as the study location because of its status as the capital city where most insurance activities are carried out as a fair representation of the goings on in the entire organization. Research questionnaires and interview schedules were used to collect data. Sets of Likert type scale questions were administered. Likert type scale questions were preferred for their ease of use and suitability in measuring attitudes. The management sample questionnaires were sent through e-mail and a sub sample of 2 from the information technology section were interviewed. Respondents were asked to make comparisons on roles and responsibilities, working environment and other attitudinal variables before and after the system change. The interview schedule was used to obtain insights on the strategic objectives of the organization. Personal interviews were necessary and useful in capturing sensitive information regarding the information system. Internal capability factors were delved into through probing to get clearer insight on the issues behind respondents' attitudes.

Descriptive and inferential statistics were used to analyse the collected data. The Statistical Package for the Social Sciences (SPSS) computer program was used to calculate the measure of central tendency and dispersion while Chi-square was used to organize data to facilitate description. A matched paired or paired sampled T-test (t-tests) methodology was used to compare differences in performance rating before and after introduction of the new information systems were used. The purpose was to identify performance variations in relation to organizational objectives and shed light on the effects of adoption of information systems as a management strategy on employee performance. Discussion of findings was limited to variables whose statistical significance fell below the 0.05 level of significance. Frequency tables were used to present questionnaire responses pertaining to levels of the new IS acceptance indicators. Paired t-test methodology was used to establish the mean differences between responses to items. The mean response for each item, both before and after introduction of the new IS, was also computed. The mean data was analyzed to determine the  $p$  and  $t$  values. The Chi-square test of independence was used to establish the relationship between job category and employee job performance.

## **RESULTS AND DISCUSSION**

### **Level of Acceptance of New Information Systems**

An analysis of the questionnaire responses pertaining to the level of acceptance of the new IS for each of the 30 participants yielded the results shown in Table 3 below.

**Table 3: Employee Response to the Introduction of the New IS**

Effects of New MIS on Employee	EMPLOYEE RESPONSES									
	SA		A		U		D		SD	
	f	%	f	%	f	%	f	%	f	%
Caused Anxiety and fear	11	36.7	14	46.7	2	6.7	0	0.0	3	10.0
Elicited a lot of resistance	4	13.3	11	36.7	6	20.0	4	13.3	5	16.7
Threatened Employee job Security	4	13.3	24	80.0	0	0.0	3	6.7	0	0.0
Enhance staff turn over	3	10.0	6	20.0	8	26.7	8	26.7	5	16.7
Clarity of Responsibility	10	33.3	20	66.7	0	0.0	0	0.0	0	0.0

As shown in the table above, the introduction of new IS had an effect on the employees. Eleven (36.7%) of the participants strongly agreed that the introduction to the new IS caused them anxiety and fear. A cumulative total of 15 participants, representing 50%, tended to agree that the introduction of new IS elicited a lot of resistance. Another 28(93.3%) of the respondents agreed that the introduction of new IS threatened their job security. However, 9(30%) of the participants agreed that the introduction of new IS enhanced staff turnover. All 30(100%) of the participants tended to agree that the introduction of the new IS had made them confused over their responsibilities. These results, therefore, indicate that the introduction of new IS was not positively received by most of the employees.

### Performance Indicators

An analysis of the questionnaire responses pertaining to the suggested performance indicators for each of the 30 participants yielded the results shown in Table 4 below.

**Table 4: Responses to the Suggested Indicators of Employee Performance**

Performance indicator	Participants response				
	Yes		No		Totals (N=30)
	F	Percentage	F	Percentage	
Employee job satisfaction	28	93.3	2	6.7	30
Employee motivation	30	100.0	0	0.0	30
Appropriate skills	25	83.3	5	16.7	30
Rate of client service	29	96.7	1	3.3	30
Customer complaints	19	63.3	11	36.7	30
Insurance charges	26	86.7	4	13.3	30
Decision making speed	27	90.0	3	10.0	30
Discretion and flexibility	25	83.3	5	16.7	30
Access to company resources	30	100.0	0	0.0	30
Creativity/ innovativeness	19	63.3	11	36.7	30
Ease of communication	25	83.3	5	16.7	30
Amount of paper work	26	86.7	4	13.3	30

As shown in the table above, a total of 12 performance indicators were identified. Employee satisfaction and access to company resources, both at 100 per cent agreement were identified as the

main performance indicators. The others were rate of client service (96.7%); employee motivation (93.3%); decision-making speed (90.0%); insurance charges (86.7%); amount of paper work (86.7%); discretion and flexibility (83.3%); ease of communication (83.3%); customer complaints (63.3%), and creativity and innovativeness (63.3%).

### The Effects of Introduction of the New IS on Employee Performance

A comparison of the mean questionnaire responses pertaining to the performance indicators before and after introduction of the new IS for each of the participants revealed the data shown in Table 5 below.

**Table 5: Mean Responses on Performance before and after Introduction of New IS**

Performance Indicators	Mean Response Before IS	Mean Response After IS	p	t	N=30
Employee motivation	2.23	2.93	<b>0.002</b>	<b>-3.296</b>	30
Job satisfaction	2.40	2.80	0.107	-1.636	30
Appropriate skills	2.03	2.50	<b>0.004</b>	<b>-3.043</b>	30
Rate of client service	2.13	3.57	<b>0.000</b>	<b>-10.304</b>	30
Customer complaints	2.83	1.77	<b>0.000</b>	<b>6.468</b>	30
Insurance charges	2.73	1.83	<b>0.000</b>	<b>4.844</b>	30
Decision making speed	2.07	3.33	<b>0.000</b>	<b>-8.679</b>	30
Discretion and flexibility	2.33	2.87	<b>0.009</b>	<b>-2.693</b>	30
Access to company Resources	2.33	2.97	<b>0.003</b>	<b>-3.129</b>	30
Creativity/ innovativeness	2.00	2.87	<b>0.000</b>	<b>-4.069</b>	30
Ease of communication	2.13	3.03	<b>0.001</b>	<b>-3.666</b>	30
Amount of paperwork	3.47	1.43	<b>0.000</b>	<b>15.572</b>	30

As shown in the table above, there was a significant negative change in employee motivation from a mean response of 2.03 to 2.50  $\{t(1.58) = -3.043, p0.001\}$ ; other significant negative changes were noted in rate of client service from a mean of 2.13 to a mean of 3.57  $\{t(1.58) = -10.304, p<0.001\}$ ; decision-making speed from mean of 2.07 to a mean of 3.33  $\{t(1.58) = 8.679, j0.001\}$ ; discretion and flexibility from a mean of 2.33 to a mean of 2.87  $\{t(1.58) = -2.693, p<0.01\}$ ; access to company resources from a mean of 2.33 to a mean of 2.97  $\{t(1.58) = -3.129, p0.01\}$ ; creativity/innovativeness from a mean of 2.00 to a mean of 2.87  $\{t(1.58) = -4.069, p0.001\}$ , and ease of communication from a mean of 2.13 to a mean of 3.03  $\{t(1.58) = -3.666, p<0.01\}$ .

There were, however, significant positive changes in customer complaints from a mean response of 2.83 to a mean response of 1.77  $\{t(1.58) = -6.486, p<0.001\}$ ; insurance charges from a mean of 2.73 to a mean of 1.83  $\{t(1.58) = 4.844, p0.001\}$ , and amount of paper work from a mean of 3.47 to a mean of 1.43  $\{t(1.58) = 15.572, p<0.001\}$

These results indicate that there was an improvement in employee performance after the introduction of the new IS. In most of the items, participants' responses showed significant changes after the introduction of the new IS. The negative changes also meant that the mean response was

moving towards the high and very high rating while the positive changes indicated that the mean response was tending towards the low and very low rating.

### The Relationship between Employee Category and Job Performance

An examination of the cross-tabulation of the participants' job category against their job performance for each of the 30 participants revealed the data shown in Table 6 below.

**Table 6: Job Category and Job Performance**

Job category	Job performance				Total
	Very low	Low	High	Very high	
Top managers	0	0	0	1	1
Branch managers	0	0	2	1	3
Underwriters	1	2	7	2	12
Claims/legal manager	0	2	3	0	5
Finance/Operations manager	1	2	4	0	7
IT manager	1	0	1	0	2
<b>Totals</b>	<b>3</b>	<b>6</b>	<b>17</b>	<b>4</b>	<b>30</b>

As shown in the table above, the only top manager sampled felt that his job performance was very high. Out of 3 branch managers, 2 felt that their job performance was high while 1 was of the view that his job performance was very high. Out of the 12 underwriters, 1 thought that his job performance was very low, 2 felt that their job performance was low; 7 felt that they performed highly while 2 felt that their performance was very high. Out of the 5 claims/legal managers, 2 thought that they performed lowly, 3 felt they performed highly. Out of the 7 finance/operations managers, 1 felt that he performed very low, 2 thought that their performance was low, while 4 thought that their performance was high. Finally, out of the 2 IT managers, 1 felt he performed very lowly while the other 1 felt that his performance was high.

A Chi-square test of independence was then performed to examine the relationship between participants' job category and their job performance. The relationship between these variables was not significant at the 0.05 level,  $\chi^2_{0.05}(15) = 15.937$ ,  $p > 0.05$ . These results indicate that participants' job performance is independent of the participants job category.

## DISCUSSION

The study established a high level of resistance to the introduction of the new IS at Kenindia. The implementation of the new IS did not address the fear and anxiety, among other factors, over job losses among employees. According to the research results, respondent's rating on staff turnover contrasted with those strongly agreeing and strongly disagreeing that the system enhanced the same; however, according to these participants, the indication was that over half of them had worked in the Company for five or less years. Laudon and Laudon (2006) contend that IT reduces the cost of middle level management and clerical workers. Therefore, the above findings could be an indication



that some employees have since retired or resigned from the Company with reasons not related to systems change or to the change in IS.

The responses regarding the suggested performance indicators, such as employee satisfaction and access to company resources, were also rated very highly among other factors. The factors that were rated well are: decision-making speed, insurance charges, rate of client service, ease of communication, appropriate skills, employee motivation, discretion/flexibility and amount of paper work. O'Brien (1998) argues that an information system is important for control of performance. It should provide feedback that can be monitored and evaluated to determine if the system is achieving the established or set standards. A good system is one that is flexible so that appropriate information is produced and provided to end users. Individual performance measures should be relevant to the organization's objectives. At Kenindia, according to the participants who were managers, one of the main reasons of systems change was the need to increase documentation speed. People should positively adopt to systems to ensure that desirable outcomes are achieved. and systems should work together to ensure desirable outcomes are achieved.

In addition, comparison of mean scores before and after implementation of performance indicated that the new IS reduced the amount of paper work, customer complaints and insurance charges. However, the following performance indicators increased: employee motivation, need for appropriate skills, rate of client service, decision-making speed, discretion and flexibility, access to company resources, creativity/innovativeness and ease of communication. Laudon and Laudon (2006) agree that behavioural knowledge about organizations facilitates and enhances the flattening of hierarchies. The lower level employees are aided to make decisions without supervision. Management efficiency is thus enhanced with the span of control growing in a way that the number of employees supervised by each manager grows. IS also enhances flexibility of organizations in that small firms are able to act large by flexing muscles that only large firms can. On their part, large firms use IT to achieve some responsiveness that only small firms can achieve. Small firms can also personalize their products in the same capacity as large firms through the use of IT. It is expected that the use of IT will enhance timely information and decision-making speed in firms.

The results of the Chi-square test of independence indicated that the participants' job performance was independent of their job category. According Laudon and Laudon (2006), IS should reduce the cost of middle level management and clerical workers. Therefore, job performance and job category should be dependent as per literature.

## **CONCLUSION AND RECOMMENDATIONS**

The results of the study indicate that the new IS tends to cause fear and anxiety among employees who think that the systems is out to take over their jobs. This is also attributed to confusion of responsibilities and duties of IS among employees. In addition, some of the senior officials in management feel that information systems usurp their power and authority. However, from the study findings, it is clear that employees generally improve their performance whenever IS are used. An increase in access to resources can be attributed to the use of financial incentives by the company in a liberal way to motivate and recognize employee efforts to adapt to the use of new IS. Moreover, employee motivation increased after introduction of the new information system, so did client rate

of service while, on the other hand, employee complaints reduced; all an indication that the company has been able to motivate the workforce to positively adapt to the use of IS. The new information management system also aids employees to become more creative and innovative, therefore improving their overall performance. The implementation of the new information system has, therefore, seen a general improvement in the employee performance at Kenindia Assurance Company Ltd.

Based on the results of the case study at Kenindia Assurance Ltd., it is recommended that MIS should be used as a strategic tool to improve employee performance. Managers must have appropriate managerial skills in order to stipulate their core functions of management such as coordinating, directing, controlling, organizing and planning. Moreover, the increase in financial gains owing to improved employee performance should be a motivator to some managers to relinquish their fears that IS are meant to usurp their official powers rather than enhance organizational performance. Power is a feel-good factor that may require more than just financial motivation to address. The idea of constant change should be made a part of any organization's culture in order to stay relevant in the business environment. If constant change is embraced people get used to the idea and will avoid feeling too comfortable within one particular office or status. In the world of business, change is the only way in which companies can acquire and maintain their competitive edge.

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