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# **Influence of Locus of Control, Work Motivation and Information Use on Decision-making of Managers in the Aviation Industry in Nigeria**

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## **Abstract**

*This study discusses the influence of locus of control, work motivation and information use on decision making of managers in the aviation industry in Nigeria. Stratified random sampling method was used to select 1238 managers from five aviation parastatals in Nigeria out of which 945 responded. The response rate achieved was 76.3 percent. The study found that locus of control, work motivation and information use significantly influence decision making of the respondents. It is therefore recommended that aviation industry administrators and most especially policy makers in the industry should give due attention to locus of control, work motivation and information use in order to improve the decision making of managers in the industry. From the managerial context, being aware of your employee's internal-external locus of control can be very helpful in that individuals with high external locus are less likely to be committed to their organisation, they may feel unable to influence organisational decision making.*

**Key words: Locus of control, Work motivation, Information use, Decision-making, Aviation managers, Nigeria**

## **I Introduction**

The aviation industry is the global air transportation network that carries goods and passengers. It refers to all the entities involved in the day to day operation of air transport. The industry provides essential services to numerous other industries, from medicine and national defence to tourism and sports. It provides crucial support to businesses, governments and individuals. According to Ogbeidi (2006), the industry is indispensable to the socio-economic development of a country. Air transportation plays an important role in the economic prosperity of any nation. Aside from linking communities and countries for

business and tourism, it also serves as a means for shipping heavy goods, while providing employment for people worldwide (Ghobrial and Irvin, 2004).

In Nigeria, the industry is managed by six public organisations namely the Accident Investigation Bureau (AIB); the Federal Airports Authority of Nigeria (FAAN); the Nigerian Airspace Management Agency (NAMA); the Nigerian Civil Aviation Authority (NCAA); the Nigerian College of Aviation Technology (NCAT) and the Nigerian Meteorological Agency (NIMET). There are twenty-five (25) airports operated by FAAN, five of which are functional international airports; twenty-one with scheduled passenger services on commercial airlines and Airstrips / Airfields scattered around the country. Also, there are nineteen (19) private airlines with an air operator certificate issued by NCAA. The diverse nature of aviation operational activities, to a very large extent, depends heavily on information, hence, the place of timely and relevant information in the industry cannot be compromised (Buhalis, 2004). The trend in the industry is toward a common-use environment which draws on multiple sources of information to compile and display up-to-date data used in decision-making by managers.

Decision-making is the most important act in aviation. These are related to realization of the operational objectives such as getting the passengers to their destinations safely, accurate weather prediction, hitch free air navigation, C-checks maintenance, effective policing of the nation's air space and so on (Soran, Sesen and Balkan, 2013). Decision-making is one of the most central processes in organisations, and a basic task of management at all levels (Li, 2008). The decision-making process is systematic and managers use information which have been processed into meaningful form and of absolute value to the recipients (Terzioğlu, 2010 in Soran, Sesen and Balkan, 2013). Studies have shown that decisions are like the veins of an organisation (Torralba and Palazzi, 2010); the process is of incalculable value in the life of organisations (Bahrami, Amiri and Parandvar, 2014); an integral part of the personality (Riaz, Riaz and Batool (2012) of the employee in any organization.

Locus of control is a personality variable which refers to individual's perception of the main causes of events in life (Igbenghua and Popoola, 2011). It is the individual's beliefs about whether they control the outcomes in their lives (Internal locus of control) or the outcomes are controlled by factors such as luck and other people (External locus of control

(Rotter, 1966 in Chhabra, 2013). Locus of control is an important variable for the explanation of human behaviour in organisations. It is a personality trait measured in terms of an internal or external focus. It is one factor that may affect the decision-making process (Thompson, 2013). A number of studies have linked locus of control to decision-making in organisations (Lease, 2004; Selart, 2005; Coban and Hamamci, 2006 in Özen-Kutunis, Mesci and Övdür 2011).

Workers' motivation has been of interest to the modern day managers of organisations as well as the industrial psychologists, sociologists and other organizational behaviour researchers. According to Popoola (2007), work motivation is universally agreed to be of paramount importance to personnel productivity in the world of work. He explained further that, it is a force that maintains and changes the quality, intensity and direction of behaviours toward arousing the interest of workers by constantly and willingly executing their assigned responsibilities without any coercion or with little or no supervision from their superiors. Work motivation is a process to energize employee to the work goal through a specific path (Roy, 2001). Managers who are well motivated may be willing to expend more effort and seek out different high quality information from the available sources to make better decisions. Studies have shown that individuals with internal locus of control have more active work motivation and portray more effective work performance (Spector, 1998 in Millet, 2005); Özen-Kutunis, et al., 2011). It must be noted that decision-making is one of the critical job functions to be performed by the managers in any organization like the aviation industry.

Another variable of interest in this study is information use. Information use leads to better decisions by managers in organisations. Information is needed for decision-making and operations at all levels of managements in organisations. It is an intrinsic component of nearly every activity in an organisation, so much that its function has become transparent. Information can be seen as raw data processed into a meaningful form, and of absolute value to the recipient. Information is an essential part of an organisation and therefore it is basic in decision-making (Stair and Reynolds, 2005; Turban, et al., 2005; Oyewusi, 2008). Furthermore, managers use information in organisations to make series of change in their business environment, to create new knowledge and information for innovation and to make sound decisions. Managers in the aviation industry rely solely on the accuracy of information, to arrive at informed decision(s). Hence, there is need for the availability of reliable sources as a key component of their daily operations for decision-making.

Dunn (1980) found that private organisations with profit incentives use information for decisions substantially more often than public ones. It must be noted that good motivational strategies such as wide access to information and management support for wise use of information may improve decision-making of workers particularly managers in public organisations like the aviation industry.

## **II Statement of the Problem**

In Nigeria, services in the aviation industry have made headlines for years but rarely due to its excellence. A lot of public outcry have always trailed developments in the industry such as poor weather forecast, shortage of critical infrastructure, shortage of aviation fuel, indiscriminate flight cancellation, lack of aircraft C- checks maintenance and so on (Shadare and Goodluck-Ogazi, 2012). Decisions are the essence of management and it lies at the very heart of leadership and as managers make decisions, they are faced with several obstacles which can impact positively or negatively on their work. Studies have shown that locus of control plays a critical role in an individual's self-confidence, motivation, organisational commitment and self-reliance. An individual's perception of his / her ability has a significant impact on his / her self-regulatory influences which governs motivation and personal achievements in complex decision-making environment such as the aviation industry. Also, factors that affect a manager's locus of control such as motivation also affect their decision-making behaviour. The public and customers' complaints about ineffective services rendered to them by the aviation industry in Nigeria could be attributed to ineffective decision-making of managers therein. The high loss of revenue and the uncontrollable increase in costs of business operations in the aviation industry in Nigeria are indicators of irrational decision-making of the managers therein.

The Nigerian government has given motivation to workforce in the aviation industry by providing modern working equipment, increase wages and salaries and conducive working environment for good provision of services to customers. Information is a critical resource for effective decision-making of the managers in the aviation industry in Nigeria. It appears that the managers in the Nigerian aviation industry failed to highly utilized information in their decision-making processes. It must be noted that past studies in the field of organisational management, Psychology (educational, industrial); Health, Library and Information Science and so on did not pay attention to locus of control, work motivation and information use as

they affect decision-making of managers in organisations. Hence, the problem was to identify whether or not locus of control, work motivation and information use influence decision-making of managers in the aviation industry in Nigeria.

### **III Objectives of the Study**

The objectives of this study are to:

- ascertain the level of relationship between locus of control and the decision-making of managers in the aviation industry in Nigeria;
- determine the degree of relationship between work motivation and decision-making of managers in the aviation industry in Nigeria;
- find out the level of relationship between information use and decision-making of managers in the aviation industry in Nigeria; and
- ascertain whether the linear combination of locus of control, work motivation and information use could significantly influence the decision-making of managers in the aviation industry in Nigeria.

### **IV Research Questions**

To achieve the identified objectives of the study, the following research questions were raised:

- What is the level of decision-making of managers in the aviation industry in Nigeria?
- What is the major pattern of locus of control of managers in the aviation industry in Nigeria?
- What is the level of work motivation of managers in the aviation industry in Nigeria?
- What are the types of information use for decision-making by managers in the aviation industry in Nigeria?
- What is the relative influence of locus of control, work motivation and information use on the decision-making of managers in the aviation industry in Nigeria?

### **V Hypotheses**

The following hypotheses were formulated and tested at  $\alpha = 0.05$  level of significance.

1. There is no significant relationship between locus of control and decision-making of managers in the aviation industry in Nigeria.

2. There is no significant relationship between work motivation and decision-making of managers in the aviation industry in Nigeria.
3. There is no significant relationship between information use and decision-making of managers in the aviation industry in Nigeria.
4. A linear combination of locus of control, work motivation and information use does not have significant influence on decision-making of managers in the aviation industry in Nigeria.

## **VI Literature Review**

Locus of Control refers to a personality trait reflecting the generalised belief that either events in life are controlled by one's own actions (an internal locus of control) or by outside influences (an external locus of control) (Hurrell, Jr., Levi, and Murphy, 2011). Internal or External Locus of Control plays an important role in work motivation and decision-making of managers in organisations. Individuals with internal locus of control are careful, alert, dominant, focused on success, self-confident and ingenious. On the other hand, the individuals with external locus of control are less careful, affected by the group members, easily influenced by external forces, less self-confident and they display unsteady performances (Rotter, 1975 in Ozen-Kutunis et al., 2011). Individuals with an internal locus of control believe that they can exert control over life events and circumstances, including the associated reinforcements, that is, those outcomes which are perceived to reward one's behaviours and attitudes. In contrast, those with an external locus of control believe they have little control over life events and circumstances, and attribute reinforcements to powerful others or to luck (Hurrell Jr., et al., 2011).

The construct of locus of control emerged from Rotter's (1954) Social Learning Theory. Social Learning Theory suggests that an expectation is reinforced when the expected events or behaviour actually occur in the future. In other words, if you expect something to happen and it does, your expectation is reinforced, and if your expectation does not occur, your expectation is weakened (Yemen and Clawson, 2003). To measure locus of control, Rotter (1966) developed the Internal-External (I-E) scale, which has been the instrument of choice in most research studies (Hurrell, et al., 2011). Studies have shown that internal locus of control has a much bigger impact on individuals than the external locus of control. Individual with internal locus of control have more active work motivation and portray effective work performance (Ozen-Kutunis, 2011). Lease (2004) discovered that external

locus of control was associated with decision-making difficulties. Kinick and Vecchio (1984) in Igbeneghwa and Popoola (2011) reported that individuals that have internal locus of control are likely to be more committed to their organisations than those who have external locus of control.

Furthermore, Selart (2005) discovered that managers with low internal locus of control have more tendencies to result to group decision than the ones with high external locus of control. Coban and Hammamci (2006) in Ozen-Kutunis et al., (2011) found that individuals with internal locus of control mostly use logical decision-making strategies more than the ones with external locus of control. Locus of control may influence the way employees solve problems when performing their job duties, deal with promotions, change job characteristics, respond to leadership and exercise it themselves, experience job satisfaction, and feel motivated to work (Cinite, 2006 in Santi and Wan Rafaei, 2011). A statistically significant relationship was found between an Internal Locus of Control and Independent Decision-making among Nursing Students (Neaves, 1989). Also, Ornoy (2010) remarked that Internal Locus of control was positively related to an attitude towards taking part in decision-making at work. Thompson (2013) observed that Locus of Control; a personality trait measured in terms of an internal or external locus is one factor that may affect decision-making process. He explained further that the characteristics associated with an individual's locus of control could impact a manager's preferences for ambiguity and processing of information and thereby, his/her decision-making style.

The process of decision-making is a cornerstone in the managing organizations (Al-Nsour, 2011). Decisions are the core transactions of organisations and managers make complex choices. Decision-making is an integral and important part of a manager's job (Thompson, 2013). Decision-making is the totality of the mental, bodily and emotional processes related to the selection and preference between the ways, tools and opportunities that would enable one to achieve various stated objectives. Making a decision is, in a way, processing information (Koçel, 2003 in Soran et al., 2013). According to Soran et al., (2013), in the aviation industry, the manager has to be in a continuous process of decision-making from weather forecasting, fuelling, to aircraft acceptance of the pilot in command to the flight planning before the take-off and the approach to the gate after the flight and so on.



Torralba and Palazzi (2010) observed that making decisions is a common task on the managerial agenda and that the decisions of a manager affect individuals, the future of the organisation and, of course, they have consequences for the organisation's survival and success. Managers make decisions rationally, but they are bounded by their ability to process information (Robbin, DeCenzo and Coutler, 2011). Decisions are the essence of management and lie at the very heart of leadership (Stewart, 1996 in Thompson, 2013). As managers make decisions, they are faced with several obstacle, failures and setbacks that carry self-evaluative implications as well as social consequences (Wood and Bandura, 1989).

Work motivation enhances the quality of work; it is the most important factor that drives every human being to reach their goals and plays a key role in all processes of life. (Saeed and Muneer, 2012). It is a set of energetic forces that originate both within as well as beyond an individual's being, to initiate work-related behaviour and to determine its form, direction, intensity and duration (Pinder, 1998 in Roos, 2005). According to Roy (2001), work motivation is a process to energize employee to the work goal through a specific path. Cerri (2014) pointed out that how we and others make decisions is directly tied to motivation. And the way we process data directly relates to how we make those decisions to be motivated to do something or not. Cerri (2014) established further that managers makes decisions using information from a specific set of sources and by a specific set of processes. Furthermore, Cherry (2014) remarked that motivation is the force that initiates, guides, and maintains goal-oriented behaviours, decision-making inclusive. He explained that having a motivated workforce is vital for most businesses, since it can lead to higher fringe benefits, participation in decision-making, and working in a team.

Work motivation is the creation of work circumstances that influences workers to perform a certain activity or task of their own free will, in order to reach the goals of the organisation, and simultaneously satisfy their own needs (Niekerk, 1987) in Roos, 2005). According to Edigin (2000), motivation is a management function that stimulates individuals to accomplish laid down institutional goals. Spector (1998) in Millet (2005) reiterated that persons of internal orientation would be expected to have greater work motivation, as they are more likely to have greater belief in their own efforts and competence and also that these efforts and competencies will lead to rewards. To Du-Toit (1990) in Roos (2005) three groups of variables influence work motivation, namely individual characteristics, such as people's own interests, values and needs; work characteristics, such as task variety (decision-

making) and responsibility; and organisational characteristics (policies, procedures and customs). Olajide (2000) in Popoola (2007) explained that fulfilling or appealing to their needs, motivation is goal directed and therefore cannot be outside the goals of any organisation whether public, private or not-profit. This implies that work motivation has serious consequence on decision-making and information use of aviation managers in Nigeria.

Information use in organisations is dynamic and an interactive social process of inquiry that may result in construction of meaning or making decisions (Choo, 2007 in Steinerová, 2008). He noted further that the first type of information use is intrinsic to the user; it involves human understanding with the user's knowledge base and integration. The second form of information use concerns organisational decision-making. Similarly, Bartlett and Toms (2003) averred that information use is the factor that drives all other information behaviours (information seeking and retrieval), since it represents the ultimate purpose for which information is needed and sought. Adio and Ogunmodede (2012) revealed that information use by managers' entails the actual putting into appropriate use of acquired information and it varies among individuals and organisations. Suffice to say that managers in the aviation industry in Nigeria put into appropriate use, information acquired when prompt decisions are made on issues that affects the company. In most cases, managers in business organizations such as government parastatals in aviation industry in Nigeria make decisions and later collect and use information to support decisions made.

According to Kennerley and Mason (2008), better use of information can lead to better decisions and enhance performance. Studies have shown that access to a larger pool of information potentially allow managers to make better decisions and increased amounts of relevant information lead to better decision-making performance of managers in organisations (Dennis, 1996; Popoola, 2009). Pezeshki and Zamani (2005) stressed that information is a critical resource in the operation and management of organisations and Mabawonku (2006) reported that information equips a person with the power to choose from possible options and good use of timely information could enable the user to take right decisions, enhance performance and productivity.

Choo (1996) reiterated that decision-makers in organisations acquired and used information to construct meaning and make decisions. Stocking, Delong, Braunagel, Healy and Loper (2009) averred that good decision-making is facilitated by good information.

Condry and Chambers (1978) in Millet (2005) after a review of several studies addressing locus of control reported that individuals having an internal locus of control tended to learn and use control-relevant information more than individuals having an external locus of control, and they exerted more control, being more objective, and confident that their actions would contribute to a positive outcome. Some previous studies equally stressed the relevance of information accessibility, acquisition, and utilization to the decision-making of managers in organisations (O'Reilly, 1982; Saunders and Jones, 1990; Popoola, 2006; and Allen, 2011).

## **VII Methodology**

The study adopted an ex-post facto research design. The population of this study consisted of all the 2,063 middle level managers in the five (5) aviation parastatals studied in Nigeria. The stratified random sampling technique was adopted in selecting 1,238 managers out of the 2,063 population of middle level aviation managers used for the study. A total of 60% of the respondents were randomly selected from the aviation parastatals covered. According to Yamane (1976), the sampling fraction for samples selection in a survey work, must be high enough at least up to sixty percent before generalizations can be done on the population of the study. The choice of 1,238 out of a total of 2,063 middle level managers in the aviation industry in Nigeria which makes the sampling fraction to be sixty percent was based on the above assertion of Yamane (1976). This meant that a total random sample size of 1,238 managers was used in the study. A set of questionnaire tagged locus of control, work motivation, information use and decision-making of managers (LOCWMIUDMM) scale was used for data collection.

The questionnaire was divided into five main sections. Section A dealt with demographic information of the respondents Section B dealt with Locus of control of respondents. It is a - 20 item statements scale (see Table 3) developed by Spector (1982). The items were measured on a 5-point Likert Scale, i.e. strongly agree = 5, agree = 4, neutral = 3, disagree = 2 and strongly disagree = 1. It has a reliability coefficient ( $\alpha = 0.93$ ) using Cronbach-Alpha method. Section C dealt with work motivation of respondents (see Table 4). It is a - 20 item statements scale developed by Popoola (2006). It was measured on a - 5 point Likert Scale using the response format strongly agree = 5, agree = 4, neutral = 3, disagree = 2

and strongly disagree = 1. It has a reliability coefficient ( $\alpha = 0.93$ ) using Cronbach-Alpha method.

Section D dealt with types of information use by the respondents. It is a -19 item statements Scale (see Table 4) developed by Popoola (2006). It was measured on a 4 - point scale using the response format: very highly utilized = 4, highly utilized = 3, occasionally utilized = 2 and not utilized = 1. It has a reliability coefficient ( $\alpha = 0.94$ ) using Cronbach – Alpha method. Section E dealt with decision-making of managers. It is a - 20 item statements (see Table 2) Scale developed by Popoola (2009). The items were measured on a 4 - point scale: very true of me = 4, true of me = 3, occasionally true of me = 2 and not true of me = 1. It has a reliability coefficient ( $\alpha = 0.94$ ) using Cronbach-Alpha method.

The copies of the questionnaire were administered on 1,238 managers in the studied organisations through the help of six research assistants out of which 945 responded given a response rate of 76.3 percent. The questionnaire administration and retrieval is shown in Table 1. The data collected were analyzed using simple correlation and multiple regression analysis with the aid of Statistical Package for Social Sciences (SPSS).

**Table 1: Questionnaire Administration, Retrieval and Response Rate**

<b>Organisation</b>	<b>Population</b>	<b>Number responded</b>	<b>Response rate (%)</b>
Accident Investigation Bureau (AIB)	15	12	80.0
Federal Airports Authority of Nigeria (FAAN)	480	425	88.0
Nigerian Airspace Management Agency (NAMA)	241	172	71.0
Nigerian Civil Aviation Authority (NCAA)	249	211	85.0
Nigerian Meteorological Agency (NIMET)	253	125	50.0
<b>Total</b>	1,238	945	76.3

## **VIII Findings**

### **Demographic Profiles of Respondents**

The gender distribution of the respondents shows that 637(67.4%) were males while 308 (32.6%) were females. This implies that there are more male managers than female managers in the aviation industry in Nigeria. The age distribution of the respondents ranged between 35 and 55 years, with the mean age of ( $\bar{x} = 35.3$ ,  $SD = 14.9$  years. Their working experience ranged between 1 and 30 years. The distribution of highest educational qualifications of the respondents showed that 406 (43.0%) had bachelor degree certificate; 382 (40.0%) had master degree certificate; while 157 (16.6%) had other academic qualifications. A greater percentage 233 (24.7%) were on grade level 12; 133(14.1%) were on grade level 10; 94 (9.9%) were on grade level 13; 89 (9.4%) were on grade level 14; 47 (5.0%) were on grade level 15; 33 (3.5%) are on grade level 16; while 305 (32.3%) of the respondents did not indicate their grade level. A total of 426 (45.1%) respondents have worked in the aviation industry for between 1 - 10 years, while 334 (35.3%) have been in the industry for between 11 - 20 years; 150 (15.9%) have spent between 21 - 30 years and only 35 (3.7%) of the total respondents have spent above 30 years in the industry.

Table 2 provides the mean and standard deviation scores of different items on decision-making by managers in the aviation industry in Nigeria.

**Table 2: Mean and standard deviation scores of decision-making of managers in the aviation industry in Nigeria.**

S/N	Item Statements	$\bar{x}$	SD
1	Decision is reached based on current and timely information.	3.00	0.90
2	I hate taking a decision on guess work, rule of thumb and sentiments.	2.96	0.92
3	Most frequently, I identifies problems that need to be solved in my organization.	2.95	0.97
4	Reliable and sufficient information are collected and analyzed to consider the best among alternative courses of actions.	2.92	0.90
5	I usually prefer to base my decisions on information other than pressures or influences.	2.89	0.88
6	I give consideration in appropriateness, easy flow and access to information.	2.87	0.89
7	I use both intellectual and creative thinking strategies at making decision.	2.87	0.95
8	Previous decision outcome can be reviewed due to fresh, relevant and reliable information obtained by me.	2.84	0.91
9	I always consider the consequences of the decisions taken and implemented by me.	2.83	0.93
10	Criteria are set by which alternative courses of actions are evaluated.	2.82	0.93

11	The best option is chosen on the availability and utilization of information before making decision.	2.80	0.92
12	Before problem analysis, I always makes the problem statement.	2.79	0.90
13	I always state clear objectives of solving the identified problem.	2.78	0.92
14	I realize that decision will vary depending on situation and various methods chosen.	2.77	0.85
15	Information relevant to a decision is always stored in anticipation of using it in future.	2.75	0.92
16	Information on decision made is always communicated appropriately and timely by me.	2.74	0.91
17	Bureaucracy is out of place when executing decisions reached by me.	2.71	0.92
18	I obtained a feedback on the effectiveness of the decisions implemented through the collection, analysis and interpretation of information.	2.71	0.97
19	I always ensure that monitoring and evaluation system is put in place when implementing decisions reached in my organisation.	2.70	0.95
20	Material resources are always provided for effective execution of the decision reached.	2.70	0.92

The twenty-item statements measuring decision-making were rated on a five point Scale. The maximum score is 100 and this was classified into: poor decision-making of 1-32; fair decision making of 33-66; and good decision-making of 67-100. The mean value of decision-making behaviour was 56.42 which can be situated at the fair decision-making. On the whole, it can be deduced that the respondents' level of decision-making is fair.

Table 3 presents the mean and standard deviation scores of the items on the locus of control of managers in the aviation industry in Nigeria.

**Table 3: Mean and standard deviation scores of Locus of control of managers in the aviation industry in Nigeria.**

S/N	Item Statements	$\bar{x}$	SD
1	A good leader makes it clear to everybody what their jobs are.	3.82	1.09
2	I can foresee difficulties and take actions to avoid them.	3.68	1.16
3	There is a direct connection between how hard I work and the output I get.	3.59	1.06
4	Team work is an excellent way to build character and improved productivity.	3.59	1.17
5	When I make plans, I am almost certain that I can make them work.	3.46	1.21
6	It is usually best to cover up one's mistakes.	3.42	1.22

7	I am confident of being able to deal successfully with future problems.	3.38	1.09
8	Becoming a success is a matter of hard work, luck has little or nothing to do with it.	3.37	1.35
9	My mistakes and problems are my responsibilities to deal with.	3.34	1.30
10	The idea that managers are unfair to their customers is nonsense.	3.28	1.14
11	Everyone knows that luck or chance determines one's future.	3.23	1.19
12	A great deal of what happens to me is probably a matter of chance.	3.22	1.13
13	I understand why my problems are very so much from one occasion to next.	3.20	1.06
14	In my case, maintaining control over my problem is due mostly to luck.	3.19	1.09
15	I can control my problems, only if I have outside support.	3.09	1.26
16	My life is controlled by outside actions and events.	3.01	1.43
17	My problems will dominate all my life.	2.98	1.40
18	People are victims of circumstances.	2.40	1.45
19	I believe a person can really be master of his/her life.	2.14	1.36
20	When I am under stress, the tightness in my muscle is due to things outside my control.	2.04	1.23
21	To continually manage my problems, I need professional assistance/help.	1.95	1.21

The mean score of locus of control of ( $\bar{x} = 65.39$ ) indicated that managers in the aviation industry in Nigeria exhibit internal locus of control because the mean value can be located at the internal locus of control level of 51-100.

Table 4 presents the mean and standard deviation scores of the items on work motivation of managers in the aviation industry in Nigeria.

**Table 4: Mean and standard deviation scores of work motivation of managers in the aviation industry in Nigeria**

S/N	ITEM STATEMENTS	$\bar{x}$	SD
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1	Special recognition is accorded workers with outstanding performances.	3.71	1.07
2	If employers pay attention to welfare conditions of their employee, it inspires me to increase my commitment to work.	3.70	1.05
3	Regular payment of salary is motivational.	3.66	1.07
4	It is important for management to make adequate provision for workers' physiological and basic needs.	3.53	1.13
5	In my organization, every worker is important.	3.50	1.11
6	There is a sense of security from physical harm in my organization.	3.49	1.13
7	Regular payments of staff salary contributed to industrial harmony and progress in the organization.	3.48	1.14
8	The frequent rise in pay in my place of work usually gears me up.	3.28	1.16
9	Lack of communication between management and workers slow down my pace of work.	3.26	1.14
10	Having functional equipment and materials to work with will motivate employee.	3.25	1.22
11	The work environment is conducive for skill and talent development.	3.17	1.32
12	Discord and incessant quarrelling reduces motivational level of aviation workers.	3.14	1.18
13	There is adequate scope and encouragement for individual creativity.	3.01	1.22
14	Lack of motivation by management constitute the fall in our morale.	3.01	1.27
15	My organization recognizes workers' remarkable performance.	2.96	1.18
16	Organization matches an employee's need for personal and professional development.	2.95	1.20
17	My organization gives recognition to innovations and being	2.92	1.21



	innovative.		
18	Apart from my salary, the fringe benefit I receives is enough to motivate me.	2.74	1.15
19	Without interactions, work becomes tiring.	2.72	1.18
20	Lack of adequate in-service training reduced managers' perception of motivation at work.	2.65	1.16

The mean ( $\bar{x}$ ) score of work motivation ( $\bar{x} = 52.33$ ) for the respondents was located at the moderate level, hence it can be deduced that managers in the aviation industry in Nigeria were moderately motivated.

Table 5 presents the mean and standard deviation scores of the items on information use by mangers in the aviation industry in Nigeria.

**Table 5: Mean and standard deviation scores of information use by managers in the aviation industry in Nigeria.**

S/N	TYPES OF INFORMATION USED	$\bar{x}$	SD
1	Tax laws.	3.23	1.00
2	Aeronautical charts.	3.18	1.00
3	Monetary and fiscal policies.	3.17	.98
4	Population and demographic data.	3.12	1.00
5	Trade regulations.	3.11	.99
6	Legal System.	3.04	1.00
7	Wages and salaries.	3.00	1.12
8	Nature of competition.	2.96	1.11
9	Exchange rates.	2.94	1.09
10	Crime rate.	2.87	1.17
11	Energy availability / cost.	2.77	1.17
12	Economic development.	2.65	1.13
13	Foreign policies.	2.61	1.17
14	Employment and skill levels of labour force.	2.60	1.16
15	Information flow infrastructure.	2.57	1.11
16	Weather chart.	2.49	1.20
17	Security.	2.38	1.28
18	Navigation chart / aids.	2.20	1.24
19	Maps.	2.00	1.19

The mean ( $\bar{x}$ ) score of information use of the respondents was  $\bar{x} = 52.90$ , this can be located at the moderate level. On the whole one can be deduced that the respondents moderately utilised information for decision-making.

Table 6 presents the summary of test of significant relationship among locus of control, work motivation, information use and decision-making of the respondents.

**Table 6: Summary of test of significant relationship among locus of control, work motivation, information use and decision-making of the Respondents.**

Variables	$\bar{x}$	SD	DM(r)	Sig.P
Locus of Control (LOC)	65.39	13.74	0.572	.000
Work motivation(WM)	52.34	11.74	0.509	.000
Information use (IU)	52.90	13.31	0.398	.000
Decision-making (DM)	56.42	11.99	1.000	-

The mean and standard deviation scores of the locus of control of the respondents is ( $\bar{x} = 65.39$ ,  $SD = 13.74$ ); mean and standard deviation scores of their decision-making is ( $\bar{x} = 56.42$ ,  $SD = 11.99$ ). Therefore, there is a significant relationship between locus of control and decision-making of the respondents ( $r = 0.572$ ,  $p < 0.05$ ). Hence, hypothesis one was rejected. Also, the mean and standard deviation scores of work motivation of the respondents is ( $\bar{x} = 52.34$ ,  $SD = 11.74$ ); while the mean and standard deviation score of decision-making of respondents is ( $\bar{x} = 56.42$ ,  $SD = 11.99$ ). There is a significant relationship between work motivation and decision-making of the respondents ( $r = 0.509$ ,  $p < 0.05$ ). Therefore, hypothesis two was rejected. The mean and standard deviation scores of information use of the respondents is ( $\bar{x} = 52.90$ ,  $SD = 13.31$ ) while the mean and standard deviation score of their decision-making is ( $\bar{x} = 56.42$ ,  $SD = 11.99$ ). It is therefore established that there is significant relationship between information use and decision-making of the respondents ( $r = 0.398$ ,  $p < 0.05$ ).

To determine the influence of independent variables, that is locus of control, work motivation and information use on dependent variable which is decision-making of the respondents; the overall mean scores of locus of control, work motivation, information use

and decision-making of each of the respondents were computed. The multiple regression analysis was carried out on these data (Table 7).

**Table 7: Summary of multiple regression analysis of locus of control, work motivation, and information use on decision-making of the respondents.**

Source of Variation	Df	SS	MS	F-ratio	Sig.P
Due to regression	3	47072.81	15690.94	166.26	0.000
Due to error	941	88809.40	94.38		
Total	944	135882.22	15785.32		

Adjusted R = 0.589

$R^2 = 0.346$

Adjusted  $R^2 = 0.344$

df = degrees of freedom = 3

Standard Error of Estimate (SEE) = 9.72

SS = Sum of Square

MS = mean of Square

From Table 7, it is clearly seen that there is a significant multiple relationship among locus of control, work motivation, information use and decision-making of the respondents ( $R = 0.589$ ,  $p < 0.05$ ). More importantly, the linear combination of locus of control, work motivation, and information use significantly influenced decision-making of the respondents ( $F_{(3,941)} = 166.26$ ,  $R = 0.589$ ,  $R^2 = 0.346$ ,  $\text{Adj. } R^2 = 0.344$ ,  $p < 0.05$ ). This means that 34.6 percent of the variance in decision-making of the respondents could be explained by their locus of control, work motivation and information used.

Table 8 presents the post-hoc test of the independent variables and dependent variable.

**Table 8: Summary of the relative influence of independent variables (locus of control, work motivation, information use) on decision-making of the Respondents.**

Variables	Df	Req. Coeff (B)	SE(B)	Beta	T	Sig P
Constant	941	20.811	1.644	-	12.66	0.000*
Locus of Control	941	0.360	0.035	0.412	10.25	0.000*
Work motivation	941	0.162	0.042	0.159	3.83	0.000*

Information use	941	6.782E-02	0.030	0.075	2.50	0.025*
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\* Sig at  $\alpha = 0.05$ , DM = Decision-making

NB: B = Unstandardized Regression Coefficients.

Beta = Standardized Regression Coefficients.

Further post hoc test as shown in Table 8 reveals that each of the independent variables, that is, locus of control ( $\beta = 0.412$ ,  $df = 941$ ,  $T = 10.25$ ,  $p < 0.05$ ), work motivation ( $\beta = 0.159$ ,  $df = 941$ ,  $T = 3.83$ ,  $p < 0.05$ ) and information use ( $\beta = .075$ ,  $df = 941$ ,  $T = 2.50$ ,  $p < 0.05$ ) significantly influenced decision-making behaviour of the respondents. This could not have happened due to chance because going by adjusted  $R^2$  value of 0.344, one can argue that about 34.4 percent of the total variance in decision-making of managers in the aviation industry in Nigeria is explained by a linear combination of their locus of control, work motivation and information use. Thus locus of control, work motivation and information use are critical (important) factors that could influenced the decision-making of the respondents (middle level managers in the aviation industry in Nigeria).

This can be expressed mathematically thus: **DM = 0.360LOC + 0.162 WM + 6.782E-02IU.**

In addition, going by the values of Beta, which show the relative influence of independent variables to the dependent variable, one can therefore submit that locus of control contributed 41.2 percent, work motivation contributed 16.0 percent and information use contributed 7.5 percent in influencing decision-making of the respondents.

## IX Discussion of Findings

Decision-making, planning and controlling are crucial activities that managers in organisations particularly in the aviation industry in Nigeria are expected to perform. Information is a basic ingredient and economic resource that managers in aviation industry world-wide must acquire and use to improve their decision-making. Internal locus of control managers believe that they can control events that happen during their decision-making process. However, this study established that the respondents have internal locus of control; and that there was significant relationship between locus of control and decision-making of middle level managers in the aviation industry in Nigeria.

This result is in agreement with that of Hurrell, Jr. et al. (2011). They stated that individuals with an internal locus of control believe that they can exert control over their life events and circumstances, including the associated reinforcements, that is, those outcomes

which are perceived to reward one's behaviours and attitudes. In contrast, those with an external locus of control believe they have little control over life events and circumstances, and attribute reinforcements to powerful others or to luck. Similarly, Adekola (2012) reiterated that locus of control of workers may affect their decision-making quality. Furthermore, respondents' views on locus of control revealed that a good leader makes it clear to everybody what their jobs are; can foresee difficulty and take actions to avoid them; there is a direct connection between how hard one work and the output; team work is an excellent way to build character and improve productivity; when I make plan, I am almost certain that I can make them work.

The study also found that there was significant relationship between work motivation and decision-making of managers in the aviation industry in Nigeria. This finding lends credence to Cerri (2014) who reported that how managers make decisions is directly tied to motivation and Olayiwola (2013) who posited that work motivation is crucial to effective decision-making of managers in organisations. The reactions of respondents to item statements on work motivation shows that special recognition is accorded workers with outstanding performance; if employers pay attention to welfare conditions of their employee, they are inspired to increase their commitment to their work; regular payment of salary is motivational; important for management to make adequate provision for workers' physiological and basic needs, ranked very high among other motivational needs.

The study finding further revealed that there was significant relationship between information use and decision-making of managers in the aviation industry in Nigeria. This finding agrees with Stocking, et al., (2009) whose study on airport cooperative research program: integrating airport information systems in America discovered that good decision-making is facilitated by good information. Also, Choo (1996) who observed that decision-makers in organisations acquired and used information to construct meaning and make decisions. Carson and Gilmore (2000) equally found that decision-making of managers to be heavily reliant upon the existing knowledge, personal judgement, communication skills and information use in small and medium enterprises in England.

Furthermore, this study also found that locus of control, work motivation and information use had significant multiple relationship with decision-making of managers in the aviation industry in Nigeria. Thompson (2013) stated that the traits associated with one's locus of control may impact an individual's decisions. Locus of control was positively related to an attitude towards taking part in decision-making at work (Ornoy, 2010). Cerri (2014)

pointed out that how we and others make decisions is directly tied to motivation. And the way we process data directly relates to how we make those decisions to be motivated to do something or not. He established further that managers makes decisions using information from a specific set of sources and by a specific set of processes. It must be noted that locus of control, work motivation and information use are essential ingredients at every stage of decision-making in organisation.

This finding further corroborated findings of earlier studies such as Kennerley and Mason (2008) whose study established that better use of information can lead to better decisions and enhance performance; Dennis (1996) who remarked that access to a larger pool of information potentially allow managers to make better decisions and Popoola (2009) who stated that increased amounts of relevant information lead to better decision-making performance of managers in organisations.

However, the most critical finding of this study is that locus of control, work motivation and information use significantly influences decision-making of the respondents. This does not occur by a mere chance because about 34.4 percent of the total variance in decision-making of managers in the aviation industry in Nigeria can be attributed to a linear combination of their locus of control, work motivation and information use. In addition, locus of control contributed 41.2 percent, work motivation contributed 15.9 percent and information use contributed 7.5 percent to the decision-making of the respondents. Arguably, locus of control can be regarded as the greatest contributor to the decision-making of managers in the aviation industry in Nigeria

## **X Conclusion**

Decision-making lies at the heart of managerial behaviour in all organisations. It is a key activity at all levels and a crucial part of an organisation. Locus of control describes the degree to which an individual believes that he/she influences the outcome of events. Work motivation is a set of energetic forces that originate both within as well as beyond an individual's being, to initiate work-related behaviour and to determine its form, direction, intensity, and duration. However, information has been widely accepted as a corporate asset that business organisations especially the aviation industry need to exploit in order to improve their decision-making process and business performance in general. Hence, the characteristics associated with an individual's locus of control could impact a manager's preferences for ambiguity and processing of information and thereby, his/her decision style.

The study therefore provided empirical evidence that locus of control, work motivation, and information use independently has a significant influence on decision making of managers in the aviation industry in Nigeria. The study equally established that the combination of locus of control, work motivation, and information use would improve decision-making by managers in the aviation industry in Nigeria.

Based on the findings of this study, it is therefore recommended that:

1. The management of aviation industry in Nigeria should take into consideration the locus of control of their managers at the point of recruitment of personnel and employ those with internal locus of control for improving their decision-making.
2. They should make frantic efforts to formulate and implement good work motivation strategies such as conducive work environment, good pay, life insurance policy, pension benefits among others so as to improve the decision-making of their managers.
3. The management of the aviation industry in Nigeria should endeavour to encourage their managers to make intensive use of information in their decision-making process.

## **BIO-DATA**

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