

# Determinants of Profitability of Airlines in the Aviation Industry in Kenya

Enos Bernabas Anene Jomo \*, Margaret Oloko \*\*, George Orwa \*\*\*

\* PhD student- Kenyatta University of Agriculture and Technology, Kenya

\*\* Jomo Kenyatta University of Agriculture and Technology, Kenya

\*\*\* Jomo Kenyatta University of Agriculture and Technology, Kenya

**Abstract-** The objective of the study was to establish determinants for the profitability margins at Kenya Airlines in the aviation industry. The study objective of the study was to establish the extent of which innovation and knowledge had on profitability level. The Kenya airlines over period of time from the year 2007 have experienced low profitability margins causing shareholders loss on their wealth, it further resulted to low pricing and devaluing of the Kenya Airlines wealth capital accumulation and the losses resulted to retrenchment of workers/employees and low GDP growth contribution. The target population were all the airlines in Kenya, thus a census study was conducted from 273 managers from the top, middle and functional levels were sampled though the use of questionnaires. Several sampling techniques were used that is the non-probability design through the use of both purposive and convenience and probability. The study used the descriptive research design, and data was collected through the use of questionnaires (structured and unstructured) to collect both primary data and secondary data be used. The data was analyzed and presented through use of descriptive analysis, probit regression, content analysis and the SPSS version 20 was used to analyse the content of the study. The study found that all the variables of the study had a positive impact on the profitability of airlines in the aviation industry in Kenya and thus they were statistically significant according to the findings of the study. In conclusion the study recommended several actions that need to be considered for the airline to return to paths of profitability. That is; there is need for airlines to increase on their innovation capability to have competitive advantage edge on the market environment.

**Index Terms-** Kenya Aviation, Profitability, Innovation, Knowledge

## I. INTRODUCTION

The airline industry has lost \$42 billion over the past five years. All of this is accounted for by US airlines. On average over the past five years airlines in the rest of the world have broken even (Pearce, 2005) however, globally airline profitability improved significantly in the year 2006 from airlines strong revenue growth, cost efficiencies and capacity management. Industry-wide operating profit is estimated to have increased from \$4.3 billion in 2005 to \$13.0 billion in 2006 translating to a 2.9% operating profit margin. The US airlines had the strongest improvement in operating profitability. Twelve

US airlines made operating profits of more than \$100 million (compared to 5 in the year 2005), while only four US airlines made operating losses (compared to 9 airlines in the year 2005). Nevertheless, local currency profits also increased at several European and Asia-Pacific network airlines, which remain among the highest profit generators (IATA, 2007).

Despite the clear value being created for customers, the airline industry has found it difficult to make an adequate level of profits. It is also the case that network airline profitability has been lowest on the more mature N. American and European regions. However, none have managed to generate a ROIC sufficient to meet the minimum expectations of the investors. Airlines from all regions and business models, over the last full business cycle, generated average ROICs below their Weighted Average Cost of Capital (WACCs). There has been only a minor improvement in returns for investors in airlines over this past business cycle. During the period 2004- 2011 returns on invested capital in the worldwide airline industry averaged 4.1%. This compares with an average of 3.82% during 1996-2004. (IATA, 2011).

## II. STATEMENT OF THE PROBLEM

Although aviation contributes 1.1 % in Kenya GDP which is ksh 24.8 billion, where by the airlines services provides Ksh 13.0 billion, (Oxford Economics, 2011), the airlines sectorial growth rate and its contribution to growth rate has been fluctuating that is the year 2005 at 5.2%, year 2006 at 9.0%, the year 2007 at 7.2%, the year 2008 at 0.1% the year 2009 at 4.0% , the year 2010 at 6.9%, the year 2011 at 5.4%, the year 2012 at 3.3% and the year 2013 at 3.6%, (Delloite, 2011& ROK, 2014). The contribution of GDP by sector for instance the Kenya airlines in transport sector dropped from 11.6% in 2008 to 10.4% in 2012, (Odero & Reeves, 2014). Although most of the research has been done on Kenya airways that is Mulei (2011) focused on corporate governance, Mwikya (2013) studied on time service delivery at kenya airways, kweyu (2010) looked at corporate culture, Irungu (2012) focused on information technology as a result none of this studies took an in-depth analysis on the factors that contribute to profitability margins of Kenya airlines as an industry hence the purpose of this study to fill the gap.

## III. GENERAL OBJECTIVE

To establish the strategic determinants of profitability of airlines in the aviation industry sector in Kenya.

**Specific Objectives**

1 The specific objective of this study was to establish the extent to which Innovation and Knowledge determines profitability of Kenyan airlines in the aviation industry.

**IV. RESEARCH METHODOLOGY**

This study used both the census and descriptive mode of study as evident in the research conducted by Nderu, (2013), on Influence of Survival Strategies on the Organizational Performance of Kenya Airways and Irene, (2012), on the Influence of Information and Communication Technology on Performance of Aviation Industry - A Case Of Kenya Airways Ltd. A population is termed either as finite if it consists of a fixed number of elements such that it is possible to enumerate it in its totality and it is represented by the symbol N, or a population is termed as infinite if theoretically it is impossible to observe all the elements (Kothari, 2004). The population of the study was all the local airline companies in the aviation industry in Kenya (Maina, 2014) which employs 6000 employees who directly work in the Kenya aviation Industry (Oxford Economics, 2011). The study used the stratified sampling technique this is the process whereby sample is constrained to include elements from each of the segment (Cooper & Schindler, 2006). The study employed the use of questionnaires; this is because they provide confidentiality, and an avenue through which information can be collected from a large sample and from diverse regions (Kombo & Tromp, 2006). The research used both the primary source of data by carrying out interviews and questionnaires to respondents

to solicit for information, also secondary source of data was used that is from electronically stored information from Kenya airlines websites, financial statements, information from the International Air Travel Association (IATA), Kenya Civil Aviation authority, Kenya’s Parliamentary Senatorial Enquiry Report and information from journals. The use of secondary source of data is that it is available more cheaply, the existing data is readily available in a convenient way and form, hence saves on time because of the availability of pre-processed data (Kombo & Tromp, 2006).

**V. RESULTS AND DISCUSSIONS**

A Probit analysis was carried out to find out the relationship between the airlines profits and the various parameters including, research and development, brand name and product development. The results as in the table 4.23 below show that none of the factors research and development, brand name and product development, has a relationship with the airlines profitability. . All the respective P-Values of 0.024, 0.831 and 0.172 for research and development, brand name and product development respectively, are above alpha (0.05), at 95% Confidence interval. This shows that the airlines profit levels are affected by any of them, either research and development, brand name and product development

**Table 4.23: Innovation and knowledge Probit Variance Explained**

Parameter Estimates		Estimate	Std. Error	Z	Sig.	95% Confidence Interval	
Parameter						Lower Bound	Upper Bound
PROBIT <sup>a</sup>	Research development	-.419	.186	-2.256	.024	-.784	-.055
	RD profits	.175	.242	.723	.469	-.299	.648
	Effective brand name	.082	.385	.213	.831	-.673	.838
	Brand name profits	-.525	.767	-.684	.494	-2.028	.979
	Product development	1.024	.750	1.365	.172	-.446	2.494
	Creativity	-.156	.186	-.841	.400	-.520	.208
	Effective brand profits	-.060	.182	-.330	.742	-.418	.297
	Intercept <sup>b</sup>						
	20	.617	.360	1.711	.087	.256	.977
	30	.875	.335	2.611	.009	.540	1.210
	60	.956	.403	2.371	.018	.553	1.359
	80	.544	.458	1.186	.236	.085	1.002

a. PROBIT model: PROBIT (p) = Intercept + BX (Covariates X are transformed using the base 2.718 logarithm.)

b. Corresponds to the grouping variable Profits\_other\_airlines.

The findings of this study reveal that most airlines companies do not undertake research and development function to boost their product and services unlike this is suggestive that innovation has not resulted to increased airline profits unlike from other studies such as Diederer *et al.* (2002) conclude that innovative farmers show significantly higher profits and growth figures than firms that are not innovative. Also Favre *et al.*

(2002) conclude there is a positive impact of innovations on profits. They take R&D intensity, market share, and concentration as the relevant causal factors. Also national R&D spillovers and, moreover, international R&D spillovers are positive for profits. Avantis and Hollerstein (2002) conclude that the use of external knowledge, technological opportunity and the degree of innovativeness significantly increase the productivity

of knowledge capital. The deliberate pursuit of certain objectives (e.g. creating a new market) and higher appropriability conditions raise the return to patents.

The study by Loof (2000) showed a positive relationship of innovative sales per employee (elasticity) on five different performance measurements (employment growth, value added per employee, sales per employee, operating profit per employee, and return on assets). Meinen (2001) is positive on the question whether innovation is worth doing. He noted that Firms executing R&D on a permanent basis, that co-operate with others and use various sources of information realise extra turnover of one percent point over 1996-1998.

## VI. CONCLUSION

The purpose of the objective was to identify whether Innovation and Knowledge had an effect on profitability of Kenyan airlines in the aviation industry. The findings revealed that most airlines do not engage in product creation and development. This is because according to the respondents most airlines do not have an internal and mechanism to conduct research as a result there is no progress in creativity that initiates novel ideas to airlines for successful operation, attraction of passengers that in turn would lead to increased profitability. The presence of airlines brand name availability does not generate immediate profit to the organization. This is because the absence of strong brand name in the market results to lower visibility to the potential passengers who may end up choosing to use the service of only one dominant carrier. This lack of effective brand name from lack of marketing results to lower profitability to the airlines. The Probit regression and correlation results indicated that there was a positive and significant relationship between innovation knowledge and profitability of airlines in aviation industry. The findings imply that innovation and knowledge were statistically significant in explaining the profitability of airlines in aviation industry.

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## AUTHORS

**First Author** – Enos Bernabas Anene Jomo -PhD student- Kenyatta University of Agriculture and Technology, Kenya.

Email: enosnn@yahoo.com .Correspondence Author

**Second Author** – Margaret Oloko (PhD), Jomo Kenyatta University of Agriculture and Technology, Kenya

**Third Author** – George Orwa (PhD)- Jomo Kenyatta University of Agriculture and Technology, Kenya