Journal of Service Science and Management, 2022, 15, 350-361
https://www.scirp.org/journal/jssm
ISSN Online: 1940-9907
ISSN Print: 1940-9893

Financial Supply Chain Management Practices and Operational Performance in the Low-Cost Airline Firms in Kenya

Emily Askah[1], Ombati Ogoro Thomas[2]

[1]Faculty of Business & Management Science, University of Nairobi, Kenya
[2]Department of Management Science & Project Planning, Faculty of Business & Management Science, University of Nairobi, Kenya
Email: thomasombati@uonbi.ac.ke, Emily.askah@yahoo.com

How to cite this paper: Askah, E., & Thomas, O. O. (2022). Financial Supply Chain Management Practices and Operational Performance in the Low-Cost Airline Firms in Kenya. *Journal of Service Science and Management, 15,* 350-361.
https://doi.org/10.4236/jssm.2022.153021

Received: January 21, 2022
Accepted: June 27, 2022
Published: June 30, 2022

Abstract

Globally, airlines face unique challenges which require measures to achieve competitive advantage. The paper's aim was to ascertain the level of adoption of Financial Supply Chain Management (FSCM) practices among Kenya's low-cost airline companies. A descriptive research approach was used in this paper. This approach allows researchers to obtain accurate and systemic primary data from several low-cost airline companies in a set period of time. The target population for the study was 33 low-cost airlines operating in Kenya. The researchers gathered information through primary and secondary sources. The paper indicates that organizational success is positively influenced by Financial supply chain management. This, therefore, requires the supply chain and finance executives to make significant investments in FSCM in order to improve organizational performance. The study recommends that low-cost airlines must maintain an optimum working capital, cash conversion period, capital expenditure policies, and P_2P cycles as well as to conduct regular demand and supply analyses as FSCM strategies so as to enhance operational performance and increase business competitiveness in the aviation industry.

Keywords

Financial Supply Chain Management, Operational Performance, Low-Cost Airlines

1. Introduction

Financial supply chain management (FSCM) is the end-to-end process that in-

volves the procure-to-pay cycle, working capital management, capital expenditure, cash conversion cycle, and demand and supply market analysis business processes (Fathollah & Najafi, 2017; Wohlgeschaffen, 2010; Lawson, 2009). The FSCM includes everything that has to do with invoicing, making orders, reconciling, and analyzing payments. The quantifiable characteristics of an entity's business process results, such as production cycle time, dependability, and stock turns can be termed as operational performance (Azim et al., 2015; Corra et al., 2007; Lewis, 2019). Business performance metrics such as market share, growth, on-time performance, cost saving and customer satisfaction are influenced by operational success (Azim et al., 2015). According to Shalakha (2015), FSCM is an effective strategic and tactical instrument for realizing consumer demand patterns and managing global complexity leading to low cost and higher operational performance.

Local airlines in Kenya have embraced SCM techniques that promote service quality, effective procurement activities, fewer supplier rejections, and largely flexible and minimal-cost supply chains (Gwako, 2008). Major SCM criteria are regularly evaluated by the airline superintendents, and the findings are communicated between internal and external stakeholders (IATA, 2011). Striano (2010) further believes that SCM is growing in the airline sector and those aviation companies continue to impact airline competitiveness and worldwide technology in the companies' operation. In particular, the interest and importance of using FSCM in the dynamic market are explored by most local airline firms.

Companies rely on their supply chains to get what they need promptly while being competitive and thriving in a dynamic market (Hughes, 2010). Sirengo and Nafula (2009) argued that a low-cost carrier, also referred to as a low-cost airline, is an airline that concentrates on cutting operational expenses while getting rid of some of the standard services and amenities that are factored in their prices leading to less comforts with affordable rates. Like other airline firms, low-cost airline businesses have large system inventories, numerous suppliers, and highly esteemed customers, hence would want to gain more from the practice of optimal FSCM (Chia et al., 2019). It is not apparent, however, if low-cost airlines in Kenya are optimally anchored in FSCM hence the lacuna of knowledge on how it will contribute to optimal operational performance in terms of accelerated growth, on-time performance, market share, customer satisfaction, and cost saving in the Kenyan low-cost airline firms. Consequently, the current research aims to find out the extent of the adoption of FSCM practices by low-cost airline companies in Kenya.

Article Structure

This article has seven sections. Section 1 is the introduction, Section 2 contains the literature review, Section 3 has the research methodology, Section 4 is the research findings, Section 5 contains the discussion of findings, and Section 6 is the recommendations whereas section seven contains the conclusion.

2. Literature Review

Review of literature summarizes data that is available about a certain subject, challenge, or query. Therefore, this chapter provides theoretical review, empirical research on FSCM and operational performance.

The study was anchored on three theories namely, the theory of the firm, resource-based theory (RBV) and supply chain network theory. The theory of the firm argues that a company exists and makes decisions in order to maximize profit while RBV states that a company's sustainable competitive advantage stems from its precious, rare, inimitable and irreplaceable resources, as well as their unique use of core competencies. The supply chain network theory describes the interactions that exist between organizations, suppliers, consumers, and purchasers. These theories were critical in explaining how an organization benefits from leveraging FSCM so as to augment operational performance (Wellenbrock, 2013), by attempting to unify past research on FSCM and addressing several variables of operational performance. The theories' implications were addressed, and concluding remarks proposed the benefits of further theory creation and testing.

The measurable properties of process outcomes for a company, for example reliability, production cycle time and inventory rotations, are known as operational efficiency (Azim et al., 2015). Measures for an entity's performance like having satisfied clients, enhanced share of the market, on time performance, accelerated growth rate in terms of new route development and cost saving are therefore influenced by operational success of a given normal organization (Sirengo & Nafula, 2009). As a result, these deliverables have assisted low-cost airlines to build customer loyalty as their major operational performance measure.

Specific product and operating aspects, distinguish the low-cost model from FSCs by capitalizing on minimal, unrestricted and modest prices; high frequencies; point-to-point flights; no interlining; ticket-less travel via travel agencies and call centers; single-class, high density seating; no seat assignments; and no meals or free alcoholic beverages among other product characteristics (Aomo et al., 2016). Single-type aircraft with high utilization, use of secondary or traffic free airports with quick aircraft turnaround, short sector length, and competitive salaries with margin sharing and high throughput are among the operating characteristics (Aomo et al., 2016).

3. Research Methodology

The research employed a descriptive research approach. Descriptive study allows researchers to obtain accurate and systemic primary data from several low-cost airline companies in a set period of time. Moreover, this study approach guarantees minimal restrictions and interferences as well as ensuring sufficient safeguards to avoid bias and enhance dependability (Kothari, 2017). The descriptive research design provides phenomena with pragmatic general inferences from the facts discussed (Sekaran & Bougie, 2016).

The target population for the study was all the 33 low-cost airlines operating in Kenya. Given that this population is relatively small, a census was conducted to collect data from all the low-cost airlines. The study targeted two respondents from each of the 33 low-cost airline firms in Kenya who included the Chief Finance Officer (CFO) or Finance Manager and the Supply Chain Manager. These officials were considered relevant in this study due to their deep understanding of the operational issues and day to day supply chain activities involved in the low-cost airlines.

The researchers gathered information through primary and secondary sources. Primary data was gathered from the 33 low-cost airlines' CFO and supply chain managers or their equivalents. Semi-structured questionnaires consisting of closed and open-ended based enquiries were used for primary data. The questionnaire was developed by the researcher. A questionnaire helps in gathering primary information from respondents in a particular time (Lumpkin & Dess, 2001). The questionnaire was utilized to explore respondents' fact-based answers and opinions on FSCM and how it impacts the operational performance of the low-cost airline companies. The questionnaire was structured into two sections to gather information on various aspects of the study. This implies that Section 1 focused on the level of FSCM integration in Kenyan low-cost airlines while Section 2 covered the operational performance measures adopted by these firms. Validity of the questionnaire was tested using content validity whereas reliability was tested using Cronbach's Alpha whose value was 0.81 which was a confirmation that the questionnaire had internal consistency.

Secondary information was gathered from the airlines' annual reports to solicit information on the total fleet, domestic operators, cargo volume, and increase in passenger numbers over the previous five years (2016-2020). This was used to evaluate the percentage growth rate of the low-cost market share in the past five years.

After data collection, it was thoroughly reviewed, edited, coded and interpreted. Descriptive statistics such as the mean was used to estimate the average score of each airline and to determine the FSCM practices adopted by the Kenyan low-cost airlines. Inferential statistics such as standard deviation was used to determine the variations from the anticipated state to assess the causal connections between the elements under investigation.

4. Findings

The goal of this paper was to investigate the extent of adoption of financial supply chain management practices and growth of the Kenya's low-cost airlines. The study targeted 33 Kenyan low-cost carriers. The Kenyan airline market had more low-cost carriers than full-cost carriers, according to findings on type of operation. Information on the respondent's background in finance or supply chain management was sought. This ensured reliability and validity of the responses. Further, the expertise of various employees was deemed necessary in this

study. The majority of employees employed by these airlines had significant experience, having worked in the industry for over 6 years, indicating that they were experts in the sector.

4.1. Growth of Low-Cost Airlines

The researchers sought to understand the percentage of domestic flights operated by these Kenyan low-cost airlines and based on the results, 48% with the greatest frequency of 24 operating as domestic flights followed by 22% with a frequency of 11, 16% with a frequency of 8, and less than 15% with a frequency of 7. This implies that the majority of the 33 airlines fly domestically. Figure 1 presents percentage of total domestic flights.

Regarding the growth in Passenger Numbers in the Past 5 years, the findings indicated that the proportion with the largest passenger increase is over 50%, with 50 percent, followed by 11% - 30% with 24 percent, 31% - 41% with 22 percent, and less than 10% with 4 percent. This means that during the last five years, airlines have experienced a 50% rise in passenger growth as shown in Figure 2 below.

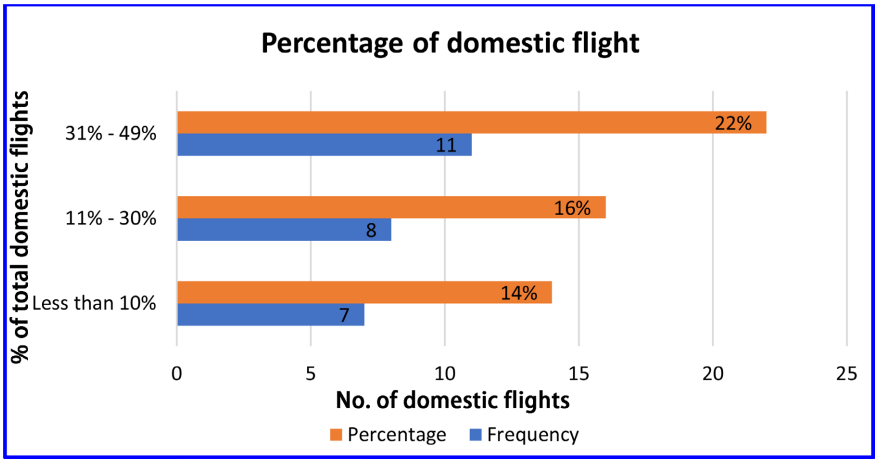

Figure 1. Percentage of total domestic flights.

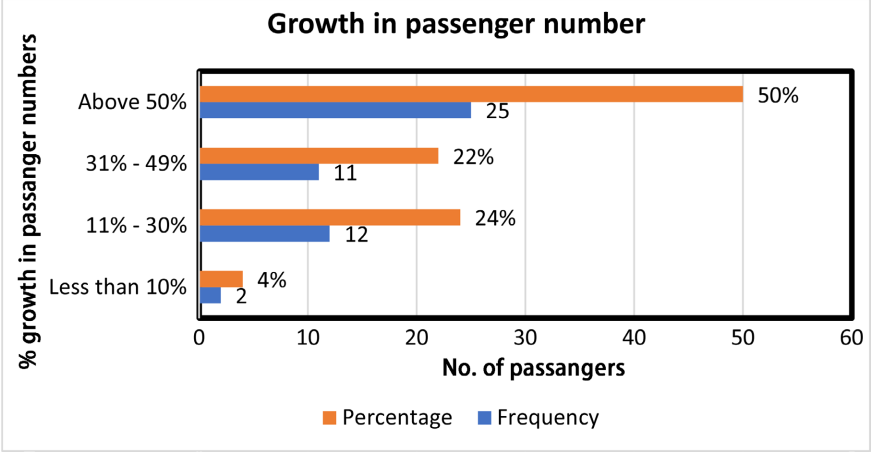

Figure 2. Percentage growth in passenger numbers in the past 5 years.

The research findings indicated that the majority of the airlines (60%) were low-cost carriers, while 26% were cargo carriers and 14% were full-service carriers. According to this data, the majority of airlines operate as low-cost carriers. Table 1 presents the distribution of categories of low-cost airlines.

4.2. Financial Supply Chain Management

Financial supply chain management is favorably associated to organizational success. As a result, supply chain and finance executives should make significant investments in FSCM in order to improve organizational performance. The study also found that having a good working capital management policy is linked to a good organization's success. As a result, businesses should maintain optimal liquidity ratios, with larger levels of current liabilities compared to overall asset value, and current assets retained in excess of current liabilities' value.

Supply and demand market analysis was found to be critical to operational performance. The market forces of demand and supply determine the price and competition that is a key performance indicator in supply and demand analysis. Additionally, demand planning provides better visibility of supply chain costs within the airline industry.

Capital spending improves operational performance because, in order to save money through CaPeX initiatives, airlines must create an optimal capital expenditure strategy, finish CaPeX projects on time and on budget, and conduct frequent cost of capital estimations. This was accomplished by negotiating lower prices to enhance cost saving. To get the most out of their investment, companies should always review their capital expenditure initiatives using market pricing indexes to realize positive values for their investments.

Finally, maintenance of optimum cash conversion cycle has a positive effect on organization performance as a consequence of automated invoicing an aspect of the P_2P cycle. Hence the procurement process was streamlined, allowing airlines to better match their buyer and supplier objectives, as well as their systems and payment solutions like ERP TMS and Bank/lenders platforms, in order to improve their operational efficiency.

As per the outcome, majority of the study's participants agreed that; the collection timeframe for debtors is determined regularly to decrease the accounts receivable days (Mean = 4.40); Negotiation of credit facilities from suppliers helps in reducing current liabilities (Mean = 4.10); Negotiating favorable payment

Table 1. Distribution of categories of low-cost airlines.

	Frequency	Percentage
Low-cost carrier	30	60
Full-cost carrier	7	14
Cargo carrier	13	26
Total	**50**	**100**

terms from suppliers/vendors (Mean = 3.92); Developing an optimal cash conversion cycle (CCC) through proper cash budgeting and forecasting (Mean = 3.46); Extension of credit policies to customers increases cash collection (Mean = 3.25); Cash conversion cycles that are shorter are preferable than those that are longer (Mean = 3.10) and Regular tracking and computing creditors' repayment period (Mean = 3.06) respectively. The findings portray that the cash conversion cycle has a substantial influence on supply chain operations efficiency. It allows airlines to set timeframes for debtor collection in order to reduce accounts receivable days and negotiate credit terms with suppliers in order to reduce current liabilities. Table 2 presents various aspects of the cash conversion cycle.

4.3. Working Capital Management

The researcher sought to identify various aspects of working capital management, decision making and implementation and KPIs of measurement in the airlines. The finding was that, the highest number of the respondents (50%) affirmed that board of directors/owners within the airlines are accountable for implementation and decision making, 36% indicated that the top management are responsible, 10% indicated that the finance/treasury was accountable and 4% of the respondents indicated that procurement & purchasing were accountable for decision making as indicated on Figure 3. This shows that within a certain airline, some positions are responsible for working capital management implementation and decision-making, as evidenced by the fact that the majority of respondents said the board of directors/owners of the airline are responsible for the same.

To find out the respondents' take on the various areas of working capital management that have the most impact on operational success of a given airline, the findings shows that majority of the responded believe that; Liquidity ratios must be kept at an ideal level (Mean = 4.40), the company should keep a high amount of current liabilities in relation to total assets (Mean = 4.10), the value of current assets should be kept greater than the value of current liabilities. (Mean

Table 2. Agreement level on the various aspects of the cash conversion cycle.

STATEMENT	Mean	Std Dev
Developing an optimal cash conversion cycle (CCC) through proper cash budgeting and forecasting	3.46	0.05
Cash conversion cycles that are shorter are preferable than those that are longer.	3.10	0.18
The collection timeframe for debtors is determined regularly to decrease the accounts receivable days	4.40	0.76
Negotiating favorable payment terms from suppliers/vendors	3.92	1.32
Regular tracking and computing creditors' repayment period.	3.06	0.20
Extension of credit policies to customers increases cash collection	3.25	0.01
Negotiation of credit facilities from suppliers helps in reducing current liabilities.	4.10	0.98

= 3.92), Working capital management is a key cornerstone of operational success (Mean = 3.46), The company's long-term investments should be used to finance current assets (Mean = 3.33), As a proportion of total assets, the company must maintain a low level of current assets (Mean = 3.25), and Working capital should be used as a key performance measurement in an airline's internal reporting (Mean = 3.10) respectively. This suggests that majority of the airlines have a working capital management system, as evidenced by the fact that the majority of respondents use liquidity ratios that are kept at an optimal level. Table 3 areas of working capital that have impact on the operation success.

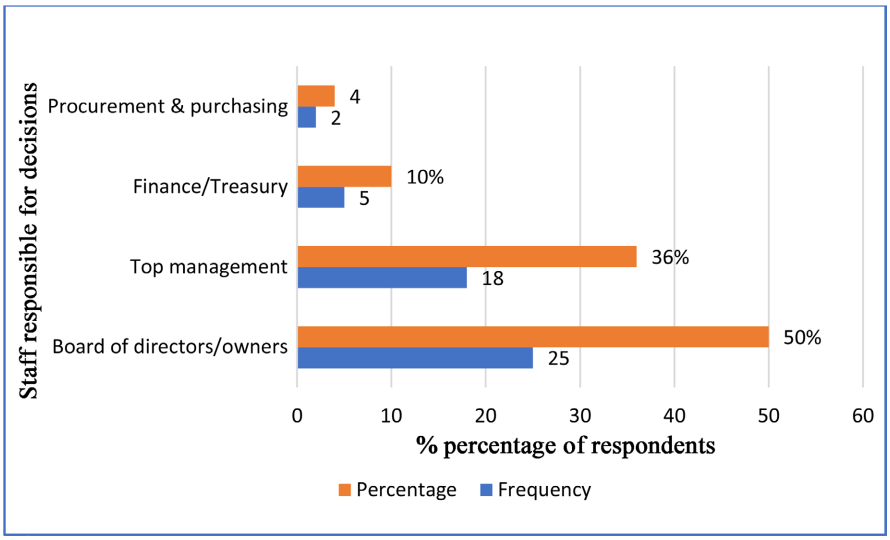

Figure 3. Posts accountable for implementation and decision making.

Table 3. Areas of working capital that have impact on the operation success.

STATEMENT	Mean	Std Dev
Working capital management is a key cornerstone of operational success.	3.46	0.05
Working capital is utilized as a key performance quantifier in the airline's internal reporting.	3.10	0.18
Liquidity ratios are kept at an ideal level.	4.40	0.76
The value of current assets is kept greater than the value of current liabilities.	3.92	1.32
The airline evaluates the optimal and minimal levels of liquidity on a regular basis.	3.06	0.20
As a proportion of total assets, the company sustains a low level of current assets.	3.25	0.01
The company keeps a high amount of current liabilities in relation to total assets.	4.10	0.98
The company's long-term investments are used to finance current assets.	3.33	0.77

4.4. Procure to Pay Cycle (P_2P)

The respondent's feedback were interpreted with the intent of computing the means and deviations of the common feedback so as to establish the effect of management of the procure to pay cycle on operational success of a given airline. The findings show that, alignment of buyer and supplier objectives through participation in system implementation (Mean = 4.05), development of a standardized procure to pay cycle (P_2P) (Mean = 4.00), Integration of the procure to pay cycle with payment solutions like ERP, TMS and Bank/lender platforms (Mean = 3.34), and streamlined O_2P/O_2C cycles as a result of automated invoicing i.e., 3-way matching (Mean = 3.25) are the areas of P_2P cycle that impact the operational success of low-cost airlines. The majority of respondents feel that aligning buyer and supplier objectives through participation in system implementation as part of procure to pay cycle has an influence on the operational system, as evidenced by these findings on Table 4 below.

5. Discussions of Findings

Regarding demand and supply market analysis and its influence on operational performance, this paper found that pricing calculated as a percentage over cost has an impact on operational performance. This is line with Eastin and Arbogast (2011) who argues that in demand and supply market analysis buyers and sellers collaborate to determine transaction volumes and costs. This is attained by analyzing historical sales data that has been adjusted for climate, seasonality, and special events, all of which are factors that are frequent in the aviation business.

The research finding indicated that the collection time-frame for debtors is established on a regular basis in order to reduce accounts receivable days, which has an influence on operational performance. This agrees with Tingbani (2015) that argues reducing the length of time cash is locked up in the CCC improves a firm's profitability and market value, stressing the necessity of good cash management strategies in improving operational performance.

Creating an optimum capital spending policy has an impact on operational performance. The study revealed that capital expenditure occurs when a firm invests its resources to buy fixed assets or improve the value of present fixed assets with a useful life that extends beyond the taxable year. In order for the

Table 4. Areas of procurement to pay cycle that impact on operational success.

STATEMENT	Mean	Std Dev
Development of a standardized procure to pay cycle (P_2P)	4.00	0.56
Integration of the procure to pay cycle with payment solutions like ERP, TMS and Bank/lender platforms	3.34	0.77
Streamlined O2P/O2C cycles as a result of automated invoicing 3-way matching.	3.25	0.45
Alignment of buyer and supplier objectives through participation in system implementation.	4.05	0.34

investors to consider a capital expenditure acquisition as a feasible spend for an organization, and it must correlate to a realistic and attractive ROI that is consistent with the firm's cost-cutting operational plan (Mwangi, 2014). Shepherd and Günter (2010) argued that optimal capital expenditure has a positive impact on operational performance as measured by return on assets (ROA). They also found that a well-structured FSCM provides a good framework for managing the arising prospects of collaborative investment options, such as increased capital expenditure, joint debt management, and ways to jointly sway working capital costs. Capital expenditures are typically expected to provide future economic benefits that will last longer than a single tax or financial year, so the capital budgeting process should ensure that capital expenditure decisions are made based on investment options that will result in high profitability and cost savings for the company.

Matching buyer and supplier objectives through participation in system implementation has an impact on operational performance. The research established that purchasing procedures that are both effective and efficient, as well as collaborative connections, are essential in attaining corporate goals and cost reduction. This study agrees with Grosse-Ruyken et al. (2011) who argued because the average cost of purchases and services in most businesses exceeds 60% to 70% of the total cost of operations, effective product management, information flow throughout the chain, and the full financial chain are critical.

6. Conclusion

The outcomes of the study showed that FSCM has a major beneficial impact on organizational performance since it serves as a "blueprint" for the supply chain and finance departments to satisfy the needs of other departments. The research also shows that FSCM appears to have a significant impact on organizational performance. Low-cost airlines, in particular, with effective FSCM policies, are more likely to achieve better levels of operational efficiency.

The researcher also concluded that demand and supply analysis was a key strategy required to enhance the operational performance of low-cost airline firms in Kenya since pricing largely depends on it. Cash conversion also had an impact on performance because the airlines had to have a debtor collection time frame that was determined on a regular basis to reduce accounts receivable days, negotiate credit facilities from suppliers to help reduce current liabilities and negotiate favorable payment terms from suppliers/vendors. Capital spending was essential in improving operational performance. Capital spending improved operational performance because, in order to save money through CaPeX initiatives, airlines must create an optimal capital expenditure strategy, finish CaPeX projects on time and on budget, and conduct frequent cost of capital estimations. Purchasing also had a significant impact on operational success. The study also revealed that purchasing was a critical component of airlines' operational performance in aligning buyer and supplier objectives through participation in

system implementation, development of a standardized procure to pay cycle, integration of the procure to pay cycle with payment solutions such as ERP TMS and bank/lender platforms, and streamlining the O2P/O2C cycle.

7. Recommendations

According to the findings of the study, FSCM has a favorable impact on organizational performance. As a result, the study advises that FSCM be applied in businesses to improve operational performance. The study also recommends that low-cost airlines must maintain an optimum working capital, cash conversion cycle, and capital expenditure policies. They should also conduct regular demand and supply markets analyses so as to have visibility in market requirements to ensure customer satisfaction. The procure-to-pay cycle should also be automated in order to enhance supplier/vendor relationships. The implementation of the above FSCM strategies will enhance operational performance and as a result of this their business competitiveness in the aviation industry will improve significantly. The key deficiency in this study is that it focused on low-cost airlines only. Maybe in the future, it may be necessary to focus on all airlines.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

Aomo, M. O., Oima, D. O., & Oginda, M. N. (2016). An Empirical Investigation into the Effect of Enhancing Airline Capacity on Load Factor: A Case of Kenya's Low-Cost Carriers. *American Journal of Industrial and Business Management, 6,* 717-731. https://doi.org/10.4236/ajibm.2016.66066

Azim, M. D., Ahmed, H., & Khan, A. S. (2015). Operational Performance and Profitability: An Empirical Study on the Bangladeshi Ceramic Companies. *International Journal of Entrepreneurship and Development Studies (IJEDS), 3,* 63-73.

Chia, A., Goh, M. & Hum, S. H. (2019). Performance Measurement in Supply Chain Entities: Balanced Scorecard Perspective. *Benchmarking: An International Journal, 16,* 605-620.

Corra, H. L., Ellram, L. M., Scavarda, A. J., & Cooper, M. C. (2007). An Operations Management View of the Services and Goods Offering Mix. *International Journal of Operations and Production Management, 27,* 444-463.

Eastin, R. V., & Arbogast, G. L. (2011). *Demand and Supply Analysis: Introduction Learning Outcomes.* CFA Institute.

Fathollah, M., & Najafi, M. (2017). Development of Financial Supply Chain Management and Supply Chain Finance Model. *Journal of Industrial Engineering Research in Production Systems, 4,* 257-269.

Grosse-Ruyken, P. T., Wagner, S. M., & Jönke, R. (2011). What Is the Right Cash Conversion Cycle for Your Supply Chain? *International Journal of Services and Operations Management, 10,* 13-29. https://doi.org/10.1504/IJSOM.2011.041987

Gwako, Z. (2008). *Supply Chain Performance Measurement in the Aviation Industry: A Case Study of Kenya Airways Ltd.* Master's Thesis, University Of Nairobi.

Hughes, M. (2010). *Financial Supply Chain Management: Banking Relationships.* Bottomline Technologies, Inc.

IATA (2011). *Profitability and the Air Transport Value Chain.* IATA Economics Briefing No. 10.

Kothari, C. R. (2017). *Research Methodology Methods and Techniques* (2nd ed.). New Age International.

Lawson, T. (2009). The Current Economic Crisis: Its Nature and the Course of Academic Economics. *Cambridge Journal of Economics, 33,* 759-777. https://doi.org/10.1093/cje/bep035

Lewis, L. (2019). Organizational Change. In A. M. Nicotera (Ed.), *Origins and Traditions of Organizational Communication* (pp. 406-423). Routledge. https://doi.org/10.4324/9780203703625-24

Lumpkin, G. T., & Dess, G. G. (2001). Linking Two Dimensions of Entrepreneurial Orientation to Firm Performance: The Moderating Role of Environment and Industry Life Cycle. *Journal of Business Venturing, 16,* 429-451. https://doi.org/10.1016/S0883-9026(00)00048-3

Mwangi, R. W. (2014). *The Effect of Capital Expenditure on Financial Performance of Firms Listed at the Nairobi Securities Exchange*. Master's Thesis, University Of Nairobi.

Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill Building Approach.* John Wiley & Sons.

Shalakha, S. M. (2015). *Innovative Supply Chain Management Practices and Organisational Performance of Oil Marketing Companies in Kenya.* Master's Thesis, University of Nairobi.

Shepherd, C., & Günter, H. (2010). Measuring Supply Chain Performance: Current Research and Future Directions. In Jan. C. Fransoo, T, Waefler, & J. R. Wilson (Eds.), *Behavioral Operations in Planning and Scheduling* (pp. 105-121). Springer. https://doi.org/10.1007/978-3-642-13382-4_6

Sirengo, A. N. (2009). *Sustainable Competitive Advantage Arising from Competitive Strategies Adopted by Low-Cost Airlines in Kenya: Case of Five Forty Aviation Ltd.* Master's Thesis, University of Nairobi.

Striano, R. (2010). *Financial Supply Chain: Bringing Suppliers on Board.* Deutsche Bank.

Tingbani, I. (2015). Working Capital Management and Profitability of UK Firms: A Contingency Theory Approach. Doctoral Dissertation, Bournemouth University.

Wagner, S. M. (2006). A Firm's Responses to Deficient Suppliers and Competitive Advantage. *Journal of Business Research, 59,* 686-695. https://doi.org/10.1016/j.jbusres.2006.01.006

Wellenbrock, M. (2013). *Theoretical Basis of Supply Management: The Network Theory in Supply Management.* University of Twente.

Wohlgeschaffen, M. (2010). *Financial Supply Chain & Working Capital Management.* UniCredit.