



International Journal of Management & Entrepreneurship Research
P-ISSN: 2664-3588, E-ISSN: 2664-3596
Volume 4, Issue 2, P.No. 84-104, February 2022
DOI: 10.51594/ijmer.v4i2.293
Fair East Publishers
Journal Homepage: www.fepbl.com/index.php/ijmer



STRATEGIC MANAGEMENT PRACTICES AND BUSINESS PERFORMANCE OF COOPERATIVES IN IFUGAO, PHILIPPINES: BASIS FOR STRATEGIC PLANNING MODEL

Jenelyn I. Chungyas^{1,2}, & Fernando L. Trinidad, Ph.D.³

¹Assistant Professor IV, Ifugao State University,

²Ph.D. Student, University of Santo Tomas

³Professor, University of Santo Tomas, Manila, Philippines

Corresponding Author: Jenelyn I. Chungyas

Corresponding Author Email: jenelynychungyas@gmail.com

Article Received: 14-01-22

Accepted: 30-01-22

Published: 07-02-22

Licensing Details: Author retains the right of this article. The article is distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 License (<http://www.creativecommons.org/licences/by-nc/4.0/>), which permits non-commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the Journal open access page.

ABSTRACT

Multi-purpose cooperatives need to operate and effectively focus their efforts on certain tasks to avoid getting astray or deviate from their targets. As required of all well-managed organization, the right external and internal environment with the right people in it is essential. For a cooperative organization to accomplish its objectives, a sense of direction needs to be set and some sort of rules or guidelines have to be established and observed. This research aims to examine the effect of strategic management practices on the business performance of selected multi-purpose cooperatives in Ifugao. Specifically, it seeks to measure the level of application of strategic management tasks by these cooperatives and correlate it with its financial and operational performance as a basis for a strategic planning model. This study utilized primary and secondary data. To assess the relationship between strategic management and financial and operational performance, the researcher used simple regression analysis. Result of the study showed a positive relationship between strategic management and financial performance which is supported by the analysis made on the financial statements of the cooperative which shows an increasing trend on the net profit margin, ROA and ROE. A positive relationship also occurs

between strategic management and operational performance of the multi-purpose cooperatives in Ifugao. This study hopes to contribute not only in addition to literature but also to be of help to the management of the cooperatives to suggest strategies that would be of great help towards a positive business performance. Moreover, this study will be serving as a reference material for both academicians and practitioners.

Keywords: Competitive Advantage, Financial Performance, Operational Performance, Planning Model, Strategic Management

INTRODUCTION

Since early times of Human History, primitive man was already involved in cooperative effort which is necessary to accomplish a common purpose such as providing security for a group of people or to collectively undertake a complex project. The building of the Banaue Rice Terraces in Ifugao is one of the most symbolic evidences of Cooperative Movement in the Philippines. Cooperation is considered as one of the best possible alternative to a business entity to help promote economic and social stability. Cooperation is a method in life that seeks to find solutions to humans many socio-economic problems. Simple forms of cooperation involved individuals in the community who organize themselves to pool financial or material resources with the common objectives of generating income and distributing the same among themselves. Other forms of cooperation includes farmers or stakeholders who contributed money and effort to purchase or build facilities for the common use of the members (Masuku, Masuku, & Mutangira, 2016).

The International Labour Organization defines a *Cooperative* as “an association of persons who have voluntarily joined together to achieve a common end through the formation of a democratically controlled organization, making equitable contributions to the capital required and accepting a fair share of the risks and benefits of the undertaking in which the members actively participate.” The primary objective of every cooperative, according to the Cooperative code of the Philippines, is to provide goods and services to its members and thus enable them to attain increased income and savings, investments, productivity, and purchasing power and promote among themselves equitable distribution of net surplus. A cooperative shall provide maximum economic benefits to its members, teach them the efficient ways of doing things and new ideas in business and management allows the lower income groups to increase their assets and net worth (Art. 7, Philippine Cooperative Code of 2008).

There are six main types of cooperatives in the Philippines as provided in Article 23 of the Philippine Cooperative Code: 1) the Credit Cooperatives; 2) Consumers Cooperative; 3) Producers Cooperative; 4) Marketing Cooperatives; 5) Service Cooperative and 6) Multi-purpose Cooperatives.

In the Philippines, Lab-oyen (2018) identified some issues and challenges encountered by micro and small cooperatives. One factor is that small and micro cooperatives have limited capital for operations. Aside from that, cooperatives who wish to augment their limited resources may embark on savings and time deposit but cannot do so because the law provides that it is for specific purpose in accordance with the provisions of the articles of cooperative and by-laws otherwise the unrelated earnings can be considered taxable. Furthermore, Lab-oyen (2018) acknowledged the lack of knowledge of employees on management functions and stressed the

need for assistance of these cooperatives to be able to comply with the Cooperative Development Authority (CDA) requirements.

The Cooperative Development Authority is the government agency tasked to carry out the provisions of the Cooperative Code of the Philippines. CDA was created to boost the establishment and development of cooperative as instruments of equity, social justice and economic development.

Sustainability of these cooperatives depends upon the proper understanding and management of what cooperatives are organized for and the concept of strategic management has proven its importance in the success of any enterprise (Fratz et.al., 2017). Monday, et.al (2015) states that for an organization to compete successfully, management need to make strategic plans and take strategic actions to gain competitive advantage and enhance performance relative to competitors.

Cooperatives and investor-owned firms (IOFs) alike are facing intensified competition. This places increasing demand on strategic management aside from high performing governance. A good board is key to strategic management activity since they are the ones who have to decide about strategies and dynamic top management is needed to implement strategic management practices (Hakelius, 2018).

Strategic management can depend upon the size of an organization, and the proclivity to change of its business environment, a global transnational organization may employ a more structured strategic management model due to its size, scope of operations and the need to encompass stakeholder views and requirements (Maugbo, 2013).

The strategic management of people, processes and decisions is vital to the success of any venture regardless of its goals, scope, industry or location. Effective management is necessary for the project's to be realized and its goals to be met. In order to improve the prospect of achieving desired results, management must address strategic management challenges the best way possible (Ramirez, 2014). On the other hand, Crab (2012) correlated sustainable strategic management practices with market effectiveness, for an organization to be effective with it ventures, a systematic framework needs to be developed, workers participation and integrity is highly required.

According to Dogan (2015), strategic management practices is needed both by new enterprises and long-established companies desiring to have competitive advantage today and tomorrow. They must learn how to integrate entrepreneurship with strategic management, and must apply strategic entrepreneurship daily.

Literature on management of cooperatives includes many articles dealing with business performance, most of which aimed at evaluating the financial performance and member's satisfaction of these cooperatives as well as showing the relationship of factors like financial resources, government support, board capability, internal control and transparency to business performance (e.g. Chareonwongsak, 2017; El-dalabeeh, 2013; Chander & Chandel, 2010; Ibitoye, 2012; Mathuva & Kiweu, 2016).

In the last decade, a lot of literature on strategic management practices has been made focusing on the needs of SME but, little attention has been given to know the extent of adoption and effect of strategic management on cooperatives (e.g. Mahazril, 2012; Marwa, 2015) Empirical literature on the relationship of strategic management with performance of cooperatives in the Philippines is scanty and no study was undertaken so far at regional level.

It is for this fact that the researcher is motivated to undertake this study to find answer whether these cooperatives have adopted and implemented strategic management practices and if this has significant effect to their business performance, especially on the financial aspect because it is the primary motivator for an individual to become a member of a cooperative.

Significance of the Study

In a developing country like the Philippines, what constitute most of the population are the poor who are always excluded to mainstream banking. To bridge the gap, the government hereby declared the policy of the state to promote the viability and growth of cooperatives as instruments of equity, social justice and economic development (Section 1, RA 6939). While the surge of cooperatives in the rural areas has been unprecedented, the factors that led to their performance and growth still is a contentious debate.

The method of measuring business performance according to Omsa, et. al., (2017) can be divided into two types: Objective and subjective measurement. Objective measurement includes profit margin, sales volume, return on investments, and inventory turnover whose data can be analyzed from the financial statements such as the balance sheet and income statement. While the subjective measure rely on the perception of the managers or owners with regards to business performance achieved like customer satisfaction and increase in members or clients. According to Yuvaragi and Biruk (2013), the financial health of cooperatives can be determined through its financial statements by examining the relationships of the different figures stated therein and make comparisons with other relevant information. The results can be a valuable tool for the members, non-members and other clients of the cooperatives in their decision-making process related to their transactions with the cooperatives.

This study hopes to contribute not only in addition to literature but also to be of help to the management of the cooperatives to suggest strategies that would be of great help towards a positive business performance. Moreover, this study will be serving as a reference material for both academicians and practitioners.

RELATED LITERATURE

Strategic Management and Cooperatives

A business organization can measure its performance using the financial and non-financial measures. The financial measures include profit margin, return on assets, return on investment or sales while the non-financial measures relate to the operational performance of the business and it focuses on issues pertaining to customer satisfaction, customers referral rates, waiting and delivery time as well as employees turn over (Monday, 2015). A survey conducted by Adams and Graham (2016) among 499 business managers shows that firms can enhance corporate performance with their ability to integrate internal and external resources, this enhances the value of integration and knowledge creation as means of achieving firm's performance.

In Japan, Nakayama (2018) examines the usage of different strategic tools which is considered to have influenced organizational performance and found out that companies in Japan employed two or more strategic tools in their business, this shows that Japanese companies are aware on the effectiveness of these tools for a positive business return.

Bouker Maroua (2015) in his investigation of cooperative banks in Tunisia concluded that the performance of cooperatives is attributed to the increase in ratio of accession and good governance of these cooperatives. This study was supported by Karin Hakelius (2018) which

gathered and examined empirical evidences concerning the extent to which the performance of cooperatives is related to the composition of their board and interaction patterns. As supported by the data, the overall performance of cooperatives was higher if the board was larger, well-educated and had consensus between the directors and the CEO. Slavik, Putnova & Cebakova (2015) concluded also in their study that leadership is a participatory factor to economic success of corporations and is an effective tool to strategic management.

In Pakistan, government and state banks has been giving their full support to develop the SME and non-government organization but there is always the gap for further improvement. Jasra, et. al., (2011) shed light on these gap by investigating some determinants to business success. Research showed that strategic management is one of the contributory factors to the success of an enterprise aside from financial resources, government support and entrepreneurial skills among others.

Dr. Beatriz Onate (2015), studied the performance of an Agrarian multi-purpose cooperatives in the Philippines correlating profit with capability. Results showed that cooperatives with good profit margin possess the organization enterprise capabilities.

Strategic Management Practice and Business Performance

Strategic management practices has been observed to significantly relate to the sustainability and growth of firms in the wake of modern corporate governance systems globally (Muriuki, et.al., 2017). In Pakistan, A study of three selected tertiary health care center was carried out by Khan & Huda (2016) to establish the influence of strategic management practices on competition and organizational performance, responses showed a positive effect on the competition level and overall performance of these health care centers.

In a survey conducted by Dr. Fakher Jaqua (2014) among 276 Tunisian companies involved in modernization program called “upgrade program” shows that strategic management is an undeniable reality in enhancing performance of enterprises because majority of the companies has incorporated these concepts to achieve competitive advantage.

Omsa, Ridwan & Jayadi (2018) in their study on the effect of strategic management practices on SME performances in Makassar, Indonesia, shows that strategic management practices are essential in achieving sales volume, accelerating of break-even point achievement and attaining target profit. This analysis was supported by Anna Witek-Crabb after examining 150 public companies in Poland found out that Strategic Management practices and market effectiveness has a significant positive correlation, this means that companies with more sustainable strategic management practices are more effective in the market (Crabb, 2012).

Dauda, Akinbade and Akinlabi (2010) examine the influence of strategic management on corporate performance in selected small scale enterprises in Lagos, Nigeria. Cross-sectional survey research method was adopted for the study and 140 participants randomly selected among small-scale enterprises in Lagos metropolis. Findings of the study show that strategic management enhances both organizational profitability and company market share.

In Nigeria, Maugbo (2013) examines the impact of strategic management on organizational growth and development in selected manufacturing firms in Anambra state. The study uses a descriptive survey design to collect detailed and factual information. Cluster sampling was used to select equal number of manufacturing firms and with the aid of a structured questionnaire, he found out that strategic management practices is not yet a common business

practice in Anambra state but it has been identified as a veritable tool for improving the competitiveness and enhancing performance level of manufacturing firms.

A longitudinal study among Austrian SMEs confirmed that a combination of strategies used by owners is advantageous for enterprises based in a highly industrialized countries. Combination of these strategies positively influenced all three performance indicators: profitability, employment growth and turnover growth (Leitner & Guldenberg, 2010). The presence of a good strategic plans helps in many ways in making business resilient to the unpredictable business environment (Agwu, 2018).

Sang Chul Jung (2014), in his study on the strategic management practices of Samsung Electronics found out that Samsung electronics uses a number of the generic value chain model in creating a shared vision, establishing a performance-based personnel management system, technology development and cost control procedures. Result showed that the success of the company is attributed to leadership, standardization of management system, commitment of innovative strategies and training, and partnership with value chain experts.

In Kenya, Lilingu, Marangu & Masungu (2015) conducted a study on the effect of strategic planning on the performance of 33 credit co-operative societies in Kakamega County. To establish the relationship between strategic planning and organizational performance, the researcher used simple regression analysis. Result showed that strategic planning affects the SACCOs performance positively thus, the researchers recommends to the managers to strictly maintain the strategic management tasks that positively related to organizational performance. Waweru and Omwenga (2015) has the same result with their study on the influence of strategic management practices on 68 private firms in Kenya. It shows that the use of strategic management practice ensures that the holistic view of performance is pegged on strategic planning, strategic choice and strategic implementation and does not merely concentrate on measure of success on the traditional pillars of cost, quality and time.

Theoretical Framework

Various strategic management theories has proven their worth as key drivers in the success of enterprises constantly reminding business managers in addressing the challenges of competition in the business world. A lot of authors also have propounded a variety of models to put forward the idea of strategic management. Among these theories and models are the following:

Michael Porter's Theory of Competitive Advantage

There is no question that Michael Porter has made substantial contribution in the field of strategic management through his Five Forces Competition Model otherwise known as Porter's Theory of Competitive Advantage (figure 1). It was introduced in 1980 and since then became a popular theory in business management in general and in the field of strategic management in particular. The theory advocates that other than competition itself among firms selling or producing the same product or services in the market, there are other forces that drives business competition. The force of these factors is so strong that it justified the need for strategic management. This model consist only of five major forces hence, it is called Porter's five forces model (Orcullo, 2007).



Figure 1. Porter's five forces model of competition
(Source: Adapted from Orcullo, 2007 p. 49)

Resource-Based Theory

The Resource-based theory was developed by Birge Wenefeldt in 1984, this theory asserts that the source of an organization's competitive advantage depends on the endowments of its resources. The underlying premise of this Theory is that firms differ in fundamental ways because each firm possess a unique bundle of resources, these firms develops competencies from these resources, and when developed especially well, these becomes the source of the firm's competitive advantage (Pierson and Robinson, 2007).

The resource-based approach stipulates that the fundamental sources and drivers of a firm's competitive advantage and their superior performance are mainly associated with the attributes of their resources and capabilities (Peteraf and Bergen, 2003).

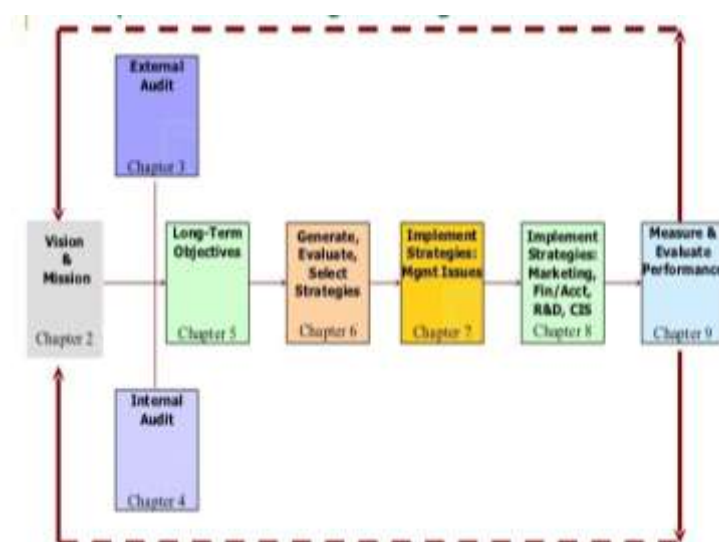


Figure 2. Comprehensive Strategic Management Model
(Source: Fred R. David, 2007 p. 15)

Fred R. David Comprehensive Strategic Management Model

Identifying an organization's vision and mission statements is the starting point of the comprehensive strategic management model (Figure 2) espoused by Fred R. David. This model identified a series of six management tasks which starts with developing mission and vision statement followed by establishing long term objectives as the second task. The third task is to generate, evaluate and select strategies followed by the implementation of these strategies

looking at management and operations issues as the fourth task and implementing strategies looking marketing, finance/accounting, R&D, and MIS issues as the fifth task. The last task or sixth task is measuring and evaluating the performance. What is unique in this model is the conduct of external and internal audit after developing mission statement and before developing long-term objectives.

According to Fred R. David, no organization has unlimited resources and no firm can take unlimited debt or issue unlimited stock to raise capital. Most organizations recognize that strategic management concepts and techniques can enhance the effectiveness of decisions

Objectives of the Study

The aim of this study is to examine the effect of strategic management practice on the financial and operational performance of selected multi-purpose cooperatives in Ifugao. Specifically, it seeks to know the following:

1. To determine the profile of respondents cooperatives;
2. To determine the level of application of strategic management tasks by the respondent cooperatives in terms of:
 - 2.1 Setting of Vision, Mission and Goals
 - 2.2 Strategy formulation
 - 2.3 Environmental Scanning
 - 2.4 Monitoring and evaluation of performance
 - 2.5 Conduct of internal and external audit
3. To assess the relationship of strategic management practices with:
 - 3.1 Financial performance of the cooperatives
 - 3.2 Operational performance of the cooperatives;

Null hypotheses:

Ho₁: There is no significant difference on the profile of respondents cooperatives;

Ho₂: There is no significant difference on the level of application of strategic management practices in terms of:

Ho_{2.1}: Setting Vision, Mission and Goals

Ho_{2.2}: Strategy formulation

Ho_{2.3}: Environmental Scanning

Ho_{2.4}: Monitoring and evaluation of performance

Ho_{2.5}: Conduct of internal and external audit

Ho₃: There is no significant relationship between strategic management practices and financial performance; and

Ho₄: There is no significant relationship between strategic management practice and operational performance of the multi-purpose cooperatives.

METHODOLOGY

Research Design

This is a descriptive correlational study designed to examine the relationship between strategic management practices with that of financial performance and non-financial/operational performance of selected multi-purpose cooperatives. This involves gathering primary and secondary data (financial statements of the respondent cooperatives) and then organizes, tabulates, and describe the data collection (Glass & Hopkins, 1984); and transform the data into

a form that will make it easy to understand and interpret, this will need re-arranging, ordering and manipulating the data to generate descriptive information (Zikmund, 2003).

Subjects and Study Site

The purposive sampling is used to recruit participants based on the characteristics and objective of the study. This research wishes to examine the effect of strategic management on the financial and operational performance of multi-purpose cooperatives in Ifugao. Although there are 33 cooperatives registered with the Cooperative Development Authority (CDA), the researcher involved 17 multi-purpose cooperatives only based on the following criteria:

1. The multi-purpose cooperatives should have strategic management practices,
2. The cooperative should have complete books of accounts which is necessary to measure the financial performance, and
3. The cooperative has a physical body which means that it should have an office and a functional organizational structure.

The researcher then eliminates the 16 cooperatives that do not possess the criteria required to carry out this study.

Research Instrument

This study utilized both secondary and primary data. A structured questionnaire was prepared for the collection of primary data. The questionnaire constructs were formulated in the form of statements to which the respondent may react by marking their answers on a 5-point Likert scale. The questionnaire has three parts, the first part deals with the profile of the manager and the cooperative while the second part focuses on the level of adoption and implementation of strategic management tasks/practices by the cooperatives. The third part aims to measure the effect of strategic management practices on the financial and operational performance of the cooperatives.

To measure the internal consistency and reliability of these instrument, the Cronbach Alpha was used. The result of the reliability test showed that the 10 questions used to measure the level of adoption and implementation of strategic management practice is reliable because the computed Cronbach alpha value is .93. The questions which aims to measure the effect of strategic management practice on the financial and operational performance of the cooperative is also reliable because the cronbach alpha result is .92. Hence, the questionnaire used in this study can be considered as a reliable instrument for measuring the objective of the study.

The secondary data used for this study to measure the financial performance of the cooperatives is their financial statement that came from their balance sheets and income statements for the past five years. Financial performance were measured using selected financial analysis tools like profit margin, return on assets, and return on equity, and current ratio or the acid test ratio for the liquidity.

Data Gathering Procedure

The researcher have informed the respondents by sending in advance a request letter asking permission for them to accomplish the structured questionnaire and get permission also to obtain a copy of their financial statements if possible five years back. The data collected was classified, tabulated and analyzed as per objective of the study.

Permission to use the different financial data from these cooperatives were sought by sending a request letter addressed to the Chief Executive Officer. The request was approved and so the proponent have given the questionnaire to the respondents and retrieved the same after a week.

Data obtained from them was treated with utmost confidentiality and strictly used for this research.

Data Analysis

Data gathered was coded, summarized and tabulated to assist in the analysis. The results then were presented as per objective of the study:

To measure the first objective which is the profile of respondent cooperative, the descriptive statistics like frequency, means and percentages was used.

In order to examine the level of adoption and implementation of strategic management practices by the cooperative and its effect on the financial and operational performance, the respondents were asks how strongly they agree or disagree with the following statement regarding strategic management. Again, Result was treated using frequency, percentages and cumulative percentages.

To assess the effect of strategic management practices on financial and operational performance of the cooperative, the study has set these null hypotheses:

Ho₃ states that there is no significant relationship between strategic management practices and financial performance; and Ho₄ states that no significant relationship also exist between strategic management and operational performance. The regression coefficient (beta β) is used to test the hypothesis with the test criteria that the study should reject the null hypothesis if p-value $\leq \alpha$, otherwise fail to reject H₀ if p-value $> \alpha$. The F-test was administered to determine the indication and overall significance of the relationships of variables.

RESULTS AND DISCUSSIONS

The primary objective of the study is to examine the effect of strategic management practice on the financial and operational performance of cooperatives specifically their level of application on the different management tasks as follows:

- a) Setting of Vision, mission and goals
- b) Strategy formulation
- c) Environmental scanning
- d) Monitoring and evaluation of performance
- e) Conduct of internal and external audit

The questionnaire has three parts, the first part deals with the profile of the general manager or chief executive office while the second part focuses on the level of adoption and implementation of strategic management tasks/practices. The third part aims to measure the effect of strategic management practice on the financial and operational performance of the cooperatives.

1A. Profile of the Chief Executive Officer or the General Manager

Table 1 shows that more than 52% of the Chief Executive Officers or the General Managers of the respondent-cooperatives were between 41 to 50 years of age and 5.56% are above 55 years old. This means that most of them are matured enough to handle a cooperative.

In terms of Educational attainment, 41.67% of the managers are Master's degree holder and 58.33% are bachelor's degree holder. This shows that the cooperatives are headed by educated individuals who can understand the need to adopt strategies as part of their management functions.

As to their number of working experience in the cooperatives, only one is a baby or new to its organization however most of them have spent their lives serving the cooperatives for more

than 11 years which is an important contributory factor in the efficient management of an organization.

Table 1

Profile of the Chief Executive Office, Chief Operations Officer and/or General Manager of the Cooperative

Manager's Profile		Frequency	Percent
Age	25-30	1	2.77
	31-35	5	13.9
	36-40	6	11.11
	41-50	12	52.77
	Above 55	2	16.67
Total		36	100%
Highest Educational Attainment	Diploma/undergraduate	0	0
	Bachelor's degree	21	58.33
	Master's Degree	15	41.67
	Doctorate	0	0
Total		36	100%
No. of Years in Service	1-5 years	1	2.77
	6-10 years	7	19.44
	11-15 years	14	38.89
	16-20 years	8	22.22
	20 years and above	6	16.67
Total		36	100%

1B. Profile of the Cooperatives

There are 17 multi-purpose cooperatives included in the study, 5 of which have more than three branches within and outside Ifugao and nine of them are operating within a single area only. As to their length of operation, all of them has been in operation for more than 10 years where in 17.6% or 3 out of 17 are operating for more than 30 years.

As to number of employees, table below shows that multi-purpose cooperatives in Ifugao belong to the micro, small and medium size enterprises because the number of workers employed are fewer than 100.

Table 2

Frequency and Percent Distribution of Profile of the Cooperatives

Cooperative Profile		Frequency	Percent
Number of Branches	None	9	52.9
	1	2	11.8
	2	0	0
	3	1	5.9
	More than 3	5	29.4
Total		17	
Length of Operation	1-10 years	0	0
	11-20 years	8	47.1
	21-30 years	6	35.3
	31-40 years	3	17.6
	Above 40 years	0	0
Total		17	
Number of Employees	1-20 employees	9	52.9
	21-40 employees	1	5.9
	41-75 employees	3	17.6
	76-100employees	4	23.5
	Above 100 employees	0	0
Total		17	100%
Number of Members	100-1,000	0	0

	1,001-2,000	2	11.8
	2,001-5,000	7	41.18
	5,001-10,000	6	35.3
	Above 10,000	2	11.8
Total		17	100%

Strategic Management Practices of the Cooperatives

Establishment of Vision, Mission, Goals and Objectives of the Cooperatives

In order to assess how clearly the cooperative set up its vision, mission, goals and objectives, respondents are tasked to answer how strongly they agree or disagree with the following statements presented in table 3. For the establishment of clear mission and vision statement, it has a mean of 4.67 and 4.63 respectively which means that the respondent cooperatives strongly agree that setting up a clear vision and mission statements is important to the cooperative. On the other hand, the level of adoption of cooperatives on the establishment of a clear strategic goals and objectives; and a regular planning session has garnered a mean score of 4.46 and 4.27 respectively. This clearly shows that management found it significant in the life of a cooperative to have a regular planning session and a clear goals and objectives.

Table 3

Clear Vision, Mission, Goals and Objectives of the Cooperatives

Strategic Management Practice	Mean	SD	QD
The organization has a clear Mission statement	4.67	.433	Strongly agree
The organization has a clear Vision statement	4.63	.556	Strongly agree
The organization has clear strategic goals and objectives	4.46	.537	Agree
The organization has a regular planning session	4.27	.511	Agree
Average Mean	4.51		Strongly agree

Scale: 1.00-1.50-strongly disagree; 1.51-2.50-disagree; 2.51-3.50 – Fairly agree;3.51-4.50 – Agree; 4.51-5.00 – strongly agree

Strategy formulation

To assess if the cooperative adopted various strategies, respondents are tasked to identify their level of adoption of the different strategies presented in table 4. All Seven items were rated with mean scores from 3.51-4.50 described as agree where customer service has the highest mean score of 4.20. This implies that cooperative services is a priority when it comes to crafting of strategies. This is in line with the principles of Marwa & Aziakpono (2015) that the welfare of the members should come first because they are the lifeblood of cooperatives wherein the bulk of revenue of the organization comes from them.

To establish how strategies are formulated by the cooperative and where does the strategy came from, respondents were required to give their views regarding the involvement of the different level of management in strategy formulation. There are four items in table 4 that pertains to strategy formulation and the mean scores are 2.80, 3.06, 3.33 and 3.50, which is described as Fairly agree. This shows that crafting of strategies may be done at times by the top management alone and/or with senior and division management and sometimes with the participation of the whole organization. Takeshi Nakayama (2018), in his study of Japanese companies suggest that managers and supervisors needs to be interested in and should be fully familiar with various strategic management tools and knows how to use them appropriately. The study found out that

managers who practice two or more strategies are likely to succeed than those who adopts one strategy only.

Table 4
Various Strategies adopted by the Cooperative

Strategic Management Practice	Mean	SD	QD
a) Market Strategy	3.77	.614	Agree
b) Product strategy	3.57	.590	Agree
c) Customer differentiation	3.80	.568	Agree
d) Pricing differentiation	3.93	.581	Agree
e) Cost control policy	3.83	.654	Agree
f) Customer service	4.20	.547	Agree
g) Advertising	3.87	.576	Agree
Average Mean	3.85		Agree

Scale: 1.00-1.50-strongly disagree; 1.51-2.50-disagree; 2.51-3.50 – Fairly agree;3.51-4.50 – Agree; 4.51-5.00 – strongly agree

Table 5
Crafting of Strategies

Strategic Management Practice	Mean	SD	QD
a) Top Management only	2.80	.496	Fairly agree
b) Top and senior management	3.06	.641	Fairly agree
c) Top, senior and division management	3.33	.512	Fairly agree
d) Top to bottom management	3.50	.518	Fairly agree

Scale: 1.00-1.50-strongly disagree; 1.51-2.50-disagree; 2.51-3.50 – Fairly agree; 3.51-4.50 – Agree; 4.51-5.00 – strongly agree

Environmental Analysis

Table 6 shows the different external environment considered by cooperative before they craft strategies. Competition ranked first because it has a mean score of 4.10 followed by technology, political factor, social and economic factor with score means of 3.6, 2.53, 3.3 and 3.27 respectively. This means that the strategies formulated by these cooperative were driven most by competition and less by political factor.

As to analysis of internal environment (table 7), result shows an average mean score of 3.77 which means that respondent cooperatives agree that they conduct internal environment analysis before crafting strategies wherein the community is their foremost consideration which has a mean score of 4.77 described as strongly agree. Other consideration are stakeholder, supplier and clients with mean scores of 3.73, 3.63 and 3.53 respectively.

Table 6
Analysis of External Environment

Strategic Management Practice	Mean	SD	QD
a) Political	2.53	.486	Fair
b) Economic	3.27	.516	Fair
c) Social	3.3	.581	Fair
d) Technology	3.6	.624	Agree
e) Competition	4.10	.592	Agree
Average Mean	3.36		Fair

Scale: 1.00-1.50-strongly disagree; 1.51-2.50-disagree; 2.51-3.50 – Fairly agree; 3.51-4.50 – Agree; 4.51-5.00 – strongly agree

Table 7

Analysis of Internal Environment

Strategic Management Practice	Mean	SD	QD
a) Government	3.20	.486	Fair
b) Culture	3.40	.542	Fair
c) Stakeholders	3.73	.512	Agree
d) Suppliers	3.63	.556	Agree
e) Clients/customer	3.53	.541	Agree
f) Community	4.77	.634	Strongly Agree
Average Mean	3.71		Agree

Scale: 1.00-1.50-strongly disagree; 1.51-2.50-disagree; 2.51-3.50 – Fairly agree; 3.51-4.50 – Agree; 4.51-5.00 – strongly agree

Monitoring and Control

To measure if the cooperative monitors the performance of the organization and has a regular internal and external audit, result shows that the respondents strongly agree that they conduct monitoring of performance of the cooperatives and instituted a regular external and internal audit because it has an average mean of 4.76 and 4.83 respectively described as strongly agree.

Table 8

Monitoring and Control

Strategic Management Practice	Mean	SD	QD
a) The cooperative monitors the performance of the organization on a regular basis	4.76	.634	Strongly agree
b) A regular external and internal audit is instituted	4.83	.597	Strongly agree
Average Mean	4.79		Strongly agree

Scale: 1.00-1.50-strongly disagree; 1.51-2.50-disagree; 2.51-3.50 – Fairly agree; 3.51-4.50 – Agree; 4.51-5.00 – strongly agree

Effect of strategic management practices on financial performance

To assess if strategic management practice has an effect on the financial performance of cooperative, respondents were asked to determine if strategic management has effect on the liquidity, profit margin, ROA, market share and sales of the cooperative. From the table below, cooperatives agreed that liquidity, ROA and profit margin is improved because of strategic management but they fairly agree on the effect of it on market share and increase in sales.

This result is supported by the analysis made on the financial statements of the multi-purpose cooperatives (see table 9) which uses financial analysis tools like current ratio to measure liquidity, net profit margin, return on assets and return on equity to measure the overall profitability of the cooperative.

It is clearly shown in table 9 that the cooperative are liquid for the past five years because their computed current ratio is above one which means that the cooperatives are able to pay their obligations when it becomes due.

As to profitability, net profit margin shows that the cooperatives were able to earn income for the past five years and it is increasing overtime. According to S&P 500 index, the benchmark of the overall market, the industry standard for return on assets is 1%, 7% for return on equity and 11% for net profit margin. Table 10 shows that the cooperative under study surpassed these industry standards. The Net profit margin is very good because it ranges from 31 % to 38%, ROA ranges from 6% - 7.5% and ROE from 21% - 24%.

Table 9
Effect of Strategic Management on Financial Performance

Strategic Management Practice	Mean	SD	QD
a) The cooperative has been liquid for the past 5 years	4.4	.432	Agree
b) The profit margin of the cooperative is increasing over time	4.23	.490	Agree
c) Return on assets is increasing	4.3	.543	Agree
d) Market share is increasing over time	2.6	.485	Fairly agree
e) There is remarkable increase on sales	2.67	.467	Fairly agree
Average Mean	3.64		Agree

Scale: 1.00-1.50-strongly disagree; 1.51-2.50-disagree; 2.51-3.50 – Fairly agree; 3.51-4.50 – Agree; 4.51-5.00 – strongly agree

Table 10
Financial Performance Analysis of MPC's from 2016-2020

Net profit margin	2016	2017	2018	2019	2020
Mean	0.31375	0.3118	0.3356	0.3493	0.3843
median	0.32	0.33	0.33	0.35	0.38
SD	0.0373	0.0418	0.0374	0.03629	0.0351
Min.	0.07	0.05	0.05	0.06	0.08
Max	0.59	0.59	0.57	0.56	0.57
Return on Assest	2016	2017	2018	2019	2020
Mean	0.06	0.054	0.06	0.065	0.075
median	0.05	0.05	0.05	0.06	0.06
SD	0.0374	0.032	0.0382	0.0527	0.0577
Min.	0	0	0	0	0
Max	0.14	0.13	0.15	0.2	0.23
Return on Equity	2016	2017	2018	2019	2020
Mean	0.211	0.177	0.195	0.208	0.245
median	0.15	0.15	0.16	0.15	0.18
SD	0.198	0.134	0.147	0.197	0.228
Min.	0.01	0.01	0.01	0.01	0.02
Max.	0.88	0.58	0.57	0.8	0.8
Current Ratio	2016	2017	2018	2019	2020
Mean	1.8	1.7	1.63	1.7	1.68
median	1.6	1.64	1.58	1.64	1.67
SD	0.885	0.475	0.317	0.356	0.296
Min.	1.13	1.24	1.23	1.21	1.2
Max.	4.88	2.9	2.49	2.49	2.44

Effect of Strategic Management Practice on Operational Performance

To get the effect of strategic management practice on the operational performance of cooperatives. Respondents are asked to give their level of agreement to the five questions presented below. It can be deduced from the result that strategic management practices have a positive effect on the operational performance of cooperatives in Ifugao because it has an average mean score of 4.46. Respondents strongly agree that strategic management help improved the quality of products and services offered by the cooperatives and it brings in continuous patronage of members.

Table 11

Effect of Strategic Management Practice on Operational Performance

Strategic Management Practice	Mean	SD	QD
a) It aids in the procurement of raw materials and timely delivery of products and services	4.43	.487	Agree
b) It aids in the utilization of human and material resources	4.23	.512	Agree
c) It brings about in the smooth operation of the different services	4.43	.535	Agree
d) Quality of products and services were improved	4.55	.523	Strongly Agree
e) There is continuous patronage and number of members are increasing	4.57	.511	Strongly Agree
f) Members and non-members are satisfied with the services of the cooperatives	4.57	.511	Strongly Agree
Average Mean	4.46		Agree

Scale: 1.00-1.50-strongly disagree; 1.51-2.50-disagree; 2.51-3.50 – Fairly agree; 3.51-4.50 – Agree; 4.51-5.00 – strongly agree

Inferential Analysis

To assess the effect of strategic management practices on the financial performance and operational performance of the cooperatives, the researcher used the regression coefficient (beta β) to test the hypothesis with the test criteria set that study should reject the null hypothesis H_0 if the p-value is $\leq \alpha$, otherwise fail to reject H_0 if p-value $> \alpha$. All the answers given by the respondents has scores which are scored marks according to the responses of the respondents. All responses pertaining to strategic management were summed up and finally divided by the number of items to get the mean score. The same procedure was repeated for other questions measuring the financial performance and operational performance. In order to test the hypothesis, the aggregate mean score of financial performance measures were regressed against the mean score of strategic management. Same procedure is done to test the relationship between strategic management and operational performance and results are shown in table 12 and table 13.

The regression result from the table below shows that there is a positive relationship between strategic management and financial performance ($\beta = .632$) and operational performance ($\beta = .747$). The relationship is statistically significant because the computed p-value is .000 for both financial and operational measures which is less than the set value of 0.05.

The study therefore rejects the null hypotheses and concludes that there is significant relationship between strategic management and financial performance and operational performance of the multi-purpose cooperatives in Ifugao. The result of the study shows that if the multi-purpose cooperatives adopts and implement strategic management practices in the management of the cooperatives, then their financial performance can improve by 63.2 percent and their operational performance improves by 74.7 percent. The practice therefore then of strategic management is a very big factor in the improvement of both financial and operational performance of the multi-purpose cooperatives.

Table 12

Regression Analysis of Strategic Management Practices against Financial Performance

Model Summary						
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate		
1	.632 ^a	.400	.383	.46570		
a. Predictors: (Constant), Strategic Management practices						
ANOVA^b						
Model		Sum of Squares	df	Mean Square	F	Sig. (p-value)
1	Regression	5.060	1	5.060	23.333	.000 ^a
	Residual	7.591	35	.217		
	Total	12.651	36			
a. Predictors: (Constant), strategic management						
b. Dependent Variable: Financial performance (Liquidity, ROA, Sales)						
Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.840	.709		1.186	.244
	VAR00003	.893	.185	.632	4.830	.000
a. Dependent Variable: financial performance						

Table 13

Result of Regression of Strategic Management Practices against Operational Performance

Model Summary						
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate		
1	.747 ^a	.557	.545	.34459		
a. Predictors: (Constant), Strategic Management practices						
ANOVA^b						
Model		Sum of Squares	df	Mean Square	F	Sig. (P-value)
1	Regression	5.234	1	5.234	44.082	.000 ^a
	Residual	4.156	35	.119		
	Total	9.390	36			
a. Predictors: (Constant), strategic management						
b. Dependent Variable: Operational performance						
Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.755	.524		1.441	.159
	VAR00003	.908	.137	.747	6.639	.000
a. Dependent Variable: operational performance						

Summary of Findings, Conclusion and Recommendations

Summary of Findings

This study examines the impact of strategic management on the business performance of multi-purpose cooperatives in Ifugao. The survey strategy was adopted to collect data from these cooperatives with the aid of a structured questionnaire. There are 17 multi-purpose cooperative included in the study which are selected based on a criteria presented in chapter 3 of this study. The result of the study showed that the multi-purpose cooperative in Ifugao practiced strategic management in the operations of their business because they have set clear vision, mission, goals and objectives, crafted various strategies and implemented these strategies. The regression analysis showed also a positive relationship between strategic management and financial performance and operational performance and rejected the null hypotheses because of the computed p-value of .000 which is lower than the set value of 0.05. The study found that strategic management practices significantly and positively affects the financial and operational performance of the cooperatives. The result of this study goes with the study of Lilingu, Marangu & Masungu (2015) that studied the effect of strategic planning with the organizational performance of SACCO's in Kenya and found out the strategic planning has significantly affects the overall organizational performance of the SACCO's. Agwu (2018) also got the same result when he studied the impact of strategic management on the business performance of SME's in Nigeria and admitted the reality that strategic management is important in the life of every business entity.

Conclusion

Every organization, either private, public or people's organization like cooperatives must admit that adopting strategic management is indeed important for the improvement of business performance. Various studies recommends that all organization need not only define the vision, mission and goals of the organization but also diligently seek to apply numerous strategic management principles. This conclusion is in line with Dauda, Akingbade & Akinlabi (2010) which declares that the adoption of strategic management practice is indispensable in small and medium scale firms who are prone to bankruptcy and exposed to stiff competition. To be able to gain competitive advantage, the firms or organizations must look for a way to combat the ill effect of competition and adopting strategic management practice at different levels of the organization is of great help.

Recommendation

For strategic management practices to take effect and works best for the organization, the following are highly recommended:

1. When formulating strategies, General Managers or the Chief Executive Officers of the Cooperative should take into account all necessary steps required to come up with a sound and effective strategy.
2. Strategic management entails cost, general managers should then institute a process of deciding on the objectives and strategies of the organization and on the proper allocation of resources to attain the objective.
3. Developing and formulating of strategies should be a concern of everyone in the organization, Top management should develop an approach to get the best ideas from the organization.

4. For managers and for everyone in the business organization, decision making is a daily if not an all-the-time task or duty. Strategic decision are sometimes doubted and questioned because there are consideration that others need to be informed. The general manager should adopt approaches or modalities by which strategic decisions are made.
5. Board of directors should be involved in the policy and strategy development process of the cooperative especially with cooperatives where Board of directors do not hold position in the management of the organization

References

- Adam, F.G. and Graham, K.W., (2016). Integration, knowledge creation and B@B governance: the role of resource hierarchies in financial performance. *Industrial Marketing Management*, 63, 179-191. <https://dx.doi.org/10.1016/j.indmarman.2016.10.009>
- Agwu, M. (2018). Analysis of the impact of strategic management on the business performance of SMEs in Nigeria. *Academy of Strategic Management Journal*, 17(1), 1-20
- Amoli, J.S., & Aghashahi, F. (2016). An investigation on strategic management success factors in an educational complex. *Procedia-Social and Behavioral Sciences*, 230, 447-454. Doi:10.1016/j.sbspro.2016.09.056
- Crabb, A. W. (2012). Sustainable strategic management and market effectiveness of enterprises. *Procedia-Social and Behavioral Science*, 58, 899-905. Doi:10.1016/j.sbspro.2012.09.1068
- Chander, R. and Chandel, J.K., (2010). Financial viability of apex credit institution – a case study of the HARCO bank. *Asia Pacific Business Review*, 6(2), 61-70. <https://doi.org/10.1177/097324701000600206>
- Chareonwongsak, K. (2017). Enhancing board board motivation for competitive performance of Thailand's co-operatives. *Journal of Co-operative Organization and Management*. 2017, <https://dx.doi.org.10.1016/j.jcom.2017.01.001>
- David, F. R. (2013). *Strategic management: A competitive management approach, concepts and cases* (14th Edn.) Pearsons Educational, Inc. London
- Dauda, Y. A., Akingbade, W.A., & Akinlabi, H. B., (2010). Strategic management practices and corporate performance of selected small business enterprises in Lagos, Metropolis. *International Journal of Business and Management*, 5(11), 97-105. Retrieved at: www.ccsnet.org/ijbm
- Dogan, N. (2015). The intersection of entrepreneurship and strategic management: strategic entrepreneurship. *Procedia – Social and Behavioral Sciences*. 195, 1288-1294. Retrieved at: www.sciencedirect.com. Doi: 10.1016/j.sbpro.2015.06.290
- Fratz, E. (2017). SME's: The effects of strategic management. *IEEE Technology & Engineering Management Conference (TEMSCOM)*. Rerrieved
- Adam, F. G., & Graham, K. W., (2016). Integration, knowledge creation and B2B governance: the role of resource hierarchies in financial performance. *Industrial Marketing Management*, 63, 179-191. <http://dx.doi.org/10.1016/j.indmarman.2016.10.009>
- Esnard, R., Lyne, M., and Old, K. (2017). Factors affecting the value added by agricultural cooperatives in Saint Lucia: an institutional analysis. *Journal of Co-operative*

- Organization and Management*, 5, 73-79.
<http://dx.doi.org/10.1016/j.jcom.2017.10.003>
- Hakelius, K. (2018). Understanding the board of Swedish farmer cooperatives – cases focusing on board composition and interaction patterns. *Journal of Co-operative Organization and Management*. <https://doi.org/10.1016/j.jjcom.2018.06-001>
- Jaqua, F., (2014). Strategic management practices in Tunisian SMEs involved in the upgrading program. *International Journal of Advanced Research*, 2(5), 190-203. Retrieved at: <http://www.journalijar.com>
- Jasra, J. M. et. al., (2011). Determinants of business success of small and medium enterprises. *International Journal of Business and Social Science*, 2(20), 274-280. Retrieved at: <http://ssrn.com/abstract=2130356>
- Jung, S.C. (2014). The analysis of strategic management of samsung electronics company through the generic value chain model. *International Journal of Software Engineering and its Applications*, 8(12), 133-142. <http://dx.doi.org/10.1425/ijseia.2014.8.12.12>
- Khan, R., & Huda, F. (2016). The impact of strategic management on the performance of health care organizations (A study of three selected tertiary health care center in Karachi, Pakistan). *Arabian Journal of Business and Management Review*, 6(5), 1-4. Doi: 10.4172/2223-5833.1000253
- Lab-oyen, L.P. (2018). Issues and challenges confronting cooperatives. The Herald Express. Baguio City, Philippines. <https://www.baguioheraldexpressonline.com/issues-and-challenges-confronting-cooperatives>
- Leitner, K., & Guldenberg, S. (2010). Generic strategies and firm performance in SMEs: a longitudinal study of Austrian SMEs. *Small Business Economics*, 35(2), Special Issue: Gazelles, Growth Processes and Gibrat's Law, pp. 169-189. <https://www.jstor.org/stable/40802534>
- Lilungu, D., Marangu, W., & Masungu, T. (2015). Effects of strategic planning on the performance of savings and credit co-operative in Kakanega County, Kenya. *European Journal of Business and Management*, 7(15), 18-30. Retrieved at <https://www.iiste.org>
- Mahazril, A. Y., Hafizah, H., & Zuraini, Y. (2012). Factors Affecting Cooperatives' Performance in Relation to Strategic Planning and Members' Participation. *Procedia - Social and Behavioral Sciences*, 65, 100-105. Retrieved at <https://www.sciencedirect.com>
- Mathuva, D.M., & Kiweu, J.M., (2016). Cooperative social and environmental disclosure and financial performance of savings and credit cooperatives in Kenya. *Advances in Accounting, Incorporating Advances in International Accounting*. <https://dx.doi.org/10.1016/j.adlac.2016.09.002>
- Maroua, B. (2018). The impact of the multi-stakeholders governance on the performance of cooperative banks: evidence of European cooperative banks. *Procedia-Social and Behavioral Sciences*, 195, 713-720. Retrieved at: www.sciencedirect.com, Doi:10.1016/j.sbspro.2015.06.341
- Masuku, T., Masuku, M., & Mutangira, J. (2016). Performance of Multi-purpose Cooperatives in the Shiselweni Region of Swasiland. *International Journal of Sustainable Agricultural Research*, 58-71. Retrieved at <https://www.eajournals.org>

- Maugbo, U.S. (2013). The impact of strategic management on organizational growth and development (a study of selected manufacturing firms in Anambre state). *IOSR Journal of Business and Management*, 7, 24-32. Retrieved at: <https://www.iosrjournals.org>.
- Monday, J.U., & Aladeraji, O. K. (2015). Strategic management and corporate performance: A resource-based approach. *Ife Journal of the humanities and Social Studies*, 2, 137-150. Retrieved at: <https://www.researchgate.net/publication/313475579>
- Muriuki, J. W., Cheruiyot, T., & Komen, J. (2017). Strategic management practices and sustainability of state corporations. *European Journal of Business and Social Sciences*. 6(6), 38-49
- Nakayam, T. (2018). Empirical study on the application of strategic management tools and techniques in Japanese Companies. *European Journal of Business and Management*, 10(10), 134-144, retrieved at: www.iiste.org
- Omsa, S., Ridwan, M., & Jayadi, M., (2018). The effect of strategic management practices on SME performances in Makasar, Indonesia. *American Journal of Theoretical and Applied Business*, 3(4), 71-80. Retrieved at: <http://www.sciencepublishinggroup.com/j/ajtab>, doi: 10.11648/j.ajtab.20170304.12
- Pearce, J.A., & Robinson, R.B. (2007). *Strategic Management: Strategy Formulation and Implementation*, New York
- Peteraf, M., & Bergen, M. (2003). Scanning dynamic competition landscapes: A market-based and resource-based framework. *Strategic Management Journal*, 24(1), 1027-1041
- Slavik, J., Putnova, A., & Cebakova, A., (2015). Leadership as a tool of strategic management. *Procedia Economics and Finance*, 26, 1159-1163, retrieved at: www.sciencedirect.com, doi:10.1016/S2212-5671(15)00946-6
- Strand, R. (2014). Strategic leadership of corporate sustainability. *Journal of Business Ethics*, 123(4), 687-706, <https://www.jstor.org/stable/24033146>
- Suarez, E., Calvo-Mora, A., & Roldan, J. (2016). The role of strategic planning in excellence management systems. *European Journal of Operational Research*. 248, 532-542. <http://dx.doi.org/10.1016/j.ejor.2015.07.008>
- Orcullo, N. (2007). *Fundamentals of strategic Management*. Rex Bookstore, Inc., Manila, Philippines
- Ramirez, B. (2014). Improving sustainable development outcomes through best management practices. *Consilience: The Journal of Sustainable Development*, 12, 25-45. Retrieved at: <https://www.jstor.org/stable/26476150>
- Thompson, A.A., & Strickland, A. J. (2007). *Strategic Management: Concepts and Cases*, (11th Edn.), New York: Prentice Hall, Inc.
- Waweru, P.K., & Omwenga, J. (2015). The influence of strategic management practices on performance of private construction firms in Kenya. *International Journal of Scientific and Research Publications*, 5(6), 1-36 retrieved at: <https://www.ijsrp.org>
- Whellen, T.L., Hunger, J.D., Hoffman, A.N., & Bamford, C.E (2014). *Strategic Management and Business Policy: Globalization, Innovation and Sustainability* (14th Edn.), New York: Prentice Hall, Inc.