



**EFFECT OF CORPORATE DIVERSIFICATION STRATEGY ON CORPORATE PERFORMANCE OF HASHI ENERGY (K)
LTD**

Ahmed, A. M., & Simba, F.

EFFECT OF CORPORATE DIVERSIFICATION STRATEGY ON CORPORATE PERFORMANCE OF HASHI ENERGY (K) LTD

Ahmed, A. M.,^{1*} & Simba, F.²

^{1*} Master Scholar, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Mombasa, Kenya

² Ph.D, Lecturer, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Mombasa, Kenya

Accepted: April 10, 2019

ABSTRACT

The purpose of this study was to examine the effect of corporate diversification strategy on strategic performance of Hashi Energy Ltd. The study adopted a descriptive research design. The target population comprised 98 senior employees in the firm with knowledge on corporate diversification strategies. A sample of 87 respondents was obtained using formula proposed by Yamane. Data collection was done through the use of closed-ended questionnaires. Factor analysis was used to identify the underlying factors. Descriptive statistics was used to summarize the results for each of the main variables. Pilot study was carried out to determine the validity and reliability of data collection instruments. Data analysis was done using SPSS version 23 to generate quantitative reports which were presented in the form of tabulations, percentages, mean and standard deviation. The study showed a significant positive relationship between the predictor variables and corporate performance. The study concluded that diversifying into related business generated higher profit than diversifying into unrelated business. The study also concluded that horizontal mergers led to the consequence of a sudden increase in the quantity of output. The researcher concluded that firm had achieved conglomerate diversity through buying existing businesses rather than starting new operations from scratch. The study concluded that diversifying into unrelated business provided less incremental value. The study recommended that managers in the firm should invest in feasibility studies aimed at analyzing the factors that influence related diversification. The study also recommended that the company should conduct regular monitoring and evaluation intended to measure the effectiveness of the adopted diversification strategies.

Key terms: *Diversification, Geographic diversification, Related diversification, Strategic performance, Unrelated diversification, Vertical diversification*

CITATION: Ahmed, A. M., & Simba, F. (2019). Effect of corporate diversification strategy on corporate performance of Hashi Energy (K) Ltd. *The Strategic Journal of Business & Change Management*, 6 (2), 404 – 323.

INTRODUCTION

In this new era, where technological innovations are growing at a fast pace leading to a more globalized world, corporations are facing a change in their form, structure and scope. These new technologies engendered goods to be produced at lower costs, compared to what organizations could achieve using older technologies. In order to benefit from these production opportunities, firms require reliable supplies of inputs, access to widespread distribution and retail outlets. Based on these necessities, the relationships among manufacturers, their suppliers, and their distributors have been affected by this product line and volume expansion (Gul, 2013).

Delios and Beamish (2012) puts forth that diversification can involve expanding, revitalizing, or even saving a company. Most investment professionals agree that, although it does not guarantee against loss, diversification is the most important component of reaching long-range financial goals while minimizing risk. According to Ansoff (2011), a diversification strategy is the entry into new markets with new products. Most scholars use the definition provided by Rumelt (2010) who refers to diversification as the strategy of adding related product or service lines to existing core business, either through acquisition of competitors or through internal development of new products or services, which implies increase in available managerial competence within the firm (Iqbal *et al.*, 2012).

Diversification strategy can be driven by a range of perceived benefits associated with greater market power, more efficient allocation of resources through internal capital markets, utilization of existing resources in new settings, or reduced performance variability by virtue of a portfolio of imperfectly correlated set of business. This means that using corporate resources in two business units can exploit any synergies between the two (for example, in manufacturing or distribution) to achieve cost or

differentiation advantages over undiversified firms. Same advantages stem from tax and other financial advantages associated with diversification (Knoll, 2008). But these benefits depend on institutional development. If institutional development is high, diversification strategy is less beneficial in more developed institutional economies (Kock&Gulline, 2012).

Any company's strategic emphasis is increasing sales volumes, boosting market share and cultivating a loyal clientele. Organizations pursue opportunities for geographical market diversification. The natural sequence for geographical diversification is local to regional to national to international. The degree of penetration will however differ from area to area depending on the profit potentials (Thompson & Strickland, 2010). The strategies of diversification can include internal development of new products or markets, acquisition of a firm, alliance with a complementary company, licensing of new technologies, and distributing or importing a products line manufactured by another firm. Generally, the final strategy involves a combination of these options. This combination is determined in function of available opportunities and consistency with the objectives and the resources of the company (Machel, 2012).

Diversification strategies are used to expand firms' operations by adding markets, products, services, or stages of production to the existing business. The purpose of diversification is to allow the company to enter lines of business that are different from current operations. When the new venture is strategically related to the existing lines of business, it is called concentric diversification. Conglomerate diversification occurs when there is no common thread of strategic fit or relationship between the new and old lines of business; the new and old businesses are unrelated (Thompson & Strickland, 2010). There are three main forms of corporate diversification that have been practiced by a number

of organizations around the world. The first type of diversification is the limited diversification. This form of business diversification occurs when a firm has all or most of its business activities under the same geographical area or industry. Companies that produce and sell a single line of products are most likely to fall into this category of diversification. Firms that pursue limited corporate diversification strategy do not leverage their resources and capabilities beyond a single product or market. In this case therefore, limited corporate diversification is less similar to business level strategic planning (Geringer, Tallman and Olsen, 2010).

The other form of corporate diversification is related corporate diversification. This form of diversification usually happens when a firm starts to engage in more than one product or single market. This means that the company starts to produce more than one product and also ventures into other markets. If less than 70% of the revenue earned by a company comes from one product market and the multiple business lines are linked. The multiple businesses that a business firm pursues can be related in two ways. The first relationship may happen when most of the businesses operated by the company share inputs, production technology, distribution channels and even customers. Corporate managers are more likely to pursue business opportunities in new markets or industries if such industries share numerous opportunities and resources (Patricia, 2013).

Geringer, Tallman and Olsen (2010) asserts that the last form of corporate diversification is unrelated diversification. Under this form of corporate diversification, a firm pursues a number of business activities that are not totally related and may not be sharing any resources, production technology or even customers. In this case, less than 70% of the revenue of the company may come from a single product market but few business activities share any or no attributes. A number of companies across the globe engage in the production of a number of products

that are different and require different inputs. Most companies that engage in unrelated diversification normally manage each and every business as if it were a standalone entity.

Firm diversification has been extensively researched both empirically and theoretically in the fields of strategy and finance for more than 30 years. The literature on diversification generally focuses on the economic rationale behind the diversification-performance relationship, and the main common objective of this work has been to verify the effect of diversification on the creation or destruction of firm value. Thus, the researches' center of attention has been on the performance of the diversified firms compared to specialized firms (Santalo & Becerra, 2014).

Ravichandran *et al.*, (2011) posits that firms may choose to diversify into related or unrelated markets, based on the similarity or relatedness of the new business. "Related diversification is believed to lead to better performance than unrelated diversification because the former leverages significant business synergies while the latter suffers from agency costs and inefficient resource allocation." This belief has been widely studied by many scholars. Prahalad and Bettis (2013) explain this logic more in depth, by indicating the four major and nine minor categories that Rumelt (2010) has used to identify the diversification strategies of the firms. The major categories are to be single business, dominant business, related business and unrelated business. Rumelt (2010) has used statistical models to relate diversification strategy to performance and pointed out that capital productivity is greater in moderately diversified firms. However the firms in between moderate and high levels of unrelated diversification acquired moderate or poor productivity. In other words, on the average related diversification strategies outperformed the other diversification strategies. On the other side, the unrelated business strategy was observed to be the lowest performing

(Prahalad&Bettis, 2013). Moreover, “Capon (2012) and his colleagues found that firms that restricted their diversification to narrow markets performed better than did broader firms, presumably because of their learning particular market demands.” (Besanko *et al.*, 2012) Although the theoretical and empirical findings on the area of diversification are quite rich, the results have not been consistent. Despite the inconclusive results, diversification has been an effective firm strategy for growth (Ravichandran *et al.*, 2011).

Theoretical arguments indicate that corporate diversification is associated with both costs and benefits to the firm which leads to financial performance of the firm (Denis & Yost, 2010). Potential costs of diversification include the use of larger discretionary resources to undertake value-decreasing investments, cross-subsidies that allow poorly performing segments to drain resources from better-performing segments, and misalignment of incentives between central and divisional managers. This highly contributes to financial performance of firms since the potential benefits of operating different lines of business leads to greater operating efficiency, fewer incentives to forgo positive net present value projects, greater debt capacity, and lower taxes (Jensen & Murphy, 2013).

There are a lot of evidences about that diversification should have a positive influence on performance due to economies of scope, and scale, market power effects, risk reduction effects and learning effects. Additionally, most empirical studies on the relationship between diversification and organizational performance are shaped into four types. The first type is inverted U shape. Thus; there is a nonlinear relationship between diversification and organizational performance. As the diversification degree increases to some average level, the performance will also increase, however, after an average level the company performance will decrease (Palichet *et al.*, 2013). This curvilinear

relationship between diversification and organizational performance is based on the level of diversification (Palichet *et al.*, 2013, Kakani, 2012). Second type is based on the findings showing a positive relationship between diversification and organizational performance (Singh *et al.*, 2011; Piscitello, 2013), a negative relationship (Markides, 2010; Lins&Servaes2012), or lack of a relationship (Grant *et al.*, 2013). The third type is based on the style of diversification especially categorised as related and unrelated diversification. Some studies found that related diversified firms perform better than those that are unrelated (Varadarajan&Ramanujam, 2012). The fourth type is based on the differences of countries. Several studies depicts that diversification is more likely to be profitable in developing countries (Khanna & Palepu, 2014).

In general, the potential returns from diversification decrease with market and institutional development, so that diversification would not improve firm performance in perfect markets. So it is expected that firms in less institutionally developed economies will benefit more substantially from diversification than firms in more institutionally developed economies (Chakrabartiet *et al.*, 2013). Thus, new studies between developed and developing economies or countries in business groups should be carried out to examine the diversification strategy and organizational strategic performance relationship.

Diversification has become an increasingly important aspect of doing business in the world today (Elango& Ma, 2012). Academic interest in the topic of diversification is evident by the level of attention it has received over the last few decades. The relationship between diversification and firm performance has been the subject of abundant research in several fields. However, many researchers concurred on the fact that there is no agreement on the precise nature of the relationship between

diversification and performance (Hoskisson and Hitt, 2012;Palich, Cardinal and Miller, 2013). Some studies have shown that diversification improves profitability over time (Chang & Thomas, 2012; Lubatking& Rogers, 2010) whereas others have demonstrated that diversification decreases performance (Michel &Shaked, 2013). Still other studies have shown that the diversification-performance link depends on business cycles (Hill, 2010). The empirical evidences emerging from various studies about the effect of diversification on performance have so far yielded mixed results that are inconclusive and contradictory. Because of these contradictory results (Ramanujam&Varadarajan, 2010) the relationship between diversification and performance is controversial.

In addition, despite the existence of these studies, very little attention has been given to the developing countries. Besides, relationship between corporate diversification strategy and firm performance has not received adequate research attention in Kenya. This means that there is a major gap in the relevant literature on developing countries including Kenya, which has to be covered by research. Locally Hashi energy has implemented a number of diversification strategies. The strategies range from product diversification to geographical diversification in order to remain competitive. The aim of this diversification was to enhance the strategic performance of the firm and to improve on its efficiency and effectiveness. However there is no evidence yet whether the diversification strategy has enhanced the strategic position of the firm. This scenario motivated the study on the relationship between corporate diversification strategy and firm strategic performance. This research attempted to fill this gap by examining the effect of corporate diversification strategy on corporate performance of Hashi Energy.

Research Objectives

- To establish the effect of related diversification strategy on corporate performance of Hashi energy
- To determine the effect of unrelated diversification strategy on corporate performance of Hashi energy
- To examine the effect of geographic diversification strategy on corporate performance of Hashi energy
- To find out the effect of vertical diversification strategy on corporate performance of Hashi energy

Research Hypotheses

In order to achieve the objectives of the study, the study proposed the under mentioned null hypothesis:

H0₁: There is no significant effect of related diversification strategy on corporate performance of Hashi energy

H0₂: There is no significant effect of unrelated diversification strategy on corporate performance of Hashi energy

H0₃: There is no significant effect of geographic diversification strategy on corporate performance of Hashi energy

H0₄: There is no significant effect of vertical diversification strategy on corporate performance of Hashi energy

LITERATURE REVIEW

Theoretical Review

Theories as defined by Gill and Johnson (2010) are a formulation regarding the cause and effect relationships between two or more variables which may or may not have been tested. As cited by Mugenda and Mugenda (2012), good research should be grounded in theory. Hence this study will be based

on the following theories- agency theory, resource based theory and Signaling theory. A discussion of these theories follows.

Signaling Theory

The signaling theory is applied in explaining the information content of management actions to the market. Whenever an organizational management makes announcements, they send some signals to the market which is used by investors in making their investment decisions. The investors use the information to predict the implied future performance expected by an organization so that it can guide their investment decisions. It is believed that the management team of an organization possesses superior information on the true value of the firm which the external parties may not access.

Secondly, another signaling theory hypothesis is implied cash flow hypothesis which is anchored on the notion that management team have more knowledge and information about an organization than external investors. It claims that the extent of diversification of firms operations communicates the managements' desire to optimize financial performance. In diversification and financial performance, this theory has been applied to hold that in cases where companies foresee investment projects with positive net present values, they will invest in them thereby signaling to the general public of their future better financial performance.

Agency Theory

The theory was developed by Jensen and Meckling in 1976, and it holds that following the separation of management and firm ownership, there arises agent-principal relationship that needs to be managed for better management (Pratt &Zeckhauser, 2010). Following the divergent views between agents who are the managers and shareholders, the firm may undertake various diversification strategies for various reasons. In order to harmonize the aspirations of managers and the shareholders, some agency costs

have to be incurred for a healthy financial position in such organizations. Agency theory argues that the effect diversification has on financial performance is a function of the power of a firm's management and the effectiveness of collective governance mechanisms. The theory asserts that personal motives of managers constitute the reason for diversification of firms. It explains that information asymmetry makes it difficult for shareholders to access, evaluate and interpret all records and details pertaining to opportunistic managerial behavior.

Without proper governance measures, there would be disagreements arising as a result of managers pursuing personal gain (agency cost) while shareholders aim to capitalize on profit making. Shareholders can, however put in place proper mechanisms for governance like creating boards of directors to check management from employing too much agency costs and over diversifying as well as accruing personal gain. Shareholders may further compel firms to use debt finance to fund new projects instead of equity. Mole (2012) argues that agency theory explains firm performance decision through determinants such as company size, liquidity, return on equity and the general prices in the economy (Inflation).

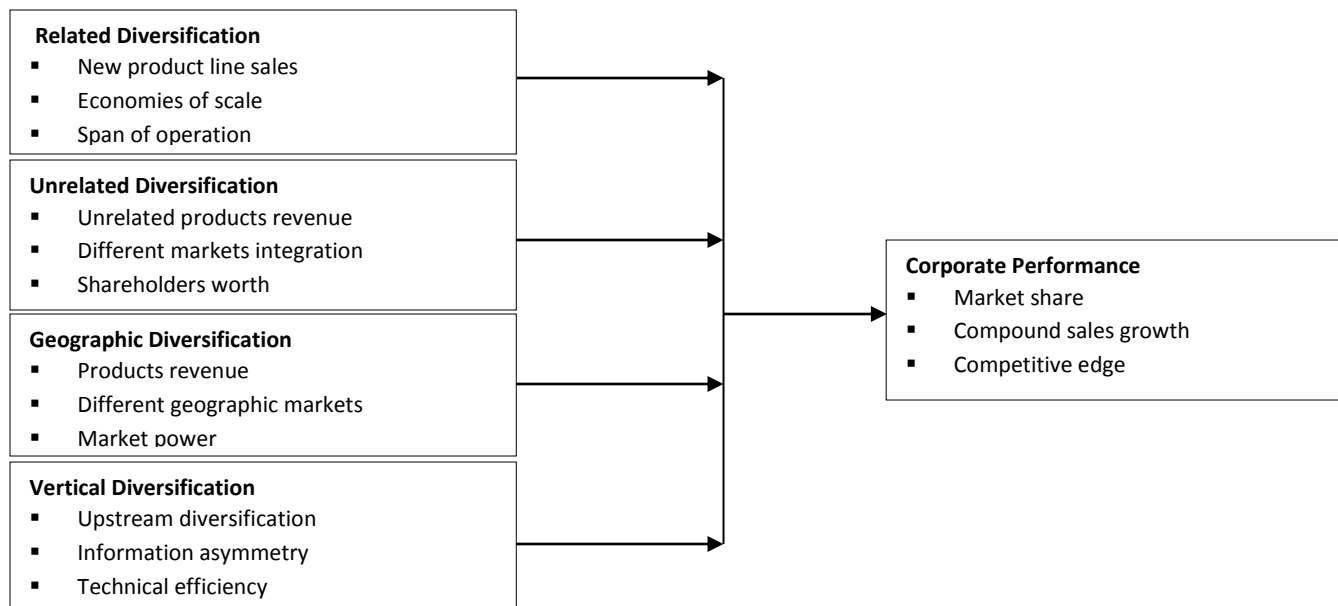
Resource Based View Theory

The resource view argues that rent-seeking firms diversify in response to excess capacity in productive factors, here called resources" (Montgomery, 2013). Under this perspective, firms acquire companies to keep the balance among the required competitive profile and competences, and their current endowments of resources. However, the amount of resources available are limited, therefore firms are not limitless in their ability to pursue new investment opportunities (Wiersema& Bowen, 2012). Apart from this limitation, conglomerate acquisition may be undertaken by the same motives for acquiring competitive profile and competences. Other reasons may be the need for growth, and to utilize the excess

capacity the firm possesses. These idle resources should be reused in more productive and profitable areas. Therefore the question to be answered is, how best the firm can exploit these resources outside of its current operations. In the book of Silverman (2010), three sets of factors are pointed out as the firm's diversification behavior. Initially is the specific range of applications to which the firm's current resources may be useful. These depict the possible set of businesses in which the firm's resource base will provide competitive advantage. The second is the scope of transaction costs in the relevant markets for the firms existing resources. These determine the firm's ability to exploit its resources through

contractual arrangements, which can prevent the need for expansion of the firm's boundaries. The third set of factors deal with the sustainability of the competitive advantage furnished by the firm's resources. For the reason of prioritization, a firm will decide on to focus first on the exploitation of those resources that offer the most sustainable competitive position, since it cannot use all of its resources at once. Finally, "in order to generate sustainable competitive advantage, it has been argued that firms' resources and capabilities should be rare, valuable, difficult to imitate, non-substitutable and non-transferable in that they cannot be easily purchased in resource markets" (Matraves&Rondi, 2010).

Conceptual Framework



Independent Variables

Dependent variable

Figure 1: Conceptual framework

Source: Author (2019)

Related Diversification and Strategic Performance

Related diversification is a strategy applied by an organization to expand its operations into new products and markets offering though limited to the existing investment lines (Grant, Butler, Hung, and Orr, 2011). It occurs whenever an organization's new business production lines have similarities with the

existing businesses operations or activities (Lahovnik, 2011). Pandya and Rao (2012) were in the view that diversifying into related business generated higher profit than diversifying into unrelated business and on an average highly diversified firms showed better results than less diversified and single product firms. The decision regarding diversifying the business in

based on some factors. Management decides whether to diversify into related or unrelated business. If the management is familiar with the market and technology of the related business then it will provide significant results. It will also reduce the total risk of the firm.

Besankoet *al.*, (2011) indicate that a firm's horizontal boundaries determine the quantities and varieties of products and services that it produces. It refers to a merger of two or more firms producing the same good under one consolidated firm (Chakravarty, 2010). Horizontal boundaries vary obviously across industries and across the firms within them. The optimal horizontal boundaries of the firms are appertaining crucially to economies of scale and scope. Economies of scale and scope exist whenever large-scale production, distribution, or retail operations have a cost advantage over smaller operations. "Economies of scale and scope not only affect the sizes of the firms and the structure of markets, but they are also central to many issues in business strategy" (Besankoet *al.*, 2011).

Economies of scale and scope are the essence for merger and diversification strategies. They have an effect on entry and exit, pricing, and the capability of the firm to protect its long-term sustainable advantage. Horizontal mergers lead to the consequence of a sudden increase in the quantity of output when the output of each merging firm is combined. While each firm has the opportunity to learn from the experience of the other firm, this learning may not engender the cumulative output of the merged entity to increase more. In the period subsequent the merger this output may increase, hence creating opportunity for further learning. However, if the output of the merged company is already large, it is expected to have passed the minimum efficient learning scale of cumulative output (Sudarsanam, 2011).

Unrelated Diversification and Strategic Performance

Unrelated or conglomerate diversification is a strategy applied by organizations to expand their area of operations beyond existing strategic capabilities such that the new businesses developed have little or no similarities with existing businesses operations (Thompson *et al.*, 2012). This strategy has been successfully applied by Companies like General Electric among others on the global scene to improve their overall performance (Kenny, 2012). Geographical diversification is the process where a firm moves to new markets outside the home markets. This may include movements to regional or geographical countries. Conglomerate merger involves the integration of firms that operate in different product markets, or in the same product market but in different geographic markets.

In business, a conglomerate is a company involved in multiple lines of business that have little relationship to one another. One well-known example is Warren Buffett's Berkshire Hathaway, which owns companies as varied as utilities, newspapers, food processors and furniture stores. Conglomerate diversity, then, refers to diversification by entering entirely new and unrelated lines of business. If you owned, say, a hardware store and then bought a car wash, you'd be engaged in conglomerate diversification. Typically, companies achieve conglomerate diversity through acquisitions, buying existing businesses rather than starting new operations from scratch. According to various authors, geographical diversification boosts the worth of shareholders by taking advantage of specific assets, by accelerating functioning flexibility and by satiating investors' preferences for holding worldwide diversified positions. Diversifying into unrelated business is likely to provide less incremental value and it has effect on weighted average systematic risk. Rumelt (2010) identified that strategic decision regarding diversifying into core skills or into unrelated business is having important consideration while measuring performance. While

Wernerfelt, and Montgomery (2012) viewed that closely diversified firms performed better than broadly diversified firms. They concluded that there is positive result and higher performance when we focus positively. The differences in performance may be resulted from when we transfer efficiencies to broader markets which is changeable.

Geographic diversification and Strategic Performance

Geographic diversification is identified as the firm's expansion into various geographic locations or markets across the borders of regions and countries (Hittet *al.*, 2010). "Thus, a firm's level of international diversification is reflected by the number of different markets in which it operates and their importance to the firm (as measured, for instance, by the percentage of total sales represented by each market)." This type of diversification strategy has its motivations as well as downsides. Denis *et al.*, (2012) identify several motivations as; global diversification is a mechanism that combines the information-based assets of buyers and sellers within the same firm. It generates value by creating flexibility within the firm, by giving the ability to respond to changes in relative prices. In addition, investors' diversification choices can result as the benefit of geographic diversification. Ravichandran *et al.*, (2011) adds the scope and scale economies, enhanced market power, and the ability to supply lower-cost factor inputs to the benefits of global diversification. Moreover, "increased operational flexibility by global diversification reduces the risks across the markets." (Kim & Mathur, 2010) However as from the downside perspective, a globally diversified entity is more complex compared to a purely domestic firm. The costs of information asymmetry between corporate headquarters and the difficulty of monitoring managerial decision-making may give rise (Denis *et al.*, 2012).

Based on the empirical studies conducted, Ravichandran (2011) and his colleagues specify that, "multinational corporations (MNCs) experienced a

positive valuation effect relative to purely domestic firms because of their role as financial intermediaries." Moreover, Lepetit *al.*, (2009) illustrate that the announcements of the mergers and acquisitions beyond regions and countries have a positive effect on the market. On the other hand, the effect on firm performance may be negative due to high transaction costs and managerial-information processing demands. Moreover, Delios & Beamish (2009) have found a positive relationship between the geographic scope and firm's performance by collecting a data of 399 Japanese manufacturing firms. Their findings illustrate that expanding into new geographic markets is an effective strategy for developing the performance of Japanese companies. However, in the study of Kim & Mathur (2010) where a sample of 28,050 firm year observations from 1990 to 1998 was used, a firm value decrease was associated for both industrial and geographic diversification.

Vertical diversification and Strategic Performance

Vertical diversification occurs when the company goes back to previous stages of its production cycle or moves forward to subsequent stages of the same cycle - production of raw materials or distribution of the final product. For example, if you have a company that does reconstruction of houses and offices and you start selling paints and other construction materials for use in this business. This kind of diversification may also guarantee a regular supply of materials with better quality and lower prices (Iqbal *et al.*, 2012). Sudarsanam (2010) defines vertical integration as "the combination of successive activities in a vertical chain under common coordination and control of a single firm." Vertical integration defines the activities that the company performs within its boundaries, compared to the purchases from independent firms in the market (Besanko *et al.*, 2010). In other words, vertical merger replaces two or more independent firms with a single

firm, and rather than relying on arm's length market-based transactions or contractual dealings, it internalizes the coordination of the successive activities of the firm.

Corporate Performance

Firm Performance is how well or badly a firm is performing both financially and non-financially (Ramanujam & Venkatraman, 2010). Kaplan and Norton (2012) concur with these authors and argue that Balanced Scorecards Strategy considers financial indications as one of the critical measures of Firm Performance. They further argue that one of the goals of strategic planning is to make profits besides realizing other financial and non-financial benefits. Steiner (2012) contends that formal Strategic Planning links short, intermediate and long range plans. The direct impact on financial performance is also used as a general measure of a firm's overall financial health over the specific period. Without financial success, virtually no business survives for long. Therefore, the use of strategic plans leads to improved financial performance (Kargar & parnell, 2010).

Various studies attempted to determine the appropriate measure of performance that captures all performance goals. Different proxies used in these studies contributed to the ambiguous findings pertaining to diversification and performance relationship. Most literature employed accounting measure as a proxy of performance. Nevertheless, this measure has been criticized because it is subject to manipulation (Buhner, 2013). Since investors made investment decision based on accounting numbers, better results should lead to higher share prices (Dubofsky&Varadarajan, 2007). However, the evidence is mixed where accounting measure of performance support undiversified firms in contrast to market measure of performance which favor diversified firms (Dubofsky & Vadarajan, 2010). The reason for dissimilar evidence may suggest existence

of market imperfections as well as different proxies used for accounting measure (Lee *et al.*, 2011).

METHODOLOGY

This study adopted a descriptive research design. This is because descriptive studies are conducted to demonstrate associations or relationships between two variables. This design has been used by several authors in their research on diversification strategy (Kariuki, 2013; Maina, 2013; Karanja, 2013). Data collected was coded into SPSS, after which the analysis began. The analysis was enhanced by descriptive measures of central tendency including means, mode and the multiple regression analysis. The study used Statistical Package for Social Sciences Version 23.0 for data analysis. The study used multiple regression analysis to generate the coefficients which measured the relationship between corporate diversification strategy and corporate performance. The analysis was done at 5% level of significance. The regression model took the form of:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where:

Y = Corporate performance

α = Regression intercept

β = regression coefficients

X_1 = Related diversification

X_2 = Unrelated diversification

X_3 = Geographic diversification

X_4 = Vertical diversification

ϵ = Stochastic term

RESEARCH FINDINGS

Effect of related diversification on corporate performance

Seeking to establish the effect of related diversification on corporate performance, a likert scale data was collected rating the extent of agreement in a scale of 1 to 5 where 1 was the strongly disagree whereas 5 was the strongly agree indicator. The results from the collected responses were analyzed based on means and their standard

deviations to show the variability of the individual responses from the overall mean of the responses per each aspect. The mean results were therefore given on a scale interval where a mean value of up to 1 was an indication of a strong extent of disagreement; 1.1 – 2.0 was disagree; 2.1 – 3.0 was a moderate extent of agreement, 3.1 – 4.0 agree and a mean value of 4.1 and above was an indication of a strong extent of agreement. Findings on related diversification strategy were as presented in table 1 below;

Table 1: Related diversification

	Mean	Std. Deviation
Diversifying into related business generated higher profit than diversifying into unrelated business	4.36	.896
Horizontal mergers lead to the consequence of a sudden increase in the quantity of output	4.04	.799
Familiarity with the market and technology of the related business reduces total risk of the firm	4.19	.762
Horizontal diversification leads to economies of scale and scope hence positively affecting firm's strategic performance	4.27	.576

From table 1 above, the respondents agreed (mean = 4.36; std. dev. = 0.896) indicating that the diversifying into related business generated higher profit than diversifying into unrelated business. The respondents strongly agreed that horizontal mergers lead to the consequence of a sudden increase in the quantity of output as shown by a mean of 4.04 with a standard deviation of 0.799. Findings also show that, the respondents agreed (mean = 4.19; std. dev. = 0.762) indicating that familiarity with the market and technology of the related business reduces total risk of the firm. Horizontal diversification leads to economies of scale and scope hence positively affecting firm's strategic performance as reported by the respondents who agreed to this fact which obtained a mean of 4.27 and a standard deviation of

0.576. The findings resonated with conclusions by Karanja (2013) who did a study on the diversification strategy and the performance of KenolKobil limited in Kenya. The study established that related diversification adopted by the firm had increased the sales, net profits and shareholder equity of KenolKobil.

Effect of unrelated diversification strategy on corporate performance

The findings under this section were also based on the means and standard deviation for the data that was collected through the likert scale measuring the level of agreement of the respondents with respect to the given aspects of unrelated diversification. The results were as presented in Table 2 below;

Table 2: Unrelated diversification

	Mean	Std. Deviation
The firm has achieved conglomerate diversity through buying existing businesses rather than starting new operations from scratch	4.19	.608
Diversifying into unrelated business provides less incremental value	4.49	.881

Conglomerate diversification has effect of weighted average systematic risk of the firm	4.37	.792
Unrelated diversification has improved the firm's overall performance	4.39	.800

As shown in the table 2, the respondents strongly agreed that the firm had achieved conglomerate diversity through buying existing businesses rather than starting new operations from scratch. This was according to the mean obtained of 4.19 with a standard deviation of 0.608 showing that the respondents had a strong extent of agreement and there was no much deviation of the responses from the mean value. The respondents also agreed that diversifying into unrelated business provides less incremental value as shown by a mean of 4.49 for agree and a standard deviation of 0.881. Further, the respondents agreed to a strong extent that conglomerate diversification has effect of weighted average systematic risk of the firm. This was shown by a mean of 4.37 with a standard deviation of 0.792 for a strong extent of agreement. Also the respondents agreed to a strong extent that unrelated

diversification has improved the firm's overall performance. This was shown by a mean of 4.39 with a standard deviation of 0.800 for a strong extent of agreement. The findings above resonated with the conclusions drawn by Ongalo (2014) who tested the relationship between unrelated diversification and corporate liquidity of 61 firms listed at NSE. The data was analyzed using a regression model and the results of the analysis showed that there was an inverse relationship between diversification and corporate liquidity of listed firms at NSE.

Effect of geographic diversification strategy on corporate performance

Table 3 presented the study results on the effect of geographic diversification strategy on performance. The results were as well based on the means and standard deviation for the likert scale data collected.

Table 3: Geographic diversification

	Mean	Std. Deviation
Geographical diversification boosts the worth of shareholders by satiating investors' preferences for holding worldwide diversified positions	4.19	.682
Increased operational flexibility by global diversification reduces the risks across the markets	4.37	.718
Geographic diversification leads to enhanced market power hence firm performance	4.19	.816
The firm has integrated with firms operating in different geographic markets	4.19	.848

As shown in the table 3, the respondents strongly agreed that geographical diversification boosts the worth of shareholders by satiating investors' preferences for holding worldwide diversified positions. This had a mean of 4.19 with a standard deviation of 0.682. The increased operational flexibility by global diversification reduced the risks across the markets. This was indicated by a mean of 4.37 with a standard deviation of 0.718. Geographic diversification leads to enhanced market power hence firm performance as indicted by a mean of 4.19 with a standard deviation of 0.816. The respondents agreed that the firm had integrated with firms

operating in different geographic markets as indicated by a mean of 4.19 with a standard deviation of 0.848. The above findings were in line with Delios and Beamish (2009) who found a positive relationship between the geographic scope and firm's performance by collecting a data of 399 Japanese manufacturing firms.

Effect of vertical diversification strategy on corporate performance

The section presented the study results on vertical diversification and how it affects corporate performance. The results are on means and standard deviation presenting the level of agreement of the

respondents on the given aspects of vertical diversification. These were as presented in table 4 below;

Table 4: Vertical diversification

	Mean	Std. Deviation
Vertical integration leads to increased technical efficiencies of the firm	4.36	.876
Vertical diversification leads to information asymmetry between various levels of management and divisions in the firm	4.04	.779
Vertical integration positively affects overall firm strategic performance	4.19	.880
The firm has adopted upward vertical integration	3.88	.795

Findings, as presented in table 4, showed that vertical integration led to increased technical efficiencies of the firm. This was as indicated by the level of agreement of the respondents where this obtained a mean of 4.36 and a standard deviation of 0.876 indicating that the respondents agreed to this fact. Findings also showed that vertical diversification led to information asymmetry between various levels of management and divisions in the firm (mean = 4.04; std. dev. = .779). Vertical integration positively affects overall firm strategic performance (mean = 4.19; std. dev. = .880). Finally the firm has adopted upward

vertical integration (mean = 3.88; std. dev. = .795). The findings resonated with Iqbal (2012) who asserted that this kind of diversification may also guarantee a regular supply of materials with better quality and lower prices.

Corporate performance

The study results on corporate performance were as presented in Table 5. The findings were on means and standard deviation showing the extent of the respondents' agreement on the corporate performance aspects given.

Table 5: Corporate performance

	Mean	Std. Deviation
Return on invested capital of the firm has increased	4.49	.851
The firm has increased compound sales growth	4.27	.675
The firm's return on assets has positively increased	4.27	.771
Firm profitability has increased over the last two years	4.24	.862

According to the findings in table 5, return on invested capital of the firm had increased. The respondents agreed to this with a mean of 4.49 and a standard deviation of 0.851. The firm had increased compound sales growth. The respondents had a strong extent of agreement to this aspect (mean = 4.27; std. dev. = .675). Further, findings show that the firm's return on assets had positively increased as indicated by a mean of 4.27 and a standard deviation

of 0.771. The findings were in agreement with the proposition by Mwangi (2015) who sought to establish how corporate diversification affected financial performance of listed manufacturing firms in Kenya. The findings indicate that corporate diversification had a positive relationship to the financial performance of listed manufacturing firms in Kenya.

Correlation Analysis

Table 6: Correlation coefficient

	Related diversif	Unrelated diversif	Geogdiversif	Vertical diversif	Corporate perf

Related divers	Pearson Correlation	1				
	Sig. (2-tailed)					
Unrelateddiversif	Pearson Correlation	.629**	1			
	Sig. (2-tailed)	.000				
Geogdiversif	Pearson Correlation	.605**	.687**	1		
	Sig. (2-tailed)	.000	.000			
Vertical diversific	Pearson Correlation	.647**	.508**	.547**	1	
	Sig. (2-tailed)	.000	.000	.000		
Corporate perf	Pearson Correlation	.483**	.389**	.493**	.168	1
	Sig. (2-tailed)	.000	.001	.000	.150	

** . Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis and Hypothesis Testing

Findings under this section presented the results on the relationship test between the dependent and independent variables. Regression test was carried out to showed the extent of effect of diversification strategy on corporate performance. The significance

of the regression model was tested at the 5% level of significance through F-statistics which shows the level of reliability of the so developed models in presenting the relationship between diversification strategy and firm performance.

Coefficient of determination

Table 7: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.605 ^a	.366	.330	2.176

a. Predictors: (Constant), Vertical diversification, Unrelated diversification, Geographical diversification, Related diversification

According to regression results in table 7, the regression equation between diversification strategy and corporate performance had a strong regression. In the model summary, the R² is 0.366 indicating that

the corporate performance caused 36.6 percent variation in performance, while the remaining 63.4% were attributable to other factors not considered in the study.

Table 8: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	191.350	4	47.837	10.107	.000 ^b
	Residual	331.317	70	4.733		
	Total	522.667	74			

a. Dependent Variable: Corporate performance

b. Predictors: (Constant), Vertical diversification, Unrelated diversification, Geographical diversification, Related diversification

Table 9: Regression coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	11.441	1.735		6.593	.000
	Related divers	.435	.132	.471	3.296	.002
	Unrelated divers	.005	.111	.006	.043	.003
	Geogdivers	.255	.088	.407	2.903	.005
	Vertical div	.349	.126	.357	2.758	.007

a. Dependent Variable: Corporate performance

The estimates of the regression coefficients, t-statistics and the p-values for the relationship between diversification strategy and corporate performance are presented in above table. These coefficients answer the regression model relating the dependent and the independent variables. In testing the relationship, related diversification, unrelated diversification, geographic diversification and vertical diversification were used to run the multiple regression against the corporate performance as the dependent variable. Based on the coefficients, the regression model $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$ therefore becomes; $Y = 11.441 + 0.435X_1 + 0.005X_2 + 0.255X_3 + 0.349X_4$ clearly shows a significant positive relationship between the predictor variables and corporate performance.

With regard to the relationship between related diversification and corporate performance, the model illustrated that related diversification is positively related to firm performance with the coefficient ($\beta_1 = 0.435$, $t = 3.296$, $P < 0.05$) indicating a positive effect on corporate performance. Hypothesis testing conducted at 95% confidence level on related diversification confirmed its significant effect on the corporate performance, hence reject Null hypothesis. The study concludes that related diversification positively affects corporate performance.

Further, according to the results as presented in the model, unrelated diversification had a significant

effect on corporate performance. From the model, the beta coefficient for the unrelated diversification is 0.005. There is a significant relationship as shown by a P-Value of 0.003 Thus, there is a positive and significant relationship between unrelated diversification and corporate performance ($\beta_1 = 0.005$, $t = .043$, $P < 0.05$). Hypothesis testing conducted at 95% confidence level on unrelated diversification confirmed its significant effect on the dependent variable, hence reject the Null hypothesis.

With regard to the relationship between geographical diversification and corporate performance, the model showed a significant effect on corporate performance with the coefficient ($\beta_1 = 0.255$, $t = 2.903$, $P < 0.05$) indicating a positive effect on corporate performance. Hypothesis testing conducted at 95% confidence level on geographical diversification confirmed its significant effect on the dependent variable, hence the Null hypothesis was rejected.

With regard to the effect of vertical diversification on corporate performance, the model illustrated that vertical diversification is positively related to corporate performance with the coefficient ($\beta_1 = 0.349$, $t = 2.758$, $P < 0.05$). Conducting Hypothesis testing on this variable at 95% confidence interval concluded that vertical diversification strategy had statistically significant effects on corporate performance of Hashi Energy, hence reject the Null hypothesis.

Table 10: Hypothesis Summary

Hypothesis Statement	Test Model	Results
Related diversification	$Y = \beta_1 X_1 + \epsilon$	$P < 0.05$ Rejected
Unrelated diversification	$Y = \beta_2 X_2 + \epsilon$	$P < 0.05$ Rejected
Geographic diversification	$Y = \beta_3 X_3 + \epsilon$	$P < 0.05$ Rejected
Vertical diversification	$Y = \beta_4 X_4 + \epsilon$	$P < 0.05$ Rejected

CONCLUSION

The study concluded that diversifying into related business generated higher profit than diversifying into unrelated business. The study also concluded

that horizontal mergers lead to the consequence of a sudden increase in the quantity of output. Familiarity with the market and technology of the related business reduces total risk of the firm. Horizontal

diversification leads to economies of scale and scope hence positively affecting firm's strategic performance.

The researcher concluded that firm had achieved conglomerate diversity through buying existing businesses rather than starting new operations from scratch. The study concluded that diversifying into unrelated business provides less incremental value. Further, the study concludes that conglomerate diversification has effect of weighted average systematic risk of the firm and that unrelated diversification has improved the firm's overall performance.

The study further concluded that geographical diversification boosted the worth of shareholders by satiating investors' preferences for holding worldwide diversified positions. Also the increased operational flexibility by global diversification reduces the risks across the markets. Further it is concluded that geographic diversification leads to enhanced market power hence firm performance and the firm has integrated with firms operating in different geographic markets.

The study concluded that vertical integration led to increased technical efficiencies of the firm. Further the study concludes that vertical diversification leads to information asymmetry between various levels of management and divisions in the firm. Finally it is concluded that vertical integration positively affects overall firm strategic performance and the firm has adopted upward vertical integration.

RECOMMENDATIONS

- The study recommended that managers in the firm should invest in feasibility studies aimed at analyzing the factors that influence related diversification. This would enable managers to formulate appropriate measures which will ensure that objectives of diversification plans are successfully implemented.
- Secondly, the study also recommended that the company should conduct regular monitoring and

evaluation intended to measure the effectiveness of the adopted diversification strategies. This is necessary because petroleum companies operate in a dynamic business environment which is highly affected by a variety of factors. Also the study recommends that the firm should approach unrelated diversification with care since it was established that conglomerate diversification has effect of weighted average systematic risk of the firm.

- The study recommended that the firm should consider geographical diversification since it was established to boost the worth of shareholders by satiating investors' preferences for holding worldwide diversified positions. The study further reveals that geographical diversification has a positive effect on the performance of the firm. There is need to the firm to expand its operations to other countries so as to enjoy more growth in its performance hence more profitability.
- The study recommended that the firm should diversify so as to increase their market stability and to prevent over reliance on a single product. This will in turn boost their future profitability and enhance their predictability about the future and thus boost their financial strengths through making profitable investments decisions

Suggestions for Further Research

A study should be carried out to establish the effect of diversification strategy on the performance in other petroleum firms in Kenya. This will assist in getting a clear overview of diversification strategy and performance of the petroleum industry.

There is need to have a replication of this study after some time. This will assist to establish the position since circumstances may cause significant changes to the current findings. A duration covering other years including the previous years when geographical diversification was being introduced need to be done so that the trend can be used to show the relationship that existed then.

REFERENCES

- Arasa, O. (2014). *Diversification strategy and performance of Kenya commercial bank group*, Unpublished Project, University of Nairobi
- Bettis, R. A. (2011). Performance Differences In Related and Unrelated Diversified Firms. *Strategic Management Journal*, 2(4), 379-393.
- Buhner, R. (2010). Assessing International Diversification of West German Corporations. *Strategic Management Journal*, 8(1), 25-37
- Chakrabarti, A., Singh, K. and Mahmoud, I. (2011). Diversification and Performance: Evidence form East Asian Firms, *Strategic Management Journal*, 28, 101-120.
- Chang, S. J. and Hong, J. (2012). How much does the business group matter in Korea? *Strategic Management Journal*, 23(3): 265-274.
- Chen, C. J., & Yu, C. M. J. (2012). *Managerial ownership, diversification, and firm performance: Evidence from an emerging market*. *International Business Review*, 21(3), 518-534.
- Daud, W., Salamudin, N. & Ahmad, I. (2012). Corporate diversification performance, *Strategic Management Journal*, 2 (1), 01-18.
- Delios, A. & Beamish, W. (2009). Geographic scope, product diversification and the corporate performance of Japanese firms. *Strategic Management Journal*, 20,8, 711-727.
- Denis, D. J., Denis, D. K., & Yost, K. (2010). Global Diversification, Industrial Diversification and Firm Value. *The Journal Of Finance*, LVII(5).
- Doaei, M., Ahmad, A. M., & Ismail, Z. (2014). Diversification and financial performance in Bursa Malaysia. *International Journal of Management and Business Research*, 4(4), 309-317.
- Dubofsky, P. and Varadarajan, P. R. (2008), Diversification and Measures of Performance: Additional Empirical Evidence. *Academy of Management Journal*, 30(3), 597-608.
- Elango, B. & M, Y. (2009), *An Investigation into the Diversification Performance relationship*. Illinois University Press.
- Gary, M. (2010). Implementation Strategy and Performance Outcomes in Related Diversification. *Strategic Management Journal*, 26, pp.643- 664.
- Geringer, J.M., Tallman, S., and Olsen, D. M., (2008) .Product and International Diversification Among Japanese Multinational Firms, *Strategic Management Journal*, 21,51-80
- Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2009). Methods of data collection in qualitative research: interviews and focus groups. *British dental journal*, 204(6), 291-295.
- Guillen, M. F. (2010). Business Groups in Emerging Economies: A Resource-Based View. *Academy of Management Journal*, 43(3), pp.362-380.

- Hitt, M. A., & Ireland, R. D. (2010). Relationships among corporate level distinctive competencies, diversification strategy, corporate structure and performance. *Journal of Management Studies*, 23, 401-416.
- Hoskisson, R. E., and Hitt, M. A., (2008). Antecedents and Performance Outcomes of Diversification: A Review and Critique of Theoretical Perspectives, *Journal of Management*, 16, pp.498.
- Iqbal, A., Hameed, I., & Qadeer, M. (2012). Impact of Diversification On Firms' Performance. *American Journal of Scientific Research*, 80, 42-53.
- Jensen, M. (1968). The performance of mutual funds in the period 1945–1964, *Journal of Finance*, 23, 2, 389–416.
- Joskow, P.L., (2009). 'Vertical Integration', in Handbook of New Institutional Economics, edited by C. Ménard and M.M. Shirley, (Berlin, Germany: Springer-Verlag).
- Kakani, R. K., (2008). *Financial Performance and Diversification Strategy of Indian Business Groups*. Doctoral Dissertation. Indian Institute of Management, Calcutta.
- Karanja, G.R. (2013). *Diversification Strategy adopted by Kenolkobil and its effect on performance*. Unpublished Research MBA Project, University of Nairobi.
- Kariuki, S. N. (2013). *The effects of diversification on growth of companies Listed in the Nairobi securities exchange*, Unpublished MBA Thesis, University of Nairobi
- Khanna, T., & Krishna, P. (2010). Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups. *Journal of Finance*, 55, 867–891.
- Kim, W. C. Hwang, P., & Burgers, W. P. (2009). Global Diversification Strategy and Corporate Profit Performance. *Strategic Management Journal*, 10(1), 45-57.
- Kock, C., and Guillen, M. F. (2009). *Strategy and Structure in Developing Countries: Business Groups as An Evolutionary Response to Opportunities for Unrelated Diversification*. *Industrial and Corporate Change*, 10(1), 77-113.
- Kothari, C. R. (2008). *Research methodology: Methods and techniques*. New Age International.
- Lee, J., Hall, E. H., & Rutherford, M. W. (2008). A Comparative Study of U.S and Korean Firms: Changes in Diversification and Performance. *International Journal Commerce and Management*, 13(1).
- Lins, K., Servaes, H., (2011). International Evidence on the Value of Corporate Diversification. *Journal of Finance*, 54, pp. 2215-2239.
- Lloyd, P. W., & Jahera, S. J. (2008). Firm-Diversification Effects on Performance as Measured by Tobin's q. *Journal of Managerial and Decision Economics*, 15, 259-266.
- Lu, W. J., & Beamish, W. P. (2011). International Diversification and Firm Performance. *The Academy of Management Journal*, 47, 598-609.

- Machel, J. & Grisby, T. (2012). Strategic Management: Total Quality Customer Service Training helps even when dealing with deadbeat parents: *Wenatchee Business Journal*, 11(2), 19-20
- Maina, W. (2013). *The relationship between product diversification and financial performance of commercial banks in Kenya*, Unpublished MBA Project, University of Nairobi
- Markides C. C., (2010) Corporate Diversification And Organizational Structure : A Resource-Based View, *Academy of Management Journal*, 39 (2), 340-367
- Michel, A., & Shaked, I. (2004). Does Business Diversification Affect Performance? *Journal of Financial Management*, 13, 18-25.
- Mitchell, M. L., & Jolley, J. M. (2013). *Research design explained*. Australia: Wadsworth Cengage Learning, 752
- Montgomery, C.A, (2006). Corporate Diversification. *Journal of economic perspectives*, 8, pp 163-178.
- Mugenda, M. O. & Mugenda, A. (2012). *Research Methods: Qualitative and Quantitative Approaches*, African Centre for Technology Studies, Nairobi, Kenya.
- Mwangi, E. (2015). *The effect of corporate diversification on the financial performance of listed manufacturing firms in Kenya*, Unpublished Doctoral dissertation, University of Nairobi.
- Ondari, E. N., Awino, B. Z. and Machuki. V. N. (2016). *The Effect of Diversification Strategy on Performance of Companies Listed In the Nairobi Securities Exchange*. Archives of Business Research 4.3 (2016).
- Palich, L.E., Cardinal, L.B. and Miller, C.C, (2000). Performance Linkage: An Examination of over Three Decades of Research. *Strategic Management Journal*, 21, pp. 155-174.
- Pandaya A., and Rao, N. (2008). Diversification and Firm Performance: An Empirical Evaluation. *Journal of Financial and Strategic Decisions*, 11(2), pp.67-81.
- Pandya, M. A., & Rao, V. R. (2008). Diversification and Firm Performance: An Empirical Evaluation. *Journal of Financial and Strategic Decisions*, 11, 67-81.
- Piscitello, L. (2011). *Corporate diversification, coherence and economic performance*. Industrial and Corporate Change, 13: 757-787.
- Prahalad C. K., & Hamel, G. (2007). *Core Competency Concept*, Harvard Business Review, May– June 1990, p. 64,
- Ravichandran, T., Liu, S. H., and Iftekhhar, H. (2009). Diversification and Firm Performance: Exploring the Moderating Effects of Information Technology Spending. *Journal of Management Information Systems*, 25(4), 205-240.
- Rumelt, R. P. (2007). Diversification strategy and profitability. *Strategic Management Journal*, 3(4), 359-369.
- Santalo, J., & Becerra.(2008). Competition from specialized firms and the diversification- performance linkage. *The Journal of Finance*, LXIII (2).

- Silverman, B. S. (2008). Technological Resources and the Direction of Corporate Diversification: Toward an Integration of the Resource-Based View and Transaction Cost Economics. *Management Science*, 45(8), 1109-1124
- Simmonds, P. G. (2007). The Combined diversification breadth and mode dimensions and the performance of large diversified firms. *Strategic Management Journal*, 11(5), 399-410.
- Syed, L. A. M., & Rao, N. V. (2010). Diversification, financing decisions and performance: An empirical evaluation. *Journal of Business and Public Affairs*.
- Thompson A, & Strickland A. J. (2008). *Strategic Management; Concepts and Cases*. Irwin, New York
- Tongli, L., Ping, E. J., & Chiu, W. K. C. (2009). International Diversification and Performance: Evidence from Singapore. *Asia Pacific Journal of Management*, 22, 65-88.
- Varadarajan, P. R., and Ramanujam, K. (2010). Diversification and Performance. A Reexamination using a Two Dimensional Conceptualization of Diversity in Firms. *Academy of Management Journal*, 30, pp. 380-393.
- Wernerfelt, B., & Montgomery, A. C. (1988). *Tobin's q and the Importance of Focus in Firm Performance*. *The American Economic Review*, 78, 246-250.
- Williamson, O. (1971). 'The Vertical Integration of Production: Market Failure Considerations', *American Economic Review*, 61.