EFFECT OF INTANGIBLE RESOURCES ON FIRM'S COMPETITIVE ADVANTAGE IN THE TELECOMMUNICATION INDUSTRY IN KENYA

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ABSTRACT

The study sought to determine the effect of intangible resources on a firm's competitive advantage in the telecommunications industry in Kenya. The specific objectives were to evaluate the influence of intellectual property, goodwill, intellectual capital as well as corporate culture on the competitive advantage of telecommunication firms in Kenya. The study utilized an explanatory research design. The study focused on four telecommunication companies in Kenya, which included Safaricom, Airtel, Finserve, and Telkom. The target population was therefore 153 staff working in enterprise business, finance, human resource, and corporate affairs departments in telecommunication companies in Kenya. Slovin's Formula was employed to determine the sample size. This study used stratified random sampling in the selection of the sample size from the target population. The study used primary data, which was collected by the use of semi-structured questionnaires. A pilot test was conducted to test the validity and reliability of the research instrument. The semi-structured questionnaire produced both quantitative and qualitative data. The qualitative data were analyzed using content analysis, and the findings were presented in a narrative form. With the help of SPSS version 24, quantitative data was analyzed using descriptive and inferential statistics. Descriptive statistics comprised of frequency distribution, mean, percentages, and standard deviation. Inferential statistics including correlation as well as multivariate regression analysis then followed. Tables and figures (bar charts as well as pie charts) were employed to present the results. The study found that intellectual property has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. Moreover, the study found that goodwill has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. Further, the study found that intellectual capital has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. The study also found that corporate culture has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. This study, therefore, recommends that the management of Kenya's telecommunications industry should motivate the employees by rewarding them, acknowledging their achievements, sharing positive feedback, offering flexible scheduling, and providing a conducive working environment to help strengthen the competitive advantage of the organizations. In addition, the management should strive towards recruiting as well as grooming the best team as well as enhance the employees' skills by conducting regular training, coaching, mentorship, and workshops to get a competitive advantage in the organization. The management should also invest in their employees through promotion, involving employees in writing a mission statement, conducting training programs, motivating the employees through rewards, and creating a feedback culture. In addition, the management should include the invention of products and services in their patents to stop others from copying, manufacturing, selling, or importing their invention without their permission.

Keywords: Intangible resources, competitive advantage, intellectual property, goodwill, intellectual capital, corporate culture.

INTRODUCTION

To serve highly educated and intelligent customers, organizations must compete in goods and services from all over the world. Customers' expectations are constantly changing in a globally dynamic world, so what is satisfying to them today may not be so tomorrow. Furthermore, the consequences of unrestricted global competition have provided customers with a variety of options. The organization for Economic Co-operation and Development (2019) report claims that the creation of a global market, international management orientation, the introduction of modern technologies, and change toward customer-focused strategies sweep national boundaries and makes the competition stronger than ever. In today's global economy, a company's intellectual and system capabilities are more important than its physical assets (Ionita & Dinu, 2021). Globalization, technological innovation, and the resulting changes in market development rates have made entry barriers increasingly unstable, and the pursuit of economies of scale is barely viable in the long term.

Mnzava (2018) categorized firm resources as physical capital, for example, physical technology employed, geographic location, and equipment. Human capital includes experience as well as training while organizational capital includes firm planning and internal and external relationships. Intangible resources, compared to tangible resources such as equipment, financial, or physical resources, are less flexible, difficult to accumulate, and difficult to transfer, even though they are the most distinctive to organizations (Andreeva & Ritala, 2016). Since these resources are valuable, rare, and not easily imitated, they can become a source of long-lasting, differential performance. Another advantage of intangible resources is that, unlike most tangible resources, their use may be leveraged. For example, sharing knowledge among employees does not reduce the value of that knowledge for anybody else (Ionita & Dinu, 2021). Aminga (2019), states that the resources and skills of a company are important when they allow it to take advantage of external opportunities or defend against external threats.

In a macro sense, intangible asset investments have exploded among corporations in the United States, Japan, and Europe (Organization for Economic Co-operation and Development, 2019). According to the Organization for Economic Cooperation and Development (2019), investments in intangible assets have a considerable influence on productivity and competitive advantage. According to estimations by Kapoor and Aggarwal (2020), the US intellectual assets value was close to $3.4 trillion in the early 2000s, and intangible assets were considered more than 75% of US output advancement over the same era. Similarly, according to Mnzava (2018), intangible assets as a percentage of US GDP have more than doubled in the last 40 years, from 4.4 percent to 10%, and intangible assets accounted for over one-third of the value of US company assets in 2000. Intangible assets have increased fast in parallel with the digital wave in recent decades, accounting for 84 percent of the S&P 500 index market value, compared to only 32 percent in 1985. The investment rate for intangible assets in US private industries increased from 10% to nearly 15% between 1985 and 2017, whereas the rate for tangible assets fell from 14 percent to about 10%.

Multinationals operating in the sub-Saharan regions have used their corporate brand to gain penetration in the region. A case in point is Unilever which has leveraged its brand to gain and maintain market traction (Organization for Economic Co-operation and Development, 2019). The Nigerian Telecommunication sector has witnessed an increase in the value of investments in intangible assets. In recent years, budgets for research and innovation have substantially increased as companies up the ante to be able to effectively compete in the marketplace (Nzewi, Eze, Chigozie & Ohodah, 2019). The telecommunication industry in Ghana has seen significant investment in intangible assets among firms in a bid to gain a competitive advantage. This has led to changing market share among the leading firms with customers changing their preferences due to perceived benefits of new products and services that were introduced after significant investment in research (Okoye, Offor & Manukaji, 2019). Companies have increased their budget allocation to research and innovation and other intangible assets to gain market share and competitive advantage within the market space in Ghana (Okpara, 2018).

The reliance on intangible assets by firms listed in the Nairobi Securities Exchange has gained traction; companies are now relying on their corporate brand to position their products and services ahead of their peers (Mugo & Macharia, 2020). Patents, copyrights, and trademarks are increasingly being filed at the state law office by companies to safeguard novel ideas that are going to be the determining factors in the future marketplace. A case in point is the telecommunications industry where Safaricom has had a stranglehold on mobile money due to the advantage of being a pioneer in the industry and the patent to Mpesa being held by its mother company Vodafone. The reliance on intangible resources to enhance the competitive advantage of firms listed in the NSE has seen firms' net value increase boosted by an increase in the goodwill in their books (Mugo & Macharia, 2020). Firms in the service and technology industry have placed significant investments in intangible investment compared to firms in the agriculture and manufacturing industries in the Nairobi securities exchange (Muita, 2018). This has seen the valuation of firms in the former category outpace the valuation of firms in the latter category. The investments in intangible assets have seen the firms gain a competitive advantage in respective industries and build a significant market base and traction within specific segments.

Revenues from telecom companies have grown at a 40 percent compound annual growth rate (CAGR), and the number of customers in Africa has quickly surpassed 400 million (Omae, Langat

& Ndung'u, 2015). As traditional urban markets become saturated, big towns such as Abidjan (Côte d'Ivoire), Lusaka (Zambia), and Libreville (Gabon) have 70 percent or higher penetration, while rural areas account for nearly half of the rise in voice (Communications Authority of Kenya, 2020). To capture this opportunity, regulators and operators must forge new industry practices and operating models to create the method of slashing costs, innovating in dissemination, and seeking more individualized pricing models. Data services yield a large growth pocket of almost $5 billion in Africa and experiences gained from other countries suggest that a 10% increase in broadband penetration leads to an additional 0.5 to 1.5 percent rise in GDP (Aminga, 2019). The telecommunication industry structure is such that there are four or more participants in many markets, including the smallest ones (Omae, Langat & Ndung'u, 2015).

Kenya's total mobile telephony customers increased to 52,168,066 in 2019, up from 45,568,924 the previous year. This represents a 14.48 percent increase over the previous year, which is slightly higher than the 13.2 percent recorded the year before (CA, 2019). The prepaid-to-post-paid subscription ratio remained at 34:1. Airtel Networks Kenya Limited (31.7 percent), Safaricom PLC (11.2 percent), Telkom Kenya Limited (6.0 percent), and Mobile Pay limited (4.8 percent) all reported an increase in their subscriber bases. Finserve Limited's subscriber base, on the other hand, fell by 3.91 percent. The mobile penetration in Kenya is higher than the total population of the country this can be attributed to a majority of users owning more than one SIM card from the same or diverse service providers (Communications Authority of Kenya, 2020). CA's number on penetration is further backed by the Kenya Integrated Household Budget Survey report released by the KNBS in April 2018 which revealed that a minimum of 30 percent of mobile users own not less than one SIM card. This translates to 1.3 cards per subscriber on average.

Statement of the Problem

There has been significant development in the telecommunication sector in Kenya in the past decade. The competitiveness of telecommunication companies in Kenya has rivaled its neighbors and peers in the sub-Sahara region. While the competitiveness can be attributed to many factors among them an open and forward-looking regulatory regime, and an inquisitive and easily excitable populace. A key factor that has remained elusive and not well understood and appreciated is the effect of intangible assets on the competitive advantage of the industry. Andreeva and Ritala, 2016) and Nguyen, (2021) in their studies that covered eastern European and Latin American countries indicated that intangible resources were slowly becoming the defining factor in the already competitive marketplace. Hunt and Morgan (2015) did a study that covered the pharmaceutical industry in Asia and found that companies were increasingly relying on intellectual capital and other forms of intangible resources to gain a competitive advantage in the marketplace. However, even though telecommunication companies in Kenya possess intangible resources such as intellectual property, intellectual capital, goodwill, and corporate culture, they are still experiencing challenges in their market share, profitability, and sales volume. Various companies in the telecommunication industry in Kenya have been experiencing challenges in the last five years in their competitive advantage. For instance, while Safaricom Limited has been reporting an increase in revenue over the years, Airtel Kenya reported a Sh 2.89 billion loss in 2018, raising its cumulative losses to Sh 68.09 billion (Airtel Kenya, 2019). Telkom Kenya reported that it would lay off 75% of its staff (575 out of 800) ahead of its merger with Airtel (Aminga, 2019). While Safaricom is dominant in the telecommunication sector, its market share has been decreasing. For instance, Safaricom's market share of total mobile subscriptions was 63.3% in 2019, which was a decline from 69.1.9% in 2017. Between 2017 and 2019 Airtel's market share increased by 2.5% to 19.7%. Therefore, it is essential to understand how intangible resources affect the competitive advantage of companies in the telecommunication sector. Nyaberi (2020) in his study on the influence of intangible resources on a firm's competitive advantage in the banking industry; and Soko (2018) in his study on the influence of intangible resources on the service as well as technology firms listed in NSE. Nyaberi (2020) conceptualized intangible resources in terms of trademarks, patents, and copyright, Soko (2018) conceptualized intangible resources in terms of trademarks, copyright, and patents. However, these study conceptualized intangible resources in terms of intellectual property, goodwill, intellectual capital, and corporate culture. While the studies provide useful information and insights into the role of intangible assets on a firm's competitive advantage, they did not examine the telecommunication industry which this study seeks to dwell on. Further, the studies adopted a descriptive research design, which only describes the variables. Because of this development, this study sought to determine the influence of intangible resources on the competitive advantage of the telecommunication industry in Kenya.

Objectives of the study

The general objective was to determine the effect of intangible resources on a firm's competitive advantage in the Kenya telecommunications industry.

The study was guided by the following specific objectives;

a. To determine the effect of intellectual property on the competitive advantage of Kenyan telecommunication firms.
b. To evaluate the effect of goodwill on the competitive advantage of Kenya telecommunication firms.
c. To assess the effect of intellectual capital on the competitive advantage of Kenya telecommunication firms
d. To establish the effect of corporate culture on the competitive advantage of Kenya telecommunication firms.

THEORETICAL REVIEW

Dynamic Capabilities (DC) Theory

DC theory was developed by Teece, Shuen, and Pisano (1997). DC theory developed as a response to RBV's incapacity to interpret the development and redevelopment of resources and capabilities in response to quickly changing contexts (Kapoor & Aggarwal, 2020). DC could be a source of competitive advantage. Beyond the notion that a corporation's acquisition of valuable, rare, inimitable, and non-substitutable (VRIN) resources, provides a corporation with a sustained competitive advantage, DC theory goes further. Organizations' dynamic capabilities enable them to integrate, marshal, and rearrange their resources and capabilities to adapt to quickly changing circumstances (Andreeva & Ritala, 2016). DCs are thus methods that allow a company to rethink its strategy and resources to create long-term competitive advantages and greater performance in rapidly changing contexts (Kapoor & Aggarwal, 2020). The DC theory describes path-dependent processes that enable businesses to adapt to rapidly changing environments by expanding, integrating, and reconfiguring their resource and capability portfolios (Gruchmann, Seuring & Petljak, 2019). When a company implements a value-creating strategy that is not being applied by any current or potential competitors, it has a competitive edge. When a company implements a value-creating strategy that is not being applied by any present or potential competitors at the same time, and other companies are unable to duplicate the strategy's benefits, the company has a sustainable competitive advantage (Gruchmann & Seuring, 2018). This study used dynamic capabilities theory to explain the effect of IPR on competitive advantage.

Intellectual Capital Theory

Intellectual Capital (IC) Theory was developed by Karl Erik Sveiby (1997). This thesis is founded on the idea that a company's wealth is determined by its human, structural, and relational capital, and that value is created by transforming one type of capital into another. The IC theory arose in reaction to the growing recognition of the value of information and knowledge (Korutaro, Ntayi, Ahiauzu & Sejjaaka, 2019). Because IC was initially defined at almost the same time as knowledge management and human capital and was becoming key parts of the organizational conversation, it is more critical than ever to clarify, define, and distinguish the concept of IC. The theory is based on the belief that human capital, structural capital, and consumer capital all contribute to an enterprise's wealth. When one type of capital is converted into another, value is created (Dalwai & Mohammadi, 2020). This study utilized the intellectual capital theory to explain the effect of IC on competitive advantage. According to the theory, when human skill (human capital) produces new business procedures (structural capital), which results in improved services for consumers and improved loyalty, value is created.

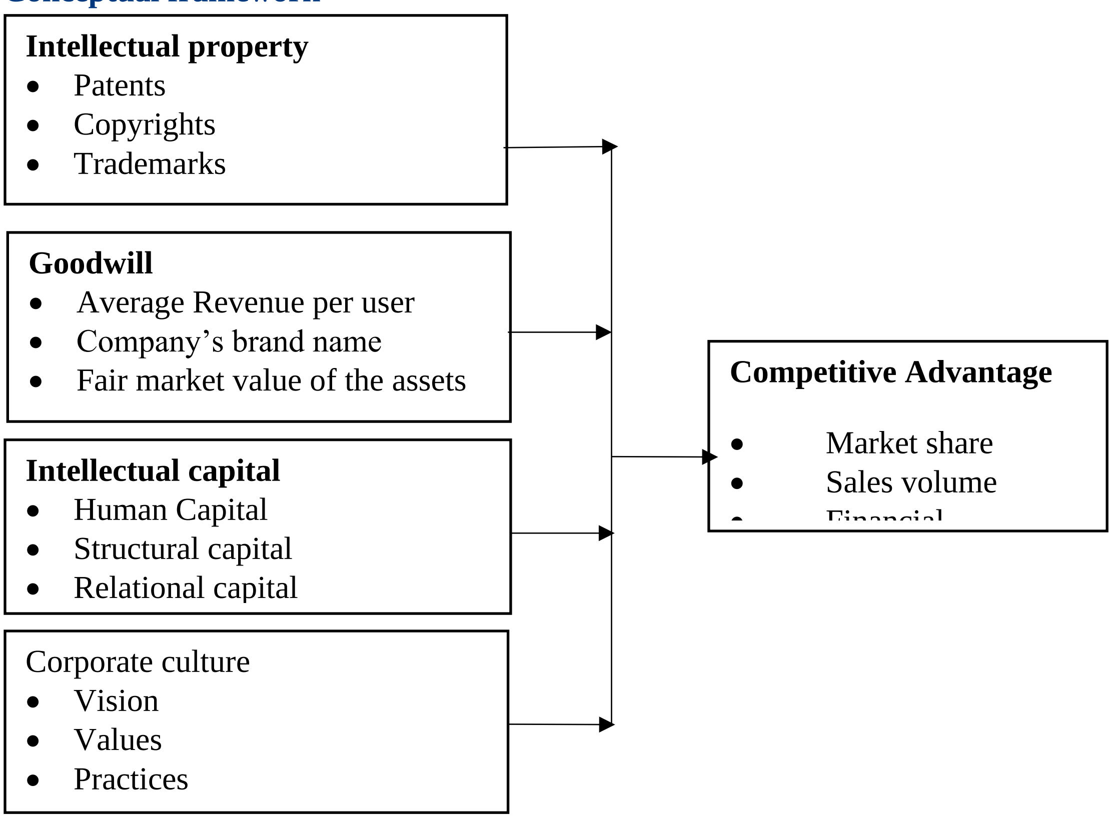
Resource-Based View Theory

theory was founded by Barney (1991). RBV theory focuses on highlighting the organization’s competitive advantage. It indicates that firms can only gain a competitive advantage through the utilization of resources as well as capabilities available in the organization (Wijethilake & Ekanayake, 2018). Fahy (2016) indicated that resources are distinct from capabilities in that capabilities are non-transferrable special resources of the firm and are specifically for a certain organization. The key function of these resources is to ensure the proper functioning of other resources owned by the company. The study made use of RBV theory to examine the effect of goodwill on competitive advantage. In a firm, competitive advantage is only built using both firm capabilities and resources. The ability to build, refine, or even repair goodwill with stakeholders is critical to its success. Because of its intangible nature, goodwill is difficult to reproduce or replicate by competitors. The benefits generated by a cumulative positive reputation constitute a potential avenue to sustained competitive advantage.

Edgar Schein's Management Theory

Edgar Schein's management theory was developed in 1980 by Edgar Schein in his endeavor to understand why people behave in different ways in different organizations (Schein, 1992). He noted that culture is constantly evolving and that change affects all elements of human functioning. It also covers significant topics such as outward adaptation and internal integration. Finally, it takes the form of an interconnected, structured set of fundamental assumptions that address ultimate questions like the nature of mankind, human relationships, time, space, and the nature of reality and truth itself (Danziger, Rachman-Moore & Valency, 2018). This study used Edgar Schein's management theory to explain the effect of corporate culture on competitive advantage. According to the theory, three levels of culture are artifacts, espoused values, as well as basic assumptions, which are related to the vision, values, and practices of an organization. The utilization of the corporate culture components such as vision, values, and practices affects the competitive advantage of an organization. The development of a vision, the establishment of values, and the practices of the values are highly influenced by basic assumptions and artifacts.

Conceptual framework



Intellectual Property and Competitive Advantage

Intellectual property involves the protection of human creativity products that covers the 'originality of new products, the confidentiality of know-how, and distinctiveness of names, trademarks, and get up, among other things (Aurora & Ferreira, 2019). Patents, copyright, industrial designs, and trademarks have all been expanded to encompass trade secrets, plant breeder's rights, geographical indications, and rights to layout designs of integrated circuits. Intellectual property can also be defined as a physical expression of the original idea that is protected by laws, such as patent, copyright, and trademark laws (Nguyen, 2021). Aurora and Ferreira (2019) examined IPR and educational spin-off competitiveness in Portugal. Estimates for logistics were based on a survey of 48 Portuguese firms. Nonetheless, when IPR protection mechanisms are classified by type, the results show that the use of informal protection mechanisms, such as lead time and trade secrets, boosts company competitiveness, whereas the use of formal protection mechanisms, such as patents, trademarks, and copyrights, affects it negatively.

The impact of IPR protection on a company's competitiveness is influenced by its size and innovation profile. Using a survey research design, Deepak (2018) examined the relationship between intellectual property (IP) strategy, competitive advantage, and performance among Pune-based information technology (IT) firms. The researcher used primary data from a poll of IT firm intellectual property managers and secondary data from annual financial reports. The study's findings suggest that intellectual property strategy has a substantial impact on competitive advantage and corporate performance in India's IT industry. Top management must use IP as a strategic tool to compete effectively in the marketplace, and a periodic IP audit must be performed to value the company's intangible assets. In this study, various intangible asset valuation methods used throughout the world were investigated for Indian firms to implement.

Intellectual Capital and Competitive Advantage

Intellectual capital is considered to be the possession of information and experience, professional expertise and ability, goal relationships, and technology skills that when combined, provide a competitive advantage to firms (Nzewi, Eze, Chigozie & Ohodah, 2019). Consequently, it can be stated that IC consists of resources as well as competencies that are rare, valuable, inimitable, and non-substitutable, all of which lead to improved performance and long-term competitive advantage for businesses. Using Survey research design, Nzewi, Eze, Chigozie, and Ohodah (2019) studied the role of intellectual capital in the competitive advantage of selected commercial banks in Anambra State. The study's participants were 100 workers from the chosen banks. A standardized questionnaire was employed to obtain data. The findings demonstrated a positive link between human capital and employee innovativeness, with changes in the independent variable accounting for 95% of the variation in the dependent variable (employee innovativeness) (human capital).

Employee innovativeness has a considerable association with human capital, according to the findings. In a review of the literature, Ipek, Salih, and Hüseyin (2019) examined the relationship between a firm's IC and competitive advantage. Results showed that organizational capital, human capital, and relational capital influence competitive advantage positively. Moreover, intellectual capital influenced strategy formulation and strategy formulation influenced competitive advantage.

Goodwill and Competitive Advantage

Goodwill represents assets that are not separately identifiable. Goodwill does not include identifiable assets that are capable of being separated or divided from the entity and sold, transferred, licensed, rented, or exchanged, either individually or together with a related contract, identifiable asset, or liability regardless of whether the entity intends to do so (Zhang, 2019). In China, Zhang (2019) examined the impact of internally generated goodwill on the financial performance of firms. Data are collected from the Compustat database for twenty years from 1991 to 2010. The final sample consists of 84,515 firm-year observations. The empirical results indicate that the firms with positive internally generated goodwill have significantly better liquidity, profitability, and leverage ratios than those with negative internally generated goodwill. The results also show that positive internally generated goodwill firms have a stronger price-earnings association than negative internally generated goodwill firms.

In the United Kingdom, Yasean, Ahmed, and Mohammad (2018) examined the impact of goodwill on firms' financial and market performance. The study used an explanatory research design. The study targeted 150 nonfinancial companies. In particular, the results indicate that goodwill (GW) does have a statistically positive effect on firms' current and future performance in the United Kingdom. Okoye, Offor, and Manukaji (2019) studied the effect of intangible assets on the performance of quoted companies in Nigeria. Ex post facto research design was used in the study and five firms from different sectors were sampled. The data used in this study were sourced from annual reports and statements of accounts of the selected firms. Descriptive statistics, correlation analysis, and ordinary least Square regression were employed in analyzing the data. The results indicated that goodwill had a significant effect on the return on capital employed by quoted companies in Nigeria.

Corporate Culture and Competitive Advantage

According to Okpara (2018), culture is a crucial component of effective organizational performance, and research has demonstrated that culture influences strategy creation and implementation, as well as a company's potential to attain high levels of excellence. The culture of an organization includes what the organization has done well in the past and what has worked for it. Long-serving members of an organization can typically accept these principles without questioning. In China, Zhao, Teng, and Wu (2018) evaluated the effect of corporate culture on firm performance. Using a survey research design, corporate culture promotion is found to be negatively connected to company market value, positively associated with innovation output, and not significantly associated with firm financial performance. Small businesses and businesses in less developed provinces are also responsible for the adverse impact of corporate culture promotion on firm market value. Furthermore, they discovered that some corporate culture promotions, such as those promoting creativity and honesty, were unrelated to a company's value or financial performance. The promotion of an innovative culture, on the other hand, was linked to increased innovation output.

In Kenya, Chepngeno, Wagoki, and Okello (2019) assessed how organizational culture affects long-term competitive advantage in state-owned organizations. A descriptor-explanatory research design was employed during the study. Because the entire population took part in the survey, the census approach was used. The study population consisted of 47 Postal Corporation middle-level managers from the Nairobi, Rift Valley, and Nyanza areas. The study found that organizational culture influenced sustainable competitive advantage. Also, the study discovered that organizational values had weak positive as well as a statistically significant association with the sustainable competitive advantage of the Postal Corporation of Kenya. Owino and Kibera (2019) assessed the relationship between organizational culture and performance among MFIs. The researcher adopted a descriptive cross-sectional survey design. Secondary data was gathered from the association of microfinance institutions in Kenya and the Microfinance Rating Africa's-yearly reports. A systematic questionnaire was used to obtain primary data from the chief executive officer, human resource manager, and marketing manager. Clan and hierarchy were discovered to be the most prevalent cultural typologies-in the-microfinance industry. The findings show that non-market performance is significantly influenced by organizational culture. In the microfinance sector, organizational culture is also a crucial source of long-term competitive advantage.

RESEARCH METHODOLOGY

Research Design

The study adopted a causal research-design, also known as explanatory research design. The study sought to show the influence of intangible resources on a firm’s competitive advantage in the telecommunications industry in Kenya and hence an explanatory research design was the most appropriate.

Target Population

The study focused on four telecommunication companies in Kenya, which include Safaricom, Airtel, Finserve, and Telkom, which were the unit of analysis. The unit of observation was all the staff working in enterprise business, finance, human resource, and corporate affairs departments in telecommunication companies in Kenya. The target population was therefore 153 staff working in enterprise business, finance, human resource, and corporate affairs departments in telecommunication companies in Kenya.

Sampling Frame

Slovin's Formula was employed to calculate the study’s sample size. The corresponding sample size was 110. The sample-size for-this study was determined by stratified-random-sampling from the target-population.

Data Collection

Primary data was collected by the use of semi-structured questionnaires. A letter of data collection was obtained from the University before embarking on data collection. Apart from that, the researcher also obtained a permit for data collection from NACOSTI and the management of telecommunication companies. When administering questionnaires to the respondents, the researcher used a drop-off/pick-up later method. Follow-ups were made on daily basis through phone calls and the data collection process took three weeks.

Pilot Study

A pre-test group of 11 individuals (10% of the sample size) was chosen using a stratified random sampling method from Enterprise Business, Finance, Human Resource, and Corporate Affairs departments. The pilot study enabled the study to be familiar with research and its administration procedure as well as identifying items that required modification. The result helped the study to correct inconsistencies arising from the instruments, which ensured that they measure what is intended.face validity was enhanced by using reviews from experts in the field of strategic management including the supervisors. The content validity of the questionnaire was improved by structuring the questions according to the study's indicators and objectives. Confirmatory factor analysis shows how well the measures represent a construct. the intellectual property had an AVE of 0.726, the goodwill had an AVE of 0.712 intellectual capital had an AVE of 0.784 and corporate culture had an AVE of 0.785. the intellectual property had a Cronbach's Alpha of 0.862, which was more than 0.7, and hence intellectual property was considered reliable. In addition, goodwill had a Cronbach's Alpha of 0.799 and hence it was considered reliable. Further, the results show that intellectual capital had a Cronbach's Alpha of 0.795 which implies that the questions for intellectual capital were reliable. Also, corporate culture had a Cronbach's Alpha of 0.801, which was more than 0.7, and hence corporate culture was considered reliable. All the indicators were significantly contributing to the construct and hence Cronbach’s reliability alphas were more than 0.7.

Data Analysis and Presentation

Data analysis involved preparation of the data collected data - coding, editing and cleaning of data so that it may be processed using Statistical Package for Social Sciences (SPSS) which was used to analyze the quantitative data. Quantitative data was analyzed by the use of descriptive and inferential statistics and presented in tables and figures. Content analysis was employed in this study to analyze qualitative data. Content analysis refers to a research technique for identifying the existence of specific words, topics, or concepts in qualitative data. Qualitative findings were given in the narrative form. The Pearson correlation matrix was used to indicate the direction, strength and significance of the relationships. The independent variables and dependent variable for this study were modeled using multiple regression method. The multiple regression model for the study was:

$Y= \beta_0 + \beta_1X_1+ \beta_2X_2+ \beta_3X_3 + \beta_4X_4+ \varepsilon$……………………………………Equation 1

Where:

Y represented competitive advantage

β_0 represents Constant; β_1, β_2, β_3 & β_4 represents Regression coefficients of the independent variables, respectively.

X_1-= Intellectual Property; X_2-= Goodwill; X_3-= Intellectual Capital; X_4-= Corporate Culture; ε represents Error term.

RESEARCH FINDINGS AND DISCUSSIONS

Intellectual Property and Competitive Advantage

The study found that intellectual property has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. Moreover, the study revealed that Kenya's telecommunications industry gain exclusive rights to innovations for a fixed period. The study also revealed that the Kenya telecommunications industry use brand name and logo to identify that the products or services originate from a unique source. Further, the study found that trademarks provide explicit protections for brands. Nonetheless, the study revealed that at times, the Kenya telecommunications industry has the right to make copies and authorize others to make copies. In addition, trademarks moderately provide explicit protections for slogans and logos. In addition, the study established that patents do not cover the invention of products and services. Moreover, the study revealed that Kenya's telecommunications industry patents do not represent the legal right to exclude others from the market. The study found that patents are not a relevant form of competitive advantage. Further, the Kenya telecommunications industry has no copyrights of products and innovations.

Goodwill and Competitive Advantage

The study found that goodwill has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. Moreover, the study established that the average revenue per consumer in Kenya's telecommunications industry has been increasing over the years. In addition, the average revenue per consumer in the use of internet services and voice services has been increasing over the years. The study found that the companies have managed to build a brand name over the years. Moreover, the study established that the brand name is considered an asset to organizations. The study found that the fair market value of Kenya's telecommunications industry is based on the value of assets. In addition, the fair market value has been increasing over the years. Nonetheless, the study found that the customers are not willing to pay more for the services because of the brand name. Moreover, the study found that Kenya's telecommunications industry does not have the highest fair market value in the telecommunication industry.

Intellectual Capital and Competitive Advantage

The study found that intellectual capital has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. Moreover, the study established that Kenya's telecommunications industry has skilled and educated staff that help the organization achieve a competitive advantage. In addition, Kenya's telecommunications industry has an efficient structure with less bureaucracy. The study further revealed that organizational structure enables employees to operate efficiently. The study found that relational capital is of benefit to both the organizations and stakeholders. Moreover, organizations connect internal intellectual resources with external stakeholders to produce value. Nonetheless, the study established that the employees are moderately motivated, which leads to an increase in productivity. Moreover, the study found that competent human capital has moderately increased efficiency in service delivery. In addition, the structures in Kenya's telecommunications industry moderately influence organizational innovation. The study also found that at times, creating and maintaining relational capital is crucial for having successful organizations.

Corporate Culture and Competitive Advantage

The study found that corporate culture has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. The study further revealed that values in Kenya's telecommunications industry foster teamwork and motivation among employees. Moreover, the study found that Kenya's telecommunications industry has set organizational values. Furthermore, Kenya's telecommunications industry has set a realistic, honest, and achievable vision. In addition, the study found that a vision statement helps orient customers, suppliers, and other stakeholders. The study also found that Kenya's telecommunications industry encourages more junior team members to dissent in discussions without fear. Nonetheless, the study revealed that values in Kenya's telecommunications industry moderately encourage innovation and decrease workplace politics. Furthermore, the study found that a vision statement moderately inspires and motivates the stakeholders. Moreover, Kenya's telecommunications industry moderately protects organizational values. Furthermore, the study established that Kenya's telecommunications industry has not invested in people in visible ways.

Competitive Advantage

The study found that Safaricom had the highest market share followed by Airtel, Telkom, and Finserve. In 2016, Safaricom had a market share of 70.9%, which decreased to 69.8% in 2017, 67.1% in 2018, 64.8% in 2019 and 63.6% in 2020. The market share of Airtel increased from 17.3% in 2016 to 17.8% in 2017, 19.7% in 2018, 25.9% in 2019 and 27.2% in 2020. The market share of Telkom decreased from 9.6% in 2016 to 9.5% in 2017, 8.7% in 2018, 6.2% in 2019 and 6.3% in 2020. The findings also show that the market share of Finserve increased from 2.2% in 2016 to 2.9% in 2017, 4.5% in 2018, decreased to 3.1% in 2019, and 2.9% in 2020. Safaricom had the highest sales volume share followed by Airtel, Telkom, and Finserve. In 2016, Safaricom had a sales volume share of 71.3%, which decreased to 70.6% in 2017, 69.4% in 2018, 67.3% in 2019 and 64.7% in 2020. The sales volume share of Airtel decreased from 19.1% in 2016 to 18.6% in 2017, which increased to 22.3% in 2018, 23.5% in 2019, and 25.9% in 2020. The sales volume share of Telkom increased from 7.2% in 2016 to 8.1% in 2017, but decreased to 5.6% in 2018, increased to 6.1% in 2019 and 6.5% in 2020.

The findings also show that the sales volume share of Finserve increased from 2.4% in 2016 to 2.7% in 2017, remained the same in 2018, increased to 3.1% in 2019, and decreased to 2.9% in 2020. Safaricom had the highest revenue followed by Airtel, Telkom, and Finserve. In 2016, Safaricom had revenue of Ksh. 195.68 billion, which increased to Ksh. 212.9 billion in 2017, Ksh. 233.3 billion in 2018, Ksh. 250.3 billion in 2019 and Ksh. 262.6 billion in 2020. The revenue generated by Airtel increased from 48.5 billion in 2016 to Ksh. 46.4 billion in 2017, Ksh. 49.2 billion in 2018, Ksh. 59.7 billion in 2019 but decreased to Ksh. 59 billion in 2020. The revenue generated in Telkom Kenya decreased from Ksh. 26.9 billion in 2016 to Ksh. 24.8 billion in 2017, Ksh. 21.7 billion in 2018, Ksh. 14.3 billion in 2019 and Ksh. 13.7 billion in 2020. The findings also show that the revenue generated in Finserve increased from Ksh. 6.2 billion in 2016 to Ksh. 7.6 billion in 2017, Ksh. 11.2 billion in 2018, decreased to Ksh. 7.1 billion in 2019 and Ksh. 6.3 billion in 2020.

Inferential Analysis

Table 1: Karl Pearson Correlation Analysis

		Competitive Advantage	Intellectual Property	Goodwill	Intellectual Capital	Corporate Culture
Competitive Advantage	Pearson Correlation	1				
	Sig. (2-tailed)		.			
	N	98				
Intellectual Property	Pearson Correlation	.610**	1			
	Sig. (2-tailed)	.000				
	N	98	98			
Goodwill	Pearson Correlation	.734**	.072	1		
	Sig. (2-tailed)	.000	.511			
	N	98	98	98		
Intellectual Capital	Pearson Correlation	.871**	.052	.101	1	
	Sig. (2-tailed)	.000	.610	.255		
	N	98	98	98	98	
Corporate Culture	Pearson Correlation	.642**	.155	.126	.188	1
	Sig. (2-tailed)	.000	.127	.215	.064	
	N	98	98	98	98	98

There is a positive and significant relationship between intellectual property and the competitive advantage of Kenya's telecommunications industry (r=0.610, p-value =0.000). Since the p-value (0.000) was less than the significance level of 0.05, the relationship was significant. There is a positive and significant relationship between goodwill and the competitive advantage of Kenya's telecommunications industry (r=0.734, p-value =0.000). Since the p-value (0.000) was less than the significance level of 0.05, the relationship was significant. There is a positive and insignificant relationship between intellectual capital and the competitive advantage of Kenya's telecommunications industry (r=0.871, p-value =0.000). Since the p-value (0.000) was less than the significance level of 0.05, the relationship was significant. There is a positive and insignificant relationship between corporate culture and the competitive advantage of Kenya's telecommunications industry (r=0.642, p-value =0.000). Since the p-value (0.000) was less than the significance level of 0.05, the relationship was significant.

Table 2: Regression Analysis

Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.857[a]	.734	.135	6.08602

a. Predictors: (Constant), Corporate Culture, Intellectual Property, Goodwill, Intellectual Capital

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6710.502	4	1677.626	45.293	.000b
	Residual	3444.685	93	37.039		
	Total	10155.19	97			

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.953	0.206		4.626	0.000
Intellectual Property	0.534	0.247	0.571	2.162	0.031
Goodwill	0.722	0.224	0.747	3.223	0.001
Intellectual Capital	0.832	0.217	0.821	3.834	0.000
Corporate Culture	0.571	0.212	0.573	2.693	0.022

The R-squared for the relationship between intangible resources and competitive advantage in Kenya's telecommunications industry was 0.734. This implied that 73.4% of the variation of the dependent variable (competitive advantage) could be explained by the independent variables (intellectual property, goodwill, intellectual capital, and corporate culture). The ANOVA was used in this study to determine whether the model was a good fit for the data. The F calculated was 45.293 and the F-critical from the F-distribution table was 2.47. Since the F calculated was greater than the F critical and the p-value (0.000) was less than the significance level (0.05), the model was considered a good fit for the data.

The regression equation was.

$Y = 0.953 + 0.534X_1 + 0.722X_2 + 0.832X_3 + 0.571X_4$

The study findings indicated that intellectual property has a positive significant effect on the competitive advantage of Kenya's telecommunications industry (β_1=0.534, p value= 0.031). Since the p-value (0.031) was less than the significance level of 0.05, the association was significant. This denotes that an increase in intellectual property will lead to a 0.534 improvement in the competitive advantage of Kenya's telecommunications industry. Goodwill has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry (β2=0.722, p value=0.001). The association was significant as the significance level (0.05) was more than the p-value (0.001). This denotes that increase in goodwill will lead to a 0.722 improvement in the competitive advantage of Kenya's telecommunications industry. Intellectual capital has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry (β3=0.832, p-value= 0.000). The association was significant because the p-value (0.000) was less than the significant level (0.05). Corporate culture has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry (β_4=5.770, p value= 0.022). Since the p-value (0.022) was less than the significance level of 0.05, the association was considered to be significant. This means that improvement in corporate culture will lead to a 0.571 improvement in the competitive advantage of Kenya's telecommunications industry.

Conclusions

The study concludes that intellectual property has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. The findings indicated patents, copyrights and trademarks influence the competitive advantage of Kenya's telecommunications industry. This implies that enhancing intellectual property (patents, copyrights, and trademarks) improves the competitive advantage of Kenya's telecommunications industry.
The study also concludes that goodwill has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. The study findings indicated that average revenue per user, the company's brand name, and the fair market value of the assets influence the competitive advantage of Kenya's telecommunications industry. This implies that enhancing goodwill (average revenue per user, company's brand name, and fair market value of the assets) improves the competitive advantage of Kenya's telecommunications industry.

The study further concludes that intellectual capital has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. The study established that human capital, structural capital, and relational capital influence the competitive advantage of Kenya's telecommunications industry. This implies that improving intellectual capital (human capital, structural capital, and relational capital) enhances the competitive advantage of Kenya's telecommunications industry.

The study further concludes that corporate culture has a positive and significant effect on the competitive advantage of Kenya's telecommunications industry. The study found that vision, values, and practices influence the competitive advantage of Kenya's telecommunications industry. This implies that improvement in corporate culture (vision, values, and practices) improves the competitive advantage of Kenya's telecommunications industry.

Recommendations

The study found that employees in Kenya's telecommunications industry are moderately motivated. This study recommends that the management of Kenya's telecommunications industry should motivate the employees by rewarding them, acknowledging their achievements, sharing positive feedback, offering flexible scheduling, providing a conducive working environment, and being respectful, honest, and supportive. Motivated employees are productive and help strengthen the competitive advantage of an organization.

The study found that Kenya's telecommunications industry has skilled and educated staff that help the organization achieve a competitive advantage. This study, therefore, recommends that the management should strive towards recruiting as well as grooming the best team to get a competitive advantage in the organization. Moreover, the management should enhance the employees' skills by conducting regular training, coaching, mentorship, and workshops.

The study found that the vision statement in Kenya's telecommunications industry moderately inspires and motivates the stakeholders. This study hence recommends that the Kenya telecommunications industry should develop a vision statement that excites and drive the stakeholders, employees, and those who will carry it out in the organization to achieve future goals. Moreover, the vision must be viewed as realistic, honest, and attainable by the employees.

The study found that the Kenya telecommunications industry has not invested in people in visible ways. This study, therefore, recommends that the management should invest in their employees through promotion, involving employees in writing a mission statement, conducting training programs, motivating the employees through rewards, and creating a feedback culture. Investing in employees encourages them to give creative solutions to problems, provide innovative ideas for new products or services and offer exceptional customer service hence enhancing competitive advantage.

The study found that values in Kenya's telecommunications industry moderately encourage innovation and decrease workplace politics. The study, therefore, recommends that the management should develop values that encourage innovation among employees since innovation provides differentiated competitiveness in terms of quality and function, which offers incentives for customers to choose. Innovation allows companies to win the competition, secure a market-leading position, and create market performance by attracting new customers.

The study found that patents do not cover the invention of products and services. This study hence recommends that the management should include the invention of products and services in their patents to stop others from copying, manufacturing, selling, or importing their invention without their permission. Moreover, the organizations will get protection for a pre-determined period, allowing them to keep competitors at bay.

REFERENCES

Airtel Kenya (2019). *Quarterly report on the results for the fourth quarter and year ended March 31, 2019.* Retrieved from https://airtel.africa/assets/pdf/pdf1.pdf

Al Amin, O. M., & Maina, J. (2020). Organizational Resources and Competitive Advantage of Airline Companies Operating in Kenya. *Journal of Strategic Management, 4*(3), 50-68.

Aminga, F. (2019). *Telkom Kenya lays off 575 out of 800 workers ahead of merger with Airtel*. Retrieved from https://www.k24tv.co.ke/

Aurora, A.C. & Ferreira,C. (2019). Intellectual property rights and the competitiveness of academic spin-offs. *Journal of Innovation & Knowledge, 4*(3), 154-161.

Awa, F. N., Okwo, M. & Obinabo, C. R. (2020). Effect of Intangible Assets on Corporate Performance of Selected Commercial Banks in Nigeria (2012-2018). *IOSR Journal of Economics and Finance, 11*(3), 8-19.

Busco, C. & Scapens, R.W. (2020). Management accounting systems and organizational culture: Interpreting their linkages and processes of change. *Qualitative Research in Accounting & Management, 8*(4), 320-357.

Chepngeno, F. K., Wagoki, J. & Okello, B. (2019). Effects of Organizational Culture on Sustainable Competitive Advantage in State Owned Corporations in Kenya: A Case of Postal Corporation of Kenya. *International Journal of Science and Research, 3*(10), 2354-2367.

Communication Authority of Kenya (2019). *Annual Report for the Financial Year Ended 30th June 2019.* Retrieved from https://ca.go.ke/

Communications Authority of Kenya (2020). *Fourth Quarter Sector Statistics Report for the Financial Year 2019/20 (April-June 2020)*. Retrieved from https://ca.go.ke

Consolate, T. & Mulyungi, P. (2020). Effect of Community Relations on Competitive Advantage of Telecommunication Industry in Rwanda. *International Journal of Innovative Research and Development, 9*(8), 95-121.

Dalwai, T. & Mohammadi, S.S. (2020). Intellectual capital and corporate governance: an evaluation of Oman's financial sector companies. *Journal of Intellectual Capital, 21*(6), 1125-1152.

Danziger, N., Rachman-Moore, D. & Valency, R. (2018). The construct validity of Schein's career anchors orientation inventory. *Career Development International, 13*(1), 7-19.

Deepak, R. (2018). Intellectual property strategy for competitive advantage. Int. *J. of Intellectual Property Management, 6,* 36 - 61.

Fahy, J. (2016). The resource-based view of the firm: some stumbling blocks on the road to understanding sustainable competitive advantage. *Journal of European Industrial Training, 24*(2), 94-104.

Farah, A. A., Mbebe, J. N. & Muyoka, B. (2019). Effect of intellectual capital on the financial sustainability of savings and credit cooperative societies in Kenya. *International Academic Journal of Economics and Finance, 3*(3), 427-453

Ferdaous, J. & Rahman, M.M. (2019). The effects of intangible assets on firm performance: An empirical investigation on selective listed manufacturing firms in DSE, Bangladesh. *American Journal of Business, 34*(3/4), 148-168

Gruchmann, T. & Seuring, S. (2018). Explaining logistics social responsibility from a dynamic capabilities perspective. *The International Journal of Logistics Management, 29*(4), 1255-1278.

Gruchmann, T., Seuring, S. & Petljak, K. (2019). Assessing the role of dynamic capabilities in local food distribution: a theory-elaboration study. *Supply Chain Management, 24*(6), 767-783.

Hunt, S.D. & Morgan, R.M. (2015). The Resource Advantage Theory of Competition. *Review of Marketing Research, 1*, 153-206.

Ionita, C. & Dinu, E. (2021). The effect of intangible assets on sustainable growth and firm value – Evidence on intellectual capital investment in companies listed on Bucharest Stock Exchange. *Kybernetes, 45*, 90-121.

Ipek, K., Salih, Z. & Hüseyin, N. (2019). The Relationship between Firm Intellectual Capital and the Competitive Advantage. *Journal of Global Strategic Management, 3*(2), 181-208.

Kapoor, M. & Aggarwal, V. (2020). Tracing the economics behind dynamic capabilities theory. *International Journal of Innovation Science, 12*(2), 187-201.

Korutaro, N. S., Ntayi, J., Ahiauzu, A. & Sejjaaka, S. (2019). Intellectual capital in Ugandan service firms as a mediator of board governance and firm performance. *African Journal of Economic and Management Studies, 5*(3), 300-340.

Mnzava, B. (2018). Do intangible investments matter? Evidence from soccer corporations. *Sport, Business and Management, 3*(2), 158-168.

Mugo, P. & Macharia, J. (2020). Technological innovation and competitive advantage in telecommunication companies in Kenya. *International Journal of Research in Business and Social Science, 9*, 38-47.

Muita, J. K. (2018). *Innovation Strategies and Competitive Advantage in the Telecommunication Industry in Kenya.* Retrieved from http://erepository.uonbi.ac.ke

Naimah, A. Y., Roshayani, A., Amrizah, K. & Rahayu, A. R. (2019). Green Intellectual Capital and Firm Competitive Advantage: Evidence from Malaysian Manufacturing Firms. *Academic Research Publishing, 5*(2), 463-471.

Ndicu, S. (2018). Intellectual Property Rights, Innovation and Firm Performance in Developing Countries: Firm-Level Evidence from Kenya. *Innovation Research Journal, 32*, 54-67.

Nguyen, Q.T. (2021). Intangible Assets of MNE Foreign Subsidiaries: The Role of Internal Financial Resources and Host Country Institution. *International Business Research, 15*, 263-285.

Nyaberi, J. P. L. (2020). Firm resources and competitive advantage of law firms in Kenya. *The Strategic Journal of Business & Change Management, 7*(4), 1491 – 1499.

Nzewi, H.N., Eze, I. R., Chigozie, P. & Ohodah, M. (2019). Intellectual Capital and Competitive Advantage of Selected Commercial Banks in Anambra State. *International Journal of Managerial Studies and Research, 6*(5), 27-36

Okoye, P.V., Offor, N. & Manukaji, I. J. (2019). Effect of Intangible Assets on Performance of Quoted Companies in Nigeria. *International Journal of Innovative Finance and Economics Research, 7*(3), 58-66.

Okpara, J. (2018). *Exploring the Effects of Intangible Resources on Competitive Advantage and Performance of Listed Firms in Nigeria*. Retrieved from https://www.semanticscholar.org

Organization for Economic Co-operation and Development (2019). *Productivity Growth and Finance: The Role of Intangible Assets - A Sector Level Analysis.* Retrieved from https://www.oecd.org

Owino, O. J. & Kibera, F. (2019). Organizational Culture and Performance: Evidence from Microfinance Institutions in Kenya. *Sage Journals, 9*(1), 43-56.

Seo, H. S. ., & Kim, Y. (2020). Intangible assets investment and firms' performance: evidence from small and medium-sized enterprises in Korea. *Journal of Business Economics and Management, 21*(2), 421-445.

Soko, J. (2018). Intangible Assets for Sustainable Competitive Advantage in Institutes of Higher Learning. *Msingi Journal, 1*, 104-147

Stokes, P. & Wall, T. (2017). *Research methods*. NY: Macmillan International.

Sveiby, K. E. (1997). *The new Organizational Wealth*. San Francisco CA: Berret-Koehler Publishers Inc.

Turk, I. J. & Montes, S. L. (2019). *The U.S. Telecommunications Services Industry: Assessing Competitive Advantage.* Retrieved from https://www.commerce.gov

Waruingi, J. K. (2019). *Intellectual property rights and their influence on ICT innovations in Kenya*. Retrieved from https://core.ac.uk

Wijethilake, C. & Ekanayake, A. (2018). Proactive Strategic Responses to Corporate Sustainability Pressures: A Sustainability Control System Framework. *Advances in Management Accounting, 30*, 129-173.

Yasean, A. T., Ahmed, H. A. & Mohammad., M. A. (2018). The impact of intangibles on firms' financial and market performance: UK evidence. *Review of Quantitative Finance and Accounting, Springer, 50*(4), 1147-1168.

Zhang, K. & Shih, Z. (2019). *The Competitive Advantage Analysis of the Telecommunication Corporation after the Restructuring of China's Telecommunications Industry in 2018* --- *Case study of China Mobile Communication Corporation*. Retrieved from https://lup.lub.lu.se

Zhang, M. (2019). The Impact of Internally Generated Goodwill on Financial Performance of Firms. *Journal of Applied Business Research, 67*, 109-118.

Zhao, H., Teng, H. & Wu, Q. (2018). The effect of corporate culture on firm performance: Evidence from China. *China Journal of Accounting Research, 11*(1), 1-19.