FOREIGN DIRECT INVESTMENT IN INTERNATIONAL TECHNOLOGY TRANSFER AMONG MOBILE TELECOMMUNICATION FIRMS IN KENYA

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DECLARATION

This research project is my original work that has not been presented for the award of degree in any other university or institution for any other purpose.

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This research project has been submitted for examination with my approval as University supervisor.

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DEDICATION

I dedicate this project to my lovely son Jason, my dear family who have stood by me during my entire period of studies. Finally but by no means the least, to the late Benson Nderitu who continually encouraged me to pursue this degree course.

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I am grateful to God above all for enabling me to complete this Masters project. Special thanks go to my supervisor Prof Bitange Ndemo for his insightful guidance and zealous support during the entire period of this project writing.

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ABBREVIATION AND ACRONYMS

CAK	-	Communication Authority of Kenya
DOI	-	Diffusion of Innovation
FDI	-	Foreign Direct Investment
KBA	-	Knowledge-Based Assets
M & A	-	Mergers and Acquisition
MNEs	-	Multinational Enterprises
MNC	-	Multinational Companies

ABSTRACT

In the era of globalization, the main important player to the prosperous world economy was the expansion of transactions across the border which was associated with techno-economic relations. Foreign Direct Investment has extended quickly, becoming an increasingly significant aspect in host countries and the global community. Furthermore, FDI generally will boost economic growth and provide better living standards in specific nations. Regardless of the outcomes of foreign direct investment, most developing nations panic that by opening up domestic markets to competition as well as external investment less constraints. They fear that it may lead to losing regulating their planned industries including the telecommunications sector. The major goal of this survey was the determination of FDI roles in global technology transfer among mobile telecommunication firms in Kenya. The study adopted a detailed cross-sectional assessment as its study design. The study population involved all the three major mobile companies operating in Kenya. The primary data utilized in the investigation was obtained through self-administering of questionnaires. The facts were analyzed with the aid of a software that is Statistical Package for Social Sciences (SPSS). The results were presented largely in form of tables and figures. From the results, several factors actually influence the mobile firms' decisions on external technology acquisition and this includes compatibility of new technology, existing ties with the partner companies, technological change life cycle stage, and intellectual protection. Foreign direct investment was found to be essential to the telecommunications companies as it helped them to be competitive, innovative, enhance managerial expertise, upgrade their marketing expertise which results in enhanced job opportunities. The study thus recommends for a need of the government to create an enabling business environment to encourage more foreign direct investment in the country. By doing so, it may spur international technology transfer which will enabled the mobile telecommunications firms to increase their productivity growth, achieve a high increase in customer base due to the delivery of high quality services and products and/or strengthen its technological capability and avoidance of high costs of internal development in the long run.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Globalization is formed as a result of techno-economic relations as well as existence of political economies. Also, globalization is classified by fundamental changes in trade and investment. The foreign investment promotes the development of growth, altering the formation and geographic allocation of the industrial event. It also excites competition and promotes the universal dispersion of technologies having both valuable negative and/or positive effects on for supportable growth (Krueger, Reilly, and Casrud, 2010). Multinationals comprise the regulator of this world economic activity. The Foreign Direct Investment (FDI) contributes to the increasing share of world financial activities and its highly associated with the Multinational Corporations (MNCs). The growth in worldwide venture shows that a country's supportable progress is more affected by MNCs. These firms are also part of most talented players in the universal, with functions like creating and guiding technology. An organization spending improved expertise offer likelihoods to raise productivity, economic maturity as well as expansion. Thus, it is unexpected that most nations perceive investment (properties) by multinational enterprises as one of the most substantial ways to obtain expertise and information to improve their output base (Nunez, 2010).

The study is based on industrial organization theory which states that firm-specific advantages to determine FDI decisions. Koizumi and Kopecky (2007) notes that the trends of external investment relies on global invention life cycle. However, most inventions are initially created by technologically progressive nations, which are later transferred to developing nations upon being standardized. According to Stock and Tatikondar (2010), multinational companies initially encounter disadvantages caused by topographical and social disparities in contrast to internal companies. However, to provide resources in another nation,

it must own some exclusive possession benefit over possible domestic contenders. The technical advantage of some imperceptible, rent resilient possessions including skills of management and varieties are thought to offer such advantages as well as paybacks.

The telecommunications sector in Kenya is experiencing very rapid modification as well as apprehensive development. For examples, the telephone line's waiting lists have been replaced whereas phone tariffs for local, countrywide and worldwide calls are progressively ranking amongst the lowermost in Africa. Liberalizing the industry leads to competition from the private operators. This brings about certain considerable paybacks to subscribers especially on indeed lesser costs and improved choice. The aim to remain the largest market share in the midst of world competition has led to strategic thinking adopted by these firms. The customers have the same time become quite enlightened and demand better services than before albeit at lower prices. With the change of technology, many customers are adopting the use of second communication means like internet and Voice over Internet Protocol that is provided by Orange Company and Airtel Company. Thus, in such an unpredictable market, managers of these firms will need to develop appropriate operational strategies that will assist them to manage emergent exogenous disturbance caused by the market competition. This plan includes the transfer of technology among the various players in the Kenyan market as well as adopting new technology from the parent firms.

1.1.1 Foreign Direct Investment

Foreign investment holds approximately 10 percent or more of an initiative's voting bonds or equal, which is considered sufficient to impact decision of the management (Palugod & Palugod, 2013). FDI is actually the means from which companies attain their strategic aims. A business should have some strength (product, process skill, management and marketing abilities) necessary to the foreign associate in investing in production in overseas market(s). (Lonsdale and Cox 2010) argues that for straight venture to increase there is a need of some

shortcomings in markets for products or determinants, in addition to the recent know-how, or some meddling in rivalry by firms or competition by the government, that splits markets. FDI on tele-communications includes the capability of establishing marketable existence in an outside region, or acquisition of telephone firms by foreign venture capitalists. It could also be the combined investments between domestic and global associates to grow different tele-communication firms (Krueger et al., 2010). Among the forms of FDI, there are three main ones which include establishing the new outlet, acquisition of control share of another present company and participate jointly in a local firm (Palugod & Palugod, 2013).

FDI can provide direct information to expertise shift through methods as well as information from the company's head office in overseas subordinates. On other hand, the FDI offers the desirable corresponding capitals such as skills for management and capacity for entrepreneurial that can be shifted to teaching curricula as well as practical learning (Baldwiin et al., 2009). Foreign investment is the greatest prominent way of conveying skill to emerging nations. However, it is the sole way accessible for a company to drive knowledge outside its nations of entry or that an owner state may use to procure know-how. FDI is recognized as a major determinant that is essential for the maturity of emerging states because of various conclusions. Also, external funds influxes are anticipated to improve skills and technology, advance efficacy in resource utilization as well as increase employment (Tong and Wei, 2013). The role of FDI as an asset and root of technology has rose considerably as time goes by, and thus improved technical advance. MNCs proceed to manage the formation of expertise. The consequent significance has grown with the increasing expenditures and threats/risks of alteration. The nation that makes the FDI from overseas may also create the social capital stocks by obtaining attendants who receives coaching on the schemes of an appropriate company (Wani & Satyendra, 2008).

1.1.2 International Technology Transfer

Shifting technology bring up to the development of techniques in a single parameter, which is gets transmitted for use in other contexts (Markert, 2012). Technology Transfer attributes to the distribution of commercial technologies in the kind of arrangements on technology alteration, which may or may not be approving the agreement (legally binding) (Blakeney, 2009). Technology transfer tends to focus on producer techniques and diffusion focuses on the end-user technology. However, the technology is not successfully transmitted until it is adopted and used by end users. Technology transfer is essential equipment that allows the firm to develop its competitive advantage. The transfer of material accompanies this, but the consumer cannot obtain the actual skills of the equipment at once. Instead, human interaction (collaboration and supervision) is necessary. Therefore, the faith in the relationship between the producer-customer and knowledge management, are necessary for technology transfer (Lonsdale and Cox, 2010).

Technology transfer is a significant interest to foreign investors in developing states and is strictly linked to the method of human resource creation and rises the absorptive potential of the labor force in the nation. Transfer may occur over most carriers including sub-contracting to domestic organizations and dealers, improving standards in the workplace environment, training programs of employees and other associative paybacks. A strong trust exists that multinational enterprises possess inventive technology that is superior as well as their administration methods, of which others are taken by domestic companies when MNCs locate in a specific state (Davis, 2007). The East-Asians are fast catching-up with the enhanced states to a big scope provided shifted technology (Loungani and Razin, 2011). In the existing time of increased globalization, nations that arrived late need to follow the practice of China that served as the first example of advantages gained from embracing foreign direct investment centered on technology shift.

Expertise conveyed from FDI plans may grow the effectiveness of domestic companies (Gorg and Strobl, 2012), thus influencing main temptations for emerging economies looking for external investment. Also, foreign investment can aid in integrating local markets into the world economic coordination thus extreme efficient than can be realized only by initial/former progress of trade. The profits from foreign investment will be magnified in an exposed venture setting coupled with a free line of work and stock regime, progressive competitive strategies, external solidity, privatization and mis-directive.

1.1.3 Organizational Performance

This is the absolute fulfillment of a firm and relates to the realization of set targets, has a period in achieving these goals and involve and an operating system that incorporates the higher level of efficiency and effectiveness (Gibson et al., 2010). Therefore, performance of an organization implies the capacity of an initiative to attain such goals as high revenue, quality of output, important share of market, worthy monetary outcomes and existence at the pre-set time through appropriate policy (Koonts and Donnel, 1993). Productivity of the firm provides the foundation for a business to determine how well it is developing towards preset goals, find capacities of strong and weak points thus deciding on how upcoming creativities are to be undertaken (Van Weele, 2006).

Organizational performance comprises several events that aid in determining the objectives of the business, and control the flow to the objective (Johnson et al., 2006). There are three methods used in accessing the monetary performance of firms that is; profits/net income, Return on Investment (ROI) and Return on Shareholder Equity (RSE) (Hopkins and Hopkins, 1997). Deposit growth is another measure which is exclusive to banking and the associated financial service industry. It is estimated as the percent change in the deposit of the consumer annually. Fiscal and non-financial indicators can be employed to measure performance (Rowley, 2011). The economic pointers include a percentage growth in sales that is the sales

growth and proportion of profit margin not as profitability. Also the public image is used as well as the goodwill, value of services and competency of actions by the non-financial pointer.

Other studies, focusing on the service industry, measured performance based on worker productivity (Mishra, 2006). It is a significant performance measure in banks since human capital expenses are high and are obtained through the calculation of the logarithm of net annual revenue per worker. This measure indicates employee efforts separated from differences in product and capital market(s). Qualitative tests can be measured through responses that are applicable. They include; commitment, satisfaction, turnover, social integration among others. Also there are cognitive factors such as invention, the range of viewpoint, number and value of ideas), similarly the typical that is the behavior of feebler level of employees and finally the talk which include communication with group members.

1.1.4 Kenya's Mobile Telecom Industry

The mobile communication area is the greatest vigorous in the business and has accumulated over time occurring to few subscribers two decades ago to millions of customers presently. The examples of free phone duties accessible have also altered extremely. Mobile money transfer, internet services as well as video conferencing that provides voice services. Currently, there are three principal actors in this sector in Kenya; these include Airtel, Safaricom and Telkom Kenya. Permitting of these drivers has seen the administration make good of its capacity to Kenyans to develop this sector. The general goal in management for this industry is on the way as the industry optimizes its addition to the growth of the Kenyan economy, through ensuring availability of qualified, reliable and affordable communication services everywhere the nation.

Currently, there are over 33.6 million mobile phone users in Kenya which is around 82% of the population. Safaricom with nearly 22.5 million subscribers, controls 67.4% of the market, Bharti Airtel has around 22.6% of the customer base, with Orange Telkom having 10% (CAK, 2015). Mobile operators have partnered with multinational telecommunication equipment manufacturers and suppliers for the provision of hi-tech communication materials and services. Telecommunication merchants deal with manufacture, supply, installation, integration and commission of the telecom equipment as well as the provision of related services for Network operators. They also undertake operation and maintenance, training, consultancy and network planning and optimization amongst others. In this regard, telecommunication vendors play a critical role in the growth of the industry. They are the pillars behind the success of telecom operators. Globally, the top telecom providers are Huawei Technologies, Ericsson, Nokia, CISCO, Alcatel-Lucent, and ZTE Corporation. These six vendors together earn more than half of the world's telecom equipment and service revenue and share a common thread: they offer products and services across the entire telecom spectrum (Infoncetics, 2015).

Kenya's mobile market has transformed suggestively over the last few years with the entry of the third and fourth Mobile Network Operators (MNOs), Yu and Orange. MNOs' networks coverage now stands at 96% as well as strong price struggle has seen prices fall by over 70% in the last four years, leading to a significant rise in usage levels in the recent past. The competitive sector was manifested as a result of Safaricom and Airtel buying out YuMobile in a deal which will see Safaricom buy Essar-owned yuMobile infrastructure and retain about 130 employees in the technical department while Airtel obtains the 2.7 million subscribers by taking over the mobile number prefix. Therefore, the clients shifted to its network without changing their identities.

1.2 Research Problem

The most important contributor to the thriving world economy. FDI in particular has expanded quickly, hence an important factor in both domestic and in the global community (Markert, 2012). FDI has improved persistently over a considerable period and covering a broad spectrum of businesses. Therefore, FDI generally will increase economic growth and create better living standards in particular nations. Despite the benefits of FDI, many developing countries fear that by opening up their markets to competition and without any restriction on foreign investment, they will lose control of strategic industries such as the telecommunications sector (Krueger et al., 2010). Nonetheless, FDI brings technological funds, skills, and market competition to the telecom sector.

The telecommunication industry in Kenya like any other environment continues to transform with changes such as new taxation laws, innovative products, and services, political shifts, stabilities and instabilities among others. The need to retain the largest market share in the midst of much competition has driven much of the strategic thinking adopted by these companies. The Mobile Service sector in Kenya has been documented as one of the fastest rising industry and at the same time observing the high level of struggle in Africa. With the change of technology, many customers are adopting the use of less expensive communication means thus, in such an unpredictable market, managers of these firms will need to develop appropriate strategies that will assist them to manage effectively emergent exogenous disturbance caused by the market competition. Foreign direct investment is associated with increased competitiveness and creation of employment with a rise in the wellbeing of the domestic country. It is as a result of inner venture raising the number of participants in the domestic sector which thrusts all competitor firms in the sector to be more competitive by lowering expenses while enhancing efficacy and value.

International studies undertaken on FDI and technology transfer on examination of the determinants of foreign investment in developing countries found that the collaboration of FDI with its respective determinants had a positive and significant effect on economic development in emerging economies (Kok and Ersoy's, 2009). Also it was found that foreign investment allowed a country to present know-hows and knowledge that are inadequate to local financiers, thus increasing productivity (De-Gregorio, 2003). Therefore, growth within the country takes place in presence of the inward investment.

Studies that have been undertaken locally on the role of FDI in international technology transfer include Mwenda (2012) study on inward foreign direct investments and transfer of technology by computer multinational corporations in Kenya. The study found out that the use of tax breaks by the government directly affects foreign direct investments into the country. Further the study established that the determinants of foreign direct investments into Kenya are a market in Kenya and neighboring countries, political stability, the absence of maximum retail price, stable and growing economy, human resource availability and strategic infrastructure. Njuguna (2013) researched on the factors that impact on the influence of external investment on the development of telecommunications sector in Kenya and established that FDI apart from providing economies with much-needed resources for local investment also generates employment opportunities, help the transfer of managerial professions and technology all contributing to economic development. However, the contribution of FDI is affected by infrastructure, licensing regime for all the providers, governmental policies towards FDIs and corruption. With the absence of a study that has been undertaken locally on the role of FDI in international technology transfer among mobile telecommunication firms in Kenya the study undertakes to answer the question; what is the role of FDI in international technology transfer among mobile telecom company in Kenya?

1.3 Research Objective

To establish the role of foreign direct investment in international technology transfer among mobile telecommunication firms in Kenya.

1.4 Value of the Study

The management of mobile telecommunication companies in Kenya may find this study an invaluable source of material in developing and harnessing foreign direct investment. This study would help the companies to know the benefits of FDI on the transfer of technology; thus FDI is perceived as a significant mechanism for the transfer of knowledge.

Other organizations can also detect use in developing their unique technology transfer that shall not be easily imitable and thus create their firm competitive advantages. The government and regulators of the industry may also find invaluable information in how foreign direct investment can be adopted and as a result put in place strategies that may guide and promote other organizations within and without the industry in taking FDI so that they can improve the technology they use to be competitive.

The findings of this study may contribute to research and practice, by elaborating the benefits of technology transfer through foreign direct investment to counter to competition in the industry. The study may also add to the existing body of knowledge by spurring new sections for further investigation within the conclusions and following certificates. Additionally, the study also may help researchers in the provision of information as secondary data for future use in the academic arena.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter presents past studies and focuses on the variables of the study and the discussion theoretical foundation of the survey. The review of literature focuses on the role of FDI in international technology transfer among mobile telecommunication firms in Kenya.

2.2 Theoretical Foundation of the Study

This study is founded on two theories which are the industrial organization theory and endogenous growth models theory

2.2.1 Diffusion Innovation Theory

The theory was developed and proposed by Rogers (1962). It states that an idea gains motion and spreads through a particular social structure. The theory was widely adopted since individuals were shown to perceive the idea and practice it as an innovation. Embracing of a new innovation and practice does not happen concurrently in a social structure. Nevertheless, this is a process whereby people are more appropriate to adopt the change than others (Hager, 2006).

The theory has its primary focus on how potential adopters perceive an innovation regarding comparative advantage or disadvantage. Some of the factors associated with the approach aid in forming a basis including inventiveness, intricacy and comparative advantage. Furthermore, firms that intensely use a particular technology are often prime candidates for early adoption of the next generation of that technology. According to Li and Atuagene-Gima (2011) this theory describes how new skills or innovations are embraced. Further, the theory recommends five characteristics of innovation that affect its approval and they include; comparative advantage, complexity, compatibility, trial ability and observe-ability. The theory suggests that clarity of innovations, explicit advantage over the previous approach that

is more readily adopted and applied (Greenhalgh, 2004). The theory suits this study as it may lead to understanding the dynamics at play concerning acceptance and use of new innovations at telecommunication firms. Therefore, mobile firm's activities support improvement in firm competitiveness and profitability.

2.2.2 The Dependency Theory

The dependency theory was proposed by Hein (2002). Apart from being adapted in many countries, the theory was well utilized in Latin American countries as it emphasized more on inward oriented policies. According to this theory, import substitution strategy was better compared to foreign investment. However, most economies especially Southeast Asian and East were focused towards attracting foreign investment into their domestic economies. This reality mostly restrained the acceptance of the dependency theory, diverting attention to the study of the contribution FDI.

The dependency theory is based on a Marxist's view of the world. The world was perceived in terms of the spread of free enterprise, as well as the utilization of inexpensive labor and funds in return for the out-of-date skills. The subscribers of this theory believed that dominantly, the world capitalist organization dealt with the division of labor. Dependency theory advocates for an inward looking approach, whereby emphasis is laid on the growth and an improved role for the nation concerning imposing hindrances to businesses. This makes an inward venture difficult and encouraging nationalization of key businesses. In this case, the dependency theory perceives FDI in the developed nations at the center of the global economic system as harmful to the future growth of the economy of emerging country's periphery (Sayek, 2004). According to theory, the entry of peripheral economies by big business allows planning for resources that might have used for national development. Therefore, the dependency theory is an international relations theory that studies the relations and connections of different nations.

2.3 Role of Foreign Direct Investment

External investment is the main factor among firms meant to achieve their considered goals. A firm should own some resources such as product and procedure know-how which may be useful in making investment decisions especially in overseas markets (Konings, 2001). The developed countries have remained the main contributor. The major beneficiary of foreign direct investment flowing to emerging economies have doubles considering the previous three decades ago. According to Meyer (2002) external investment encompasses two average properties which include technology and capital or some insubstantial benefits. This implies that foreign investment is likely to be significant in sectors with important firm-specific, elusive, Knowledge Based Assets (KBAs). The firm location on market actions oversees benefit from market power expansion and place particular benefits. Therefore, market advance and cost reduction are among the two gains that companies follow through FDI.

Developing countries that are characterized by feeble monetary institutions, little firm governance as well as accounting principles will grape the consideration of advanced proportion on of their capital inflows in the form of foreign development investment (Borensztein and De Gregorio, 2001). Bagwell and Maskus (2007) noted that the site of production services to inform competing companies of an individual's production expenses and it is the case of firm-specific informational disproportionateness given the choice to locate production amenities overseas that signals the expenses of the participant. The FDI contributes a lot to the development course in case the associate is fully possessed as well as combined into the world actions of the parent firm. Besides, FDI leads to increased competition, creates job and increases the wellbeing of the country (Dunning, 2004). Therefore firms are involved in usage of inward venture which increases the numbers of

entrants in the local industry that forces all competitor firms in the sector to become more competitive by lowering costs and thus improving productivity and worth.

According to Sethi, (2002) the developing nations adopt different ways of attracting external investment through such actions as liberalization, infrastructure improvement, human resource development and investment initiatives. The economic growth and technology transfer to nations are significant consequences of FDI, development of technological infrastructure, and human capital is critical prerequisites and therefore antecedents for external investment (Noorbakhsh and Paloni, 2001; Lipsey, 2004).

Foreign investment operates a significant function in the distribution of benefits from inventions, inspires development and has a larger effect than investment by local firms (Borensztein 2000). This emphasis that developing nations require to have extended to a certain threshold of growth before obtaining the benefits attributed to foreign investment. Similarly, external investment can enhance structural proficiencies and develop new investments in environmentally friendly defense conceivable. The roles played by FDI is crucial in achieving economic growth, development, and economic structure improvement because an increasing level of capital accumulation is the most important factor in helping overcome barriers to further economic development in developing countries. FDI and technology promote economic development in host countries through some channels, but the impact they have largely depends on the receiving countries, their industries and border countries, such as investment policy, the level of economic development and economic structure (Berg, 2005).FDI improves the economics of host economies, and facilitates further foreign investment, by increasing business opportunities for home firms, construction, transportation and hospitality and business service companies. It also creates new jobs for local employment (Guisinger and Phelan 2003).

Foreign investments have contributed to improving the conditions for the infrastructure of many countries (Lipsey, 2004). There is sufficient range of technological expansion of a nation. The living standards of the general public of the domestic country could be enhanced through the result of the foreign direct investment made in an economy.

FDI has benefited the health sector of many developing countries and actually in overall economic and social improvement of a nation. Foreign investment also assists the local and host economies in setting up mass educational curricula provided in form of subsidizations mostly offered by non-governmental institutions. The emerging countries can handle other healthcare aspects with the aid of the FDI (Das 2007). Additionally, foreign investment creates higher-skilled as well as better employment, encourages the shift of technology, raise productivity, diversifys and upgrades the value-added element of exports all of which affect a economy's capacity to incorporate the world value chains.

Chanda and Kalemli-Ozcan(2004) showed that flows of external investment have the positive short-run effect on the economic development, but accrued stock of external investment has the decisive retardant effect on economic enhancement which is related with higher income disparity. The study supports this position on other studies that suggest foreign investment to be dangerous to develop countries that have concentrated on the inverse relationship between the investment capital stock proportion and the increase of per capita Gross Domestic Product (GDP). However, the greater the assets, the lesser the investment flow especially in a given new investment level. According to Konings (2008) Less Develped Countries (LDCs) with greater rates of external investment tend to exhibit faster rates of both long and short run economic progress.

2.4 Foreign Direct Investment Technology Transfer

FDI incorporates administration, joint-investment, and transfer of both expertise and technology (Dunning, 2004). It consist of the inward and outward FDI, with outcome of a net foreign inflow which is either inverse or positively related. On the other hand, technology is described as the information essential in achieving a certain production outputs from a specific means of merging identified inputs (Kukeli, 2006). Technologies range from intra-firm organizational structures to different production processes, management techniques and means of finance. In the current global economy, there is great disparity in the technical determination. An irresistible share of scientific, expertise, inquiry and growth initiatives take place in the progressive economies. Large multinational companies are the best in innovation. Robinson, (2008) noted that technologies could be transferred either through FDI or a variety of contractual arrangements. These contractual devices are the export of equipment; licensing; technical assistance contracts; management contracts; marketing agreements; training contracts; research and development contracts (R&D); turnkey contracts; manufacturing contracts with the provision of technical assistance and the oversight of construction contracts. Technology transfer is defined as exchanging of technology knowledge and expertise from the owner to the receiver.

FDI in telecommunications encompasses the capacity to determine a commercial existence in an international region, including acquisition of telephone firms by investors from overseas or common undertakings between domestic and global associates to create new telecommunication service firms. The connection between technology shifts and FDI made by telecom firms appeared to be conspicuous (Fan, 2009). FDI may also be the root of expertise shifts to local businesses when the appearance of an international firm produces yield or performance paybacks for the owner country's local non-linked firms (Baldwin,

2009). FDI is the most significant method of transferring technology to emerging nations. Also, external investment is the only way out of all the available ways that a firm can move expertise outside its host nation, or that a host country can utilize to obtain skills.

Apart from technology transfer incorporating all dimensions of the origins, flows, and uptake of know-how, the foreign investment has more prevailing global technology transfer channel than ever. Its forms have become dominant for over a long period of time. The determinants accounting for this transfers include; the ongoing global patterns of external investment, liberalization, large-scale elimination of external trade hindrances, improved globalization of economic activities, and the growing requirement for technological effectiveness to remain supportable and increase economically. Emerging countries are expected to make better technical/practical use of these inflows. Thus local as well as hosting nation or the international company that obtains the venture that can offer a source of new know-hows, organizational skills, procedures as well as skills for management, which can lead to a strong motivation to economic growth (Djankov & Hoekman, 2009).

2.5 External Technology Transfer and Firm Performance

The use of foreign technology has calculated paybacks for a firm which includes evading the huge expenditure of internal development, attaining rapid development and even attainment of the state of the art technology (Jones, et al., 2001). As a result of this, a firm will be able to increase its innovation capacity and therefore meet market demand. Huber (2009) opine that from the viewpoint of learning and invention, by outside knowledge acquisition initiates a firm to gain a means for realization of the technological know-how that lies outside borders. This is because a company can rise its technical expertise and reinforce its technical ability by the external expertise hunt and use procedure (Chaterji, 2006).

Griliches (2006) point out that firm-level theories of technological modification recommend that a company's output development is an outcome of increasing technological information and this outward learning has a positive influence on reducing cost or raising the innovative productivity of a firm. Ahujaand (2001) show that industries can improve their invention outcome through mergers and acquisition strategies to enlarge their practical knowledge. Further, wholly outside acquirement initiatives, acquiring with a type of partnership is a conventional purchase system. On the other hand, partnerships with other institutions which have expertise may allow businesses to influence their management skills and raise their effectiveness (Mowery et al., 1996). Other studies including Vanhaverbeke et al. (2004) suggest that a company employing expertise partnerships to learn from its partners can increase its current technological skills and attain bigger inventive outcome.

Telecommunications companies cover major industrial sectors that includes the segments of entertainment, manufacture and communication. It has a double role (a traded product and/or service), and as an implementer of commerce in goods and services. Therefore, external investment in telecommunications may enhance more economic gains including new and enhanced telecommunication products and services with low prices and additional investment in other developed/grown sectors. External ventures in the telecommunication services industry should result in more competition, lowering prices for most businesses and many consumers and offring both with a choice of the different service provider (Rueber, 2003).

There is a strong belief that telecommunication companies have larger production expertise and systems of management, but a few are captured by domestic companies when MNCs locate in a specific economy (Das, 2007). The telecommunication companies are among the most valued players worldwide who are accountable for creation and control of technology. Therefore, FDI involves the transfer of wealth, expertise and information from home to host countries. Firms that use better technology offer possible ways to increase productivity.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter provides the procedure that was undertaken in the research methodology. It contains the following areas: the research design, target population, sample size, data collection and data analysis.

3.2 Research Design

This study adopted a detailed cross-sectional survey. Descriptive research design is a scientific method that involves witnessing and telling the behavior of a subject without influencing it in any way (Mugenda, 2003). It is suitable for this study because of a vast number of respondents and the fact that data was collected at one point in time. Sekaran and Bougie (2010) noted that besides, this research design was seen to be fitting for this study as it allowed the researcher to be able to draw conclusions about the variables under the study without the respondent being manipulated and thus allowed the measurements to be adequately put under control.

3.3 Target Population

It represents a populace as any finite or infinite selection of individual components (Lavrakas, 2008). It is collection of whole objects that the researcher is interested in (Hyndman, 2008). In this study, the population composed of all the three mobile firms operating in Kenya. The population of the survey formed the sample size due to the small number of businesses in which ten respondents was chosen in each company. The mobile telephony firms have to adapt to different technological changes that are being introduced by competitors as well as the changing demands of its customers. Therefore, this sector formed a prime industry to carry out the research.

3.4 Data Collection

The study used primary data collected through self-administered questionnaires. Drop and pick methods were used to administer the questions. The questionnaire involved both open and closed-ended questions intended to produce specific responses for qualitative analysis. The open-ended questions were meant to avoid limiting the respondents in answering the questions. A Likert scale was used for close –ended questions. A questionnaire was accepted since it acts as a valuable device for collecting data from respondents because of the need to provide a median of expressing their opinions more openly and clearly. Secondary data on the subject area was collected through annual reports and organizational publications both within and without the organization.

A questionnaire, as the data collection tool of choice, is easy to express, administer and also contributes a comparatively simple and straight forward approach to the study of attitudes, values, beliefs and motives. The questionnaire was administered through the drop and pick later method. The survey was made up of three sections. Part A covered demographic characteristics of respondents; Section B dealt with foreign direct investment and technology transfer while Section C dealt with the impact of foreign investment on technology transfer to the telecommunication companies in Kenya.

3.5 Data Analysis

The collected information, was analyzed by use of descriptive statistics (measures of central tendency and measures of variations). When the data was received, the questionnaires were regenerated for accuracy, consistency, and completeness. However, before the analysis was finalized, data was cleaned so as to do away with discrepancies and later, classified by similarity and then put into tables. The responses were coded into binary form to allow statistical analysis. Results were presented in tables and charts.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

The research objective was to establish a foreign direct investment in international technology transfer among mobile telecommunication firms in Kenya. This chapter presents the analysis, findings, and discussion. The results are presented in percentages and frequency distributions, mean and standard deviations.

4.2 Response Rate

A total of 30 questionnaires were issued out. The completed questionnaires were checked for completeness and consistency. Of the 30 questionnaires distributed, 22 were returned. The returned questionnaires' represented a response rate of 73% and this response rate was deemed to be adequate in the realization of the research objectives. This response rate was sufficient for data analysis and conforms to Mugenda and Mugenda (2003) where a response rate of 70% and over was acceptable.

4.3 Demographic Characteristics

The demographic information considered in this section included the length of continuous service with the mobile firms, the highest level of education and number of employees in the businesses.

4.3.1 Level of Education

This section sought to establish the level of academic qualifications that the respondents have attained. The results are presented in Figure 4.1

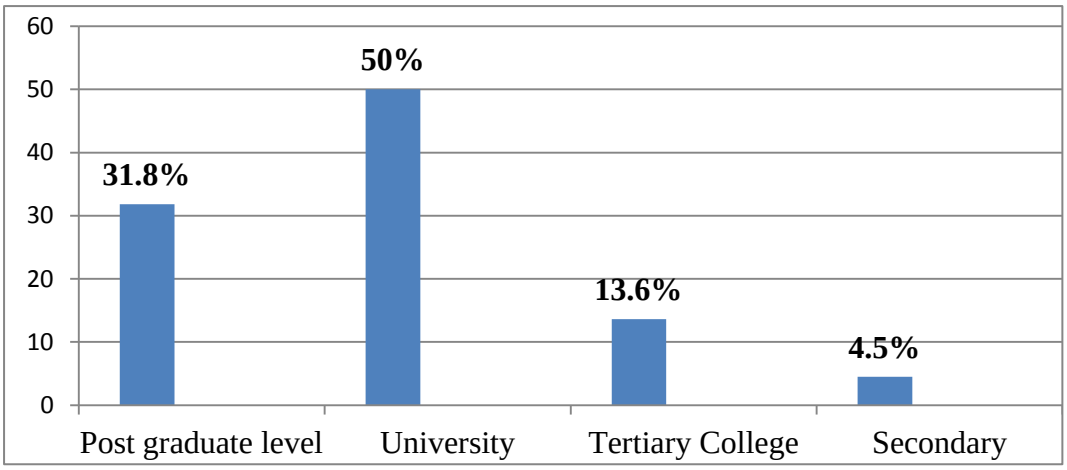

Figure 4.1: Level of Education

The findings in Figure 4.1 show that approximately 50% of respondents had attained university educational attainment, and 31.8% had achieved post graduate level. Also, the respondent also noted that 13.6% had attained tertiary qualification and 4.5% of the defendant had reached the secondary level of education. The above implies that over 80% of the respondents had attained university education and this means that, they are knowledgeable enough to understand and answer the questions accordingly. Also, the university graduates had further pursued other professional courses in information technology and communication, both locally and outside the country.

4.3.2 Length of Continuous Service

The length in which the respondents had worked in the organization sought and the results are presented in Table 4.1.

Table 4.1: Length of Continuous Service

	Frequency	Percent	Cumulative Percentage
Less than 5 years	2	9.1	9.1
5-10 years	15	68.2	77.3
Over 10 years	5	22.7	100.0
Total	22	100.0	

The findings above indicated that majority of the respondents 68.2% had worked in the mobile firm for 5-10 years, and 22.7% had been in the mobile business for over ten years. The results also indicate that 9.1% of the respondents had worked at the mobile telecommunication for less than five years.

4.3.3 Designation in the organization

This section sought to establish the defendant's appointment as this was necessary for the study as it helps in determination of the survey respondents and their understanding of the role of foreign direct investment in technology transfer. The results were presented in Table 4.2.

Table 4.2: Job Designation

	Frequency	Percentage	Cumulative Percentage
IT manager	5	22.7	22.7
Business analyst	8	36.4	59.1
Network & System Admin	9	40.9	100.0
Total	22	100.0	

From the findings, 40.9% of the respondents were network and system administration; 36.4% of the interviewees said that they were business analysts while 22.7% of the interviewees were information technology managers. The results indicate that the respondents were from the diverse field within the computer technology and therefore they understand the importance of technology transfer to the changing dynamics of the telecommunication industry.

4.3.4 Number of Employees

The number of employees in the mobile telecommunication firm indicates the size of the firm regarding customer service centers and overall operations. The results were presented in Table 4.3.

Table 4.3: Number of Employees

	Frequency	Percent	Cumulative Percentage
1000 – 1999	15	68.2	68.2
Above 2000	7	31.8	100.0
Total	22	100.0	

The results on the number of employees were that 68.2% of the respondents said that the number of staff in the company they work was between 1000 and 1999 while 31.8% of the respondents indicated the number of employees in the firms as being more than 2000. The results show that the number of officials in the companies varied and this can be attributed to the number of customers the company serves, capital base of the enterprise and the number of customer service centers spread across the country.

4.3.5 Ownership of the Company

The respondents were requested to indicate the property of the mobile company. This indication was important for the study to establish the influence of ownership structure on FDI and international shift of knowledge. The results are presented in Figure 4.2.

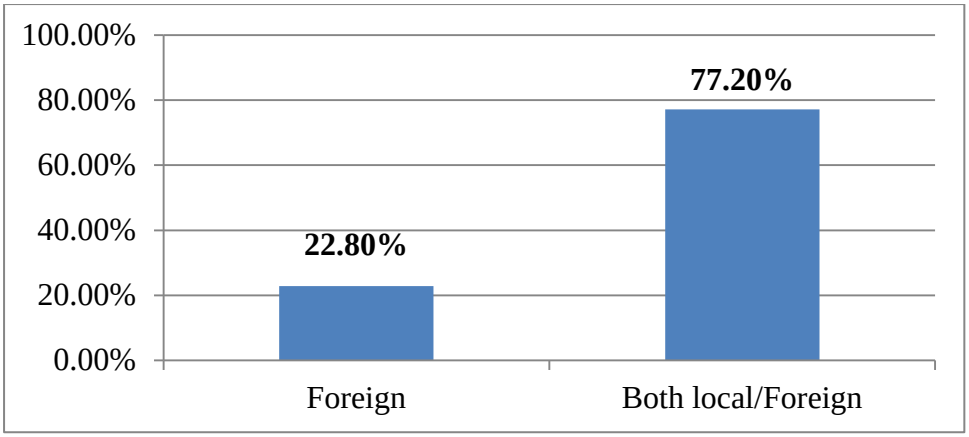

Figure 4.2: Ownership of the Company

The findings on the property of the mobile companies indicate that 77.2% of the respondents said that the companies were both local/foreign owned while 22.8% of the interviewees said that the firms were foreign owned. The results indicate that the mobile companies industry in Kenya is competitive due to the presence of both local and foreign companies who have experience in the industry and this necessitates the adoption of FDI in international technology transfer to improve their performance.

4.3.6 Duration of Mobile Company Operation

The respondents were requested to indicate the duration the company they work for has been in operation in Kenya. This was necessary for the study as the companies will have encountered challenges in the course of transactions which requires them to respond to be competitive in the industry.

Table 4.4: Duration of mobile company operation

Years	Frequency	Percent	Cumulative percent
11-15	9	40.9	40.9
Over 16	13	59.1	100.0
Total	22	100.0	

The results obtained in Table 4.4 show the distribution of responses on the duration of mobile companies operation in Kenya. The results show that 59.1% of the mobile companies have been in operation for more than 16 years while 40.9% of the respondents said that the firms have been in operation for between 11 and 15 years. The results indicate that the companies have been in operation for a longer duration of time and therefore understand the dynamics of the industry and the responses that should be adopted by the operators to be competitive.

4.4 Foreign Direct Investment and Technology Acquisition

4.4.1 Form of FDI in mobile firm

The respondents were requested to indicate the form of foreign direct investment in mobile telecommunication business in Kenya. This was important for the study to determine the type of FDI in mobile telecommunication.

Table 4.5: Form of Foreign Direct Investment in Mobile Firm

	Frequency	Percent	Cumulative Percentage
Capital investment	14	63.6	63.6
Technological Investment	8	36.3	100.0
Total	22	100.0	63.6

The results indicate that 63.6% of the respondents said that the foreign direct investment received by the mobile firms was capital investment while 36.3% of the interviewees reported that mobile companies received technological investment as a foreign direct investment. This means that capital investment is the most used form of FDI in the mobile communication companies as the shareholders of the mobile firms in Kenya would like the firms to compete effectively thus investing financial resources in infrastructure development and other capital intensive projects.

4.3.2 Factors Influence Firms' Decision-Making of External Technology Acquisition

This section of the questionnaire sought to get from the respondents on the factors influence your companies' decision of external technology acquisition on a five-point Likert scale. The range was 'strongly disagree' coded one (1) to 'strongly agree' coded five (5). The range was 'strongly disagree (1)' to 'strongly agree (5). The scores of respondents' low level of practice usage represent a variable which had a mean score of below 3.0 while the scores of above 3.0 represent respondents' agreement with the usage of marketing practice. A standard deviation of >0.9 implies a significant difference on the impact of the variable among those interviewed. The results are presented in Table 4.6.

Table 4.6: Factors Influence Firms' Decision-Making of External Technology Acquisition

Statement	Mean	Std. Deviation
Compatibility of the new technology with the existing technology in Mobile firm	4.5909	0.9081
Existing ties with the partner firms in the application of the new technology	4.5455	0.7385
Technological change life cycle stage of the mobile firm	4.5000	0.6725
Intellectual protection existing on the technology transfer	4.4091	0.9591
Internally available resources	4.3182	0.8937
Legal challenges on the existing technology being used as well as the New ones	4.2273	1.0660

The findings on the factors influencing the mobile firm's decisions on technology acquisition was that; the elements include compatibility of the new technology. With the existing technology in mobile business (M=4.5909); existing ties with the partner companies in the application of the new technology (M=4.5455) and technological change life cycle stage of the mobile company (M=4.5000). Also, the intellectual protection existing on the technology

transfer (M=4.4091) and internally available resources (M=4.3182). The respondent further noted that legal challenges to the existing technology in use as well as the new ones (M=4.2273). From the results, it was concluded that several factors influence the mobile firms' decisions on external technology acquisition and this includes compatibility of new technology, existing ties with the partner companies, technological change life cycle stage, and intellectual protection.

4.3.3 Role of Foreign Direct Investment

The respondents were requested to indicate the role that foreign direct investment has played in their mobile telecommunication firms. The results got presented in Table 4.7.

Table 4.7: Role of Foreign Direct Investment

Role of FDI	Mean	Std. Deviation
Facilitates technology transfer to the company	4.019	.901
Improved competitiveness of the company	3.915	.992
It has increased innovative capacity of the company	3.859	.930
It has resulted in enhanced job opportunities	3.812	1.139
It has increased managerial expertise in the company	3.751	1.053
Upgraded marketing expertise in the company	3.644	1.094
It has resulted in better skills in the mobile company	3.517	1.143

The results in Table 4.7 indicates that foreign direct investment facilitates technology transfer to the company (M=4.019); improve the competitiveness of the enterprise (M=3.915); increase innovative capacity of the enterprise (M=3.859) and that it has resulted in enhanced job opportunities. The respondents further established that managerial expertise has grown as

a result of FDI (M=3.751); upgrade its marketing expertise in the company (M=3.644) and that it has resulted in better skills in the mobile company (M=3.517). The results show that foreign direct investment was essential to the telecommunications firms as it has helped them to be competitive, innovative, enhance managerial expertise, upgrade their marketing expertise which results in enhanced job opportunities. This indicates that among the most important contributions of foreign investment in developing nations is that of skill transfer. Knowledge can be seen as one valuable means that aid the firm to grow and develop.

4.3.4 External Technology Transfer and Firm Performance

The respondents were required to indicate the influence of technology transfer on the mobile firm's performance. This was necessary for the study to know whether technology transfer has any effect on the company’s performance.

Table 4.8: External Technology Transfer and Firm Performance

Statement	Mean	Std. Deviation
The firm's productivity growth has been enhanced due to the external technological acquisition	4.6364	.4923
It has enabled the firm to achieve high growth in customer base due to the provision of high quality services and products	4.2727	1.0319
The firm has been able to reinforce its technological ability by the outside technology search and use process	4.2273	.8125
It has facilitated avoidance of high costs of internal development	4.1364	.8888
The company has been able to gain access to the state of the art technology in comparison to competitors in the market	4.1128	.9211
The firms rate of innovation has improved through acquisition of the external technology	4.0909	.8679
FDI has offered the company with new markets and marketing networks as well as cheaper production facilities	4.0273	1.0690
The firm has been able to gain a means of attaining the technological knowledge that lies outside its boundaries	4.0000	.7295
The firm has been able to enhance its innovation performance by using M&A strategies to expand their technical knowledge	3.8182	1.1806

The result indicates that the mobile firm's productivity growth has been enhanced due to the external technological acquisition (M=4.6364). Moreover, it has enabled the company to achieve high growth in customer base due to the provision of high-quality services and products (M=4.2727); the firm has been able to reinforce its technological ability by the external expertise search and use process (M=4.2273) facilitated avoidance of high costs of internal development (M=4.1364). Also, the company has been able to gain contact to the state of the art technology in comparison to competitors in the market (M=4.1128) and that the firm's rate of innovation has improved through the acquisition of the external technology (M=4.0909).

The respondent noted that FDI has provided the company with new markets and marketing channels as well as cheaper production facilities (M=4.0273) and that the corporation has been able to gain a means of reaching the technological knowledge that lies outside its boundaries (M=4.0000). The respondent further noted that the firm has been able to enhance its innovation performance by using M&A strategies to expand their technical knowledge (M=3.8182). The results show that the technology transfer plays a significant role in the day to day operations of the mobile telecommunication firm's as it increases their productivity growth, achieve a high increase in customer base due to the provision of high-quality services and products and strengthen its technological capability and avoidance of high costs of internal development.

4.4 Discussions of the Findings

FDI and TT have become of fundamental importance to the development of economic system, especially in emerging nations/states such as Kenya, it has been recognized that FDI and TT are key factors in the process of economic development and growth. Telecom industries play dual roles in the not only itself a separate circle in economic structure but also a supplying strategy for other sectors. Due to the unique character, telecommunications shield

and associate with several other industrial and marketable area including manufacturing, entertainment as well as communication industries. The study found out that several factors that influence the mobile firms' decisions on external technology acquisition and this includes compatibility of new technology, existing ties with the partner companies, technological change life cycle stage, and intellectual protection.

The boundary between the company and its nation surroundings has persistently been complex and growing one. With the rise in assets flows over decades ago, capital controls have been eased in many cases, but not eradicated. The technology transfer to the mobile telecommunication firms was found to have been influenced by the compatibility of new technology, existing ties with the partner companies, technological change life cycle stage, and intellectual protection. Behrman and Wallender (2006) argued that greater ownership of the affiliate and thus greater ability to control it is expected to result in more significant technology transfer. The length of experience is considered a factor regarding the longer the affiliate has been in place; the lesser/greater the amount of technology transfer expected and the more significant the experience between members would lead to a greater level of cooperation between affiliates and thus more excellent transfer of technology.

FDI is indicated to be the most significant driving force in the finding of natural resources and development of economic situations in less developed countries. Lately, FDI has not only improved quickly but also covered a wide range of sectors around the world. The foreign investment in Kenya has actually enabled the telecommunication firms to be competitive, innovative, enhance managerial expertise, and upgrade their marketing expertise which results in enhanced job opportunities. These findings were found to be compatible with Dunning (2004) findings that FDI improves effectiveness and therefore develop employment and increase the welfare of the host nation. This is a result of inward investment increasing the number of entrants in the domestic industry which forces all competitor firms in the

sector to become more competitive by reducing costs and enhancing efficiency and worth. Moosa (2002) holds that it is typically realized that FDI brings many benefits to host countries in the sense of capital, productive assets, entrepreneurship, better skills, technology, innovation, management, organization, increased export and upgraded marketing expertise. FDI can contribute directly to skill transfer by using information and procedures from the firm's head office in subsidiaries from overseas. Apart from technology, FDI brings complementary resources that are needed such as management experience and entrepreneurial abilities, which can be transferred through training programs and learning by practically doing (Baldwin et al., 2009).

Multinational firms are still among the most famous players worldwide responsible for creation and control of know-how. Foreign investment involve the transfer of capital, technology and knowledge from home to host nations. The role of FDI in technology transfer to the mobile telecommunication firms was found to have had a significant impact as it resulted in increased productivity growth, achieve a high increase in customer base due to the provision of high-quality services and products and strengthen its technological capability and avoidance of high costs of internal development. The results of the study are in line with Blaock and Gertler (2007) findings that FDI and TT lead to improved productivity and economic structure, and enhanced economic development. The main advantages of allowing TT from foreign investors to developing countries can be seen by the growth in economic development, through the increase of productivity that helps create efficiency and growth.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

5.1 Introduction

This part of the document provides a summary of the main findings of the study as well as the conclusions, limitations of the study, and recommendations for further research.

5.2 Summary of Findings

The results show that the mobile telecommunication firms have been in operation in the Kenya market for a long time and therefore understand very well the foreign direct investment in the transfer of global technology. The results show that the number of employees in the firms varied and this can be attributed to the number of customers the company serves, capital base of the enterprise and the number of customer service centers spread across the country. The results indicate that the mobile companies industry in Kenya is competitive due to the presence of both local and foreign firms who have experience in the industry and this necessitates the adoption of FDI in international technology transfer to improve their performance.

Currently, technology has proven to be the best source of economic growth. It is well understood that economic growth results either from the accumulation of factors of production or improvements in technology or both. The mobile firms have ventured into a foreign direct investment which has encouraged them to adopt capital investment as the best form of it. The mobile communication company had factors which influence the decision-making of external technology acquisition which included the compatibility of the new technology with the existing technology and the real ties with the partner companies in the application of the new technology. The transfer of alien technology plays a significant role in

the current endeavor in the mobile firms to bring rapid and sustainable development of the companies. Implementation of this activity leads to expansion of knowledge and human capabilities by creating new processes and artifacts.

Investment in telecommunications is a precondition for broad-based economic growth. The dual contribution of telecommunications as both a traded service and a means for business in other service industry implies that cost reduction, enhancements in the level of investment and the expansion of infrastructure and services brought about by liberalization should also have an effect on other segments of the economy. Foreign direct investment in the result in increased competition, lowering of tariff charges by the firms and provision of enhanced services to the customers. Foreign investment apart from contributing to development of new technology and funds to telecommunications sectors; it also brings innovation and rivalry for telecommunications providers. These benefits encourage the capability of telecommunication in the economy. The study found that the foreign direct investment had enabled mobile telecommunication firms to increase productivity, achieve high growth in customer and strengthen its technological capability by the external technology search and use process. Also, the study found that the mobile telecommunication firm had gained access to the state of the art technology in comparison to competitors in the market and the company's rate of innovation has improved through the acquisition of the external technology.

5.3 Conclusion

Actually, FDI has rose quickly over the past decades among nations and has improved world economic development. The venture leads to sufficient investment, progressive know-hows, and enormous economic benefits, which can quickly resolve firm's financial problems. Additional investment in telecommunications from aboard should bring technology transfer, a sufficient capital, and increased market competition, which should benefit national communications development. By introducing FDI into the telecommunication firms, a

practicable local telecom infrastructure and common access can be more easily reached. Foreign direct invest plays a major role in the mobile telecommunication firms as it enabled them to be competitive, inventive, enhance managerial expertise, upgrade their marketing expertise which results in enhanced job opportunities.

This study examined on the foreign direct investment in international technology transfer among mobile telecommunication firms in Kenya. It can be concluded that the mobile telecommunication companies should strive to adopt the foreign direct investment in international technology transfer entirely. The study found that foreign direct investment is necessary because it has improved on mobile telecommunication firms in productivity growth and made the company achieve a high increase in customer. Moreover, the company gained access to the state of the art technology in comparison to competitors in the market, and the company's rate of innovation has improved through the acquisition of the external technology.

5.4 Limitations of the study

The limitation of the study was that as with other researches that uses the questionnaire as the instrument to collect data, a social desirability problem was expected to occur. Some of the interviewees may give exaggerated answers which affect others instead of providing honest answers. The results and suggestions arrived at in this study should be observed in light of the technique employed. The sample came from a single sector and hence the generalizability of the results is limited. Some of the inconsistencies observed could have arisen from the nature of the sample.

Confidentiality was a significant obstruction in gathering information relating to foreign direct investment in international technology transfer among mobile telecommunication firms in Kenya. This caused difficulties in obtaining all the necessary responses and consequently

led to the reluctance of participating in the study for some of the respondents. The researcher had to inform the defendants in advance that the purpose of the research was meant for academic use only and not for other investigations although the same was stipulated on the questionnaire.

This study focused on only on three companies competing against each other in the mobile telephony industry. This study may need to be compared with one conducted in a developed economy to see what has been done in the developed country in the areas of FDI and TT; this may assist an in comparison with the findings thus making an informed decision on the role of FDI on technology transfer.

5.5 Recommendations for Policy and Practice

The study established that the FDI in the shift of global technology had enabled the mobile telecommunication to improve in productivity growth and made the firm achieve a high increase in customer and it is recommended that the company adopts the same way to meet their objectives. The study further suggests that the top management in the mobile firm should implement FDI in international transfer of technology..

Second, according to studies concerning the area of FDI and TT, it was found that some factors can lead to an impact on the process of FDI and TT, based on the evidence here. The contribution of this study strongly supports previous research in this field concerning how the host government can manage these factors to get the best possible outcome from the processes of FDI and TT. Also, this study highlighted groups among the factors, subdividing them into manageable factors such as skills of human resources and infrastructure, and unmanageable such as location and raw materials of the host country.

The results of the survey have significant implication for practice. By substantiating the link between foreign direct investment and transfer of technology, this study provides support to

firms' that have sought foreign direct investment, especially to those who have implemented successful FDI strategies and initiatives.

By identifying the importance of foreign direct investment, this study encourages practitioners to pay careful attention to the management of resources invested in the company by the foreigners. Also, the results confirmed the legitimacy of the underlying theories used in the study namely the diffusion innovation theory and the dependency theory, and justify their use in the study. The results also provide broad implications for managers of the mobile telecommunication firms regarding the foreign direct investment and the likely positive effect on their strong performance. The Kenyan government should review its policy to attract more FDI and facilitate the entry of multinationals.

5.6 Suggestions for Further Research

The study was undertaken on FDI in the international shift of technology among mobile telecommunication firms in Kenya. Also, other researchers can test other moderators to FDI in international technology transfer and identify which of the variables have the most significance to a firm. Other studies should consider introduction of other moderating variables such as government policy existing in a country. An econometric analysis is required for a similar study in future.

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APPENDIX I: RESEARCH QUESTIONNAIRE

Please indicate your answers in the spaces provided and tick (√) in the box that matches your response to the questions where applicable.

Section A: Demographic Information

1. Length of continuous service with the Mobile firm?

a) Less than five years……. [ ]

b) 5-10 years…… [ ]

c) Over 10 years……... [ ]

2. Highest level of education qualification that you possess?

a) Post graduate level……... [ ]

b) University…… [ ]

c) Tertiary College……... [ ]

d) Secondary…… [ ]

e) Other Specify…….

3. How many employees does your organization have?

a) 1000 – 1999……... [ ]

b) Above 2000……... [ ]

Section B: Foreign Direct Investment and Technology Acquisition

7. What common form of foreign direct investment does your mobile firm receive from foreign investors?

a) Capital investment [ ]

b) Technological Investment [ ]

c) Both of the above [ ]

8. To what extent has FDI played the following roles in your mobile telecommunication firm? Where 1 – No extent; 2 –Little extent; 3 - Moderate extent; 4 – Large extent; 5 – Very large extent.

Statement	**1**	**2**	**3**	**4**	**5**
It has resulted in enhanced job opportunities					
Facilitates technology transfer					
Improved competitiveness of the company					
It has increased managerial expertise in the company					
It has increased innovative capacity of the company					
It has resulted in better skills in the mobile company					
upgraded marketing expertise in the company					

8. Please indicate the extent to which the following factors influence your firms' decision-making of external technology acquisition. Where 1 – No extent; 2 –Little extent; 3 - Moderate extent; 4 – Large extent; 5 – Very large extent

Statement	**1**	**2**	**3**	**4**	**5**
Technological change life cycle stage of the mobile firm					
Intellectual protection existing on the technology transfer					
Internally available resources					
Compatibility of the new technology with the existing technology in Mobile firm					
Legal challenges on the existing technology being used as well as the New ones					
Existing ties with the partner firms in the application of the new technology					

What other factor affect the rate of which your firm acquires new technology……

…….

SECTION C: External Technology Transfer and Firm Performance

9. Please indicate the extent to which the firm's external technology transfer has affected its performance. Where **1 - Strongly disagree; 2 -Disagree; 3 - Moderate extent; 4 - Agree; 5 - Strongly Agree**

	Statement	**1**	**2**	**3**	**4**	**5**
1	It has facilitated avoidance of high costs of internal development					
2	It has enabled the firm to achieve high growth in customer base due to the provision of high quality services and products					
3	The company has been able to gain access to the state of the art technology in comparison to competitors in the market					
4	The firms rate of innovation has improved through acquisition of the external technology					
5	The firm has been able to gain a means of reaching the technological knowledge that lies outside its boundaries					
6	The firm has been able to strengthen its technological capability by the external technology search and use process					
7	The firm's productivity growth has been enhanced due to the external technological acquisition					
8	The firm has been able to enhance its innovation performance by using M&A strategies to expand their technical knowledge					
9	FDI has provided the firm with new markets and marketing channels as well as cheaper production facilities					

THANK YOU SO MUCH FOR YOUR TIME