

EFFECT OF HUMAN CAPITAL INVESTMENT ON ORGANIZATIONAL PERFORMANCE OF PHARMACEUTICAL COMPANIES IN KENYA

Emily A. Odhon'g

College of Human Resource Development
Jomo Kenyatta University of Agriculture and Technology, Kenya

Jacob Omolo

School of Economics
Department of Applied Economics
Kenyatta University

ABSTRACT: *Provision of adequate health care services to their population remains a major challenge for governments in Africa. In Kenya, the number of trained Pharmacists is increasing with time but still insufficient relative to the population in need (one pharmacist for every 8,710 persons, or approximately 0.1 per 1000 persons. Kenya had about 8 pharmacists for every 100,000 people). It was estimated that for the country to meet its health related Millennium Development Goals, the pharmacy workforce needed to grow by 28 per cent annually between 2010 and 2015. Whereas, Kenya's population is estimated to be 43 million (provisional) in 2014, the number of registered pharmacist in 2013 was 2,202 and rose to 2,355 with a ratio of 5 pharmacists per 100,000 persons. In summary we have approximately 5:100,000, meaning 5 pharmacists to 100,000 persons, while the requirement is approximately 1:10000, meaning 1 pharmacist to 10000 persons. The current numbers of pharmacists are not adequate for achievement of the post-2015 Sustainable Development Goal 3. The study sought to establish the effect of Human Capital Investment on Organizational Performance of Pharmaceutical Companies in Kenya. The independent variables include: training, education, knowledge management and skills development. The main underpinning theories in this study include: Human Capital, Skill Acquisition and Sustainable Resource Theory. 200 observations were used in the study. Study used questionnaires in data collection, descriptive and inferential statistics used in the analysis. The found a positive significant relationship between human capital investment and organizational performance. The study recommends provision of quality education, relevant training linked to industry requirement, the study suggest adoption of German Dual Vocational Education and Training system to facilitate and strengthen linkage between education sector and the industry. Promotion of knowledge management through teamwork, social networks and knowledge management systems; training on employability and transferability skills to enhance Skills Development. The enterprises to go beyond traditional apprenticeship, Soft skills assessment in schools, embrace technology and promote intrapreneurship. The study also suggest introduction of Skill Development Fund to equip the communities and businesses with relevant skills required in the dynamic global market place.*

KEYWORDS: Human Capital, Human Capital Investment, Education, Training, Knowledge Management, Skills Development, Soft Skills and Organizational Performance.

INTRODUCTION

BACKGROUND OF THE STUDY

In an era of heightened corporate transparency, greater workforce mobility, and severe skills shortages, culture, engagement, and retention have emerged as top issues for business leaders. These issues are not simply an Human Resource problem (Global Human Capital Trend, 2015). United Nations (2015) recognize that there are different approaches, visions, models and tools available to each country, in accordance with its national circumstances and priorities, to achieve Sustainable Development by 2030. To align with critical and emerging business goals, strategies and metrics, organizations has to ensure that their human resources has a strong understanding of the organization's emerging and core business issues(Global Human Capital Trend, 2014). In many economies, employers are searching for workers who possess behavioral skills such as teamwork, diligence, creativity, entrepreneurship and entrepreneurship, essential to thrive in today's rapidly evolving, technologically driven globalized economies. Thus, just improving workers' technical and vocational skills will not always meet employers' needs systems that build skills will also have to ensure that these added behavioral attributes are in place (World Bank, 2010). *Kenya Vision 2030*, intends to create a globally competitive and adaptive human resource base to meet the requirements of a rapidly industrializing economy. To achieve this much need to be done through life-long training and education (Republic of Kenya, 2007).

Human Resource must be invested in and leveraged efficiently in order for it to generate returns, for the individuals involved as well as an economy as a whole. World Economic Forum reported that the global economy is entering an era of talent scarcity that, if left unaddressed, will hinder economic growth worldwide (World Economic Forum, 2013). As we move to knowledge based economy, knowledge, skills and competencies constitutes a vital asset in supporting economic growth and reducing social inequality in developing countries. Human capital investment is one of the key factors in combating high and persistent unemployment and problems of low pay and poverty (Ogunade, 2011). The concept of human capital has played an important role in the neoclassical analysis of labour markets. This is particularly in regard to the role it plays in wage determination. It has also come to dominate the economic analysis of education. The analysis of human capital views education as one of the routes through which human capital is acquired. The basis of human capital model is based on the premise that additional non-compulsory education (schooling) increases the productivity of labour in a perfectly competitive market (Omolo, 2013).

Human Capital refers to the knowledge, expertise, and skill one accumulates through education and training (Severine and Lila, 2009; Marimuthu *et al.*,(2009),; Dae-bong (2009); Malose and Boris (2012; Afiouni (2013); Armstrong (2014), Odhong *et al.*, 2014; Joshi *et al.*, 2015). The concept of Human Capital (HC) was initially formulated by Theodore Schultz in the early 1990, as a way of explaining the advantages of investing in education on a national scale (Afiouni, 2013) cited in Odhong and Were (2013). The emphasis on human capital in organizations reflects the view that market value depends less on tangible resources, but rather on intangible ones, particularly human resources (Kulvisaechana, 2006) cited in Odhong *et al.*, (2014).

Global Perspective

According to (United Nations, 2015), the Sustainable Development Goal 3: is to ensure healthy lives and promote well-being for all at all ages. To achieve this goal, target 3.c is to substantially increase health financing and the recruitment, development of the health workforce in developing countries, especially in least developed countries and Small Island developing states. Provision of adequate health care services to their population remains a major challenge for governments in Africa. Unsatisfactory and inadequate access to essential drugs and other healthcare commodities is a key limitation that impacts on people's health in most developing and Least Developed Countries (LDCs) (United Nations Industrial Development Organization, 2010). Globally the growth of pharmaceutical firms was between 4-6 per cent in 2010-2011 exceeding \$825 billion (UNIDO, 2010). According to African countries supplying pharmaceutical products to the Common Market and COMESA, Kenya exported US\$43,677 in 2008 and this is likely to up (UNIDO, 2010).

In many developing countries, especially those in Asia and Africa, changes to the pharmacy curriculum are made according to the needs of the pharmacy workforce. For example, in countries such as Thailand, Pakistan, and India, where public health needs are overwhelming, the traditional 4-year bachelor's degree in pharmacy program was replaced by a 5 or 6-year doctor of pharmacy program in response to changes in the workforce, but no changes were made to the pharmacy curriculum to greater emphasize public health and related subjects such as social epidemiology, health promotion, social medicine (Hassali, 2011).

Germany's current dual system has been shaped by prevailing legal norms, tradition, pedagogical principles and institutional structures. It did not come about as a result of a rationally considered design on a drawing board but instead developed gradually as the result of national social and cultural history (Deibinger, 1997) cited in Euler (undated). Euler stated that the case of the dual system lies in the historical model of on-the-job occupational training that existed within trades and to which school-based and inter-company instruction were gradually added over time. The continued development was strongly influenced by technical and economic conditions that could no longer be adequately integrated into in-company and workplace-based training, resulting in the need for other learning sites.

The dual system is especially well-developed in Germany, integrating work-based and school-based learning to prepare apprentices for a successful transition to full-time employment. A major strength of the dual system is the high degree of engagement and ownership on the part of employers and other social partners. But the system is also characterised by an intricate web of checks and balances at the national, state, municipal, and company levels that ensures that the short-term needs of employers do not distort broader educational and economic goals. The VET system as a whole is well-resourced, combining public and private funding. Germany has maintained strong financial support and maintained the apprenticeship offer for the VET system even during the crisis. Germany has a well-developed and institutionalised VET research capacity, including the Federal Institute for VET, (*BIBB*), and a national network of research centres that study different aspects of the system to support continuous innovation and improvement in the VET system (OECD, 2010). In the US, The Skill Development Fund is Texas's premier job-training program providing customized training opportunities for Texas

businesses and workers to increase skill levels and wages of the Texas workforce. The Texas Workforce Commission administers funding for the program. Success is achieved through collaboration among businesses public community and technical colleges, workforce development boards and economic development (Texas Workforce Commission, 2015).

Regional perspective

Lack of comprehensive data on pharmaceutical personnel in pharmaceutical sector is a gap in national human resource policies in most developing countries (Ministry of Health and Social Welfare, 2010). Tanzania is facing a major challenge in preparing its youth, the next generation to become competitive members of East African and global economic community. Human capital investment is critical for setting Tanzania on a trajectory towards middle income status, a target it wants to reach by the year 2025(Planning Commission, 1999) cited Joshi *et al.*, (2015).

Tanzania has 700 pharmacists, 300 pharmaceutical technicians, 250 pharmaceutical assistants and a Pharmacist per population ratio of 1:50,000 (Mhamba and Mbirigenda, 2010). In most facilities, there were no job descriptions for pharmaceutical personnel and work performance was not an indicator for promotion consideration. According to the report, a total of 51 per cent of the pharmacists considered moving from their workplaces to other sectors. As many as 74 per cent of the pharmacist working at the Ministry of Health and Social Welfare (MOHSW) considered moving to public facilities and Non-Governmental Organizations(NGOs) and nearly all pharmacists working in the private health facilities while 50 per cent retailers indicated to move to other places (Ministry of Health and Social Welfare, 2010).

Local Perspective

Kenya aspires to become globally competitive country offering high quality of life to all its citizens by 2030. Attainment of this vision hinges on the extent to which the country is able to create a competitive and adaptive human capital base to meet the requirements of a rapidly industrializing and globalizing economy. All the three pillars of *Kenya Vision 2030* (economic, social and political) are anchored on the existence of a skilful, productive, competitive and adaptive human capital base (Republic of Kenya, 2007). Effectiveness of human capital investment, are therefore, imperative for achievement of *Vision 2030* goals.

Under education and training, Kenya will provide globally competitive and quality education, training and research, for her development (Republic of Kenya, 2007). In Kenya the pharmaceutical industry consists of three segments; manufacturers, distributors and retailers and all these play a major role in supporting the country's health sector which is estimated to have about 4557 health facilities country wide (Pharmaceutical Society of Kenya, 2010).

Pharmaceutical companies in Kenya are considered as one of the most important knowledge intensive organizations and a great source of human capital (Pharmaceutical Society of Kenya, 2012). The manufacturing sector's contribution to Gross Domestic Product (GDP) remained at about 10 per cent. The sector's recorded a growth of 3.4 per cent in 2014 compared to a growth of 5.6 per cent in 2013. The growth was partly due to modest inflation, decrease in oil prices which led to reduction in input costs. Formal employment in the manufacturing sector increased by 2.9 per cent from 279.4 thousand in 2013 to 287.5 thousand Persons in 2014. The total value

of manufacturing projects approved by financial institutions rose by 30.3 per cent to Ksh. 237.9 billion in 2014 from Kshs. 182.6 billion in 2013 (Republic of Kenya, 2015).

Kenya is currently largest producer of pharmaceutical products in the common market for Eastern and Southern Africa region supplying about 50 per cent of the regions market. Out of the regions estimated 50 recognized pharmaceutical manufacturers, approximately they are based in Kenya. The pharmaceutical sector consists of about 42 licensed pharmaceutical firms which include local manufacturing companies and large multination corporations, subsidiaries or joint ventures. These firms collectively employ over 2000 people, about 65% of who work in direct production. The industry compounds and packages medicines repacking formulated drugs and processing bulk drugs into doses using predominantly imported active ingredients and recipients (Pharmaceutical Society of Kenya, 2010).

Table 1.1 below shows the total number of undergraduate pharmacy students by course and sex from 2010/11 to 2014/15 academic years. The source of data is Kenyan Universities that includes: University of Nairobi, Kenya Methodist University, University of Eastern Africa-Baraton, Kenyatta University, Egerton University, Aga Khan University Hospital, Mount Kenya University and Masinde Muliro University of Science and Technology. The 2014/15 academic year data are provisional results (Republic of Kenya, 2015).

Table 1.1 Numbers of undergraduate pharmacy students by course and sex 2010/11-2014/15

Undergraduate	2010/11		2011/12		2012/13		2013/14		2014/15*	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Pharmacy	281	205	168	130	207	259	389	265	550	419

Source: (Republic of Kenya, 2015)

Table 1.2 shows the number of registered pharmacists and those in training, 2013 and 2014. In 2013, the total number registered pharmacists were 2,202. This gives a ratio of 5: 100,000. In 2014, the number of pharmacist registered were 2355, this gives a ratio of 5:100,000. This is still far below the threshold required by the United Nations Industrial Development Organization, (2010) where one pharmacist for every 8,710 persons, or approximately **0.1 per 1000** persons. In 2009, Kenya had about 8 pharmacists for every 100,000 people (Thoithi and Okalebo, 2009). The data in Table 1.2 is convincing that in Kenya, the number of trained Pharmacists is increasing with time but still insufficient relative to the population in need. In summary we have 5:100,000 while the requirement is 1:10000.

Table 1.2: Number of Registered Pharmacists and those in Training, 2013 and 2014.

Type of Personnel	Registered Pharmacists				In-Training	
	2013		2014		2013/2014*	2014/2015*
	Number	No. Per 100,000 Population	Number	No. Per 100,000 Population		
Pharmacist	2,202	5	2355	5	826	969

Source: Republic of Kenya, 2015).

Statement of the Problem

Provision of adequate health care services to their population remains a major challenge for governments in Africa. In Kenya, the number of trained Pharmacists is increasing with time but still insufficient relative to the population in need (one pharmacist for every 8,710 persons, or approximately 0.1 per 1000 persons (United Nations Industrial Development Organization, 2010). Kenya had about 8 pharmacists for every 100,000 people (Thoithi and Okalebo, 2009). It has been estimated that for the country to meet its health related Millennium Development Goals (MDGs), the pharmacy workforce needs to grow by 28 per cent annually between 2010 and 2015. The Sustainable Development Goal 3: To ensure healthy lives and promote well-being for all at all ages (United Nations, 2015). Whereas, Kenya's population is estimated to be 43 million (provisional) in 2014, the number of registered pharmacist in 2013 was 2,202 and rose to 2,355 with a ratio of 5 pharmacists per 100,000 persons (Republic of Kenya, 2015). In summary we have approximately 5:100,000, meaning 5 pharmacists to 100,000 persons, while the requirement is approximately 1:10000, meaning 1 pharmacist to 10000 persons, the number not adequate to help achieve the post-2015 Sustainable Development Goal 3.

Kenya Pharmaceutical Companies are challenged in meeting increasing technical requirements for pharmacists by a severe shortage of qualified technical personnel. Surprisingly, public secondary and tertiary schools with technical and vocational education programs have played a smaller role than expected in preparing workers for informal sector employment (Adams *et al.*, 2013). Moreover, pharmacist trained in Kenya lack an industrial orientation. There are basic training institutions for pharmacists and pharmaceutical technologist at university and diploma levels but these institutions do not have a demonstration centres to expose students. Students are attached for a three month pre-registration exposure, but the time period is not adequate for full training that can impact skills and experience of Pharma personnel. As a result of this situation, the skills and know-how on production processes, engineering, management and retail are really acquired by association and guidance on the job from the experienced personnel which is not guaranteed (United Nations Industrial Development Organization, 2010). To provide basic competency and skills to future pharmacy practitioners, there is no doubt that public health instruction needs to be incorporated into core courses in the pharmacy curriculum (Hassali, 2011).

In real sense, Kenya's economy is estimated to have expanded by 5.3 per cent in 2014, compared to a growth of 5.7 per cent in 2013. However, the pharmaceutical firms that fall under the manufacturing sector recorded a growth of 3.4 per cent in 2014 compared to a growth of 5.6 per cent in 2013, hence reporting a decline. The contribution of the manufacturing sector to the Gross Domestic Product declined also from 10.9 per cent in 2013 to 7.1 per cent in 2014. The sector's value added grew by 5.2 per cent while intermediate consumption increased by 4.3 per cent, in review period compensation of employees rose by 14.9 per cent in 2013 which was a slower growth than 17.1 per cent recorded in 2012 (Republic of Kenya, 2015). The unstable performance can be attributed to few number or pharmacist in the market. Pharmaceutical industry is a knowledge intensive industry that requires more attention on human capital investment to create value. The study, therefore, seek to establish the effect of Human Capital Investment on organizational performance of Pharmaceutical Companies in Kenya.

General Objectives

To establish the effect of human capital investment on organizational performance of Pharmaceutical Companies in Kenya.

Specific objectives

- i. Determine the effect of Training on Organizational Performance at Pharmaceutical Companies in Kenya.
- ii. Identify the effect of Education on Organizational Performance at Pharmaceutical Companies in Kenya.
- iii. Establish the effect of Knowledge Management on Organizational Performance at Pharmaceutical Companies in Kenya.
- iv. Investigate the effect of Skills Development on Organizational Performance at Pharmaceutical Companies in Kenya.

Research questions

- i. How does Training influence Organizational Performance of Pharmaceutical Companies in Kenya?
- ii. In which way does Education influence Organizational Performance of Pharmaceutical Companies in Kenya?
- iii. What is the effect of Knowledge Management on Organizational Performance of Pharmaceutical companies in Kenya?
- iv. How does Skills Development influence Organizational Performance Pharmaceutical Companies in Kenya?

LITERATURE REVIEW

Theoretical Review

Theory is defined by Gill and Johnson (2002) cited in (Saunders *et al.*, 2009) as a formulation regarding the cause and effect relationships between one or more variables which may or may not have been tested. Saunders *et al.*, (2009) further explains that Theoretical framework is a collection of interrelated ideas based on theories. It is a reasoned set of prepositions, which are derived from and supported by data or evidence. It attempts to clarify why things are the way they are based on theories.

Human Capital Theory

The origin of human capital goes back to emergence of classical economics in (1776) and thereafter developed a scientific theory. After the manifestation of that concept as a theory, Schultz (1961) recognized the human capital as one of the important factors of national economic growth in the modern economy (Dae-bong, 2009). The theory is rooted from the field of macroeconomic development theory Schultz (1993). Becker's (1993) classic book, *Human Capital: A Theoretical and Empirical Analysis* with special reference to education, illustrated this domain. Becker argues that there are different kinds of capitals that include schooling, computer training course and expenditures on medical care (Marimuthu *et al.*, 2009). The theory argues that a person's formal education determines his or her earning power. The idea of human capital originates from the observation that schooling develops certain qualities in people and that these qualities enhance economic productivity and economic growth (Severine and Lila, 2009).

Gary Becker's classic work, human capital (1964), elaborates on the notion of human capital in the context of neoclassical economics. It registers that investment in human could be viewed as similar to investment in other means of production, like factories or mines. In developing Becker's work further, another economist, Theodore Schultz, set out to map how rates of return from education could be calculated in countries with different levels of income, different attitudes to forgoing earnings to develop human capital (Severine and Lila, 2009). Human capital theory holds that it is the key competences, skills, knowledge and abilities of the workforce that contributes to organizations competitive advantage. It focuses attention on resourcing, human resource development, and reward strategies and practices. According to Human Capital Theory, education is an investment because it is believed that it could potentially bestow private and social benefits (Odhong *et al.*, 2014).

According to Armstrong (2012) cited in Odhong & Were (2013), Human capital theory helps to determine the impact of people on the business and their contribution to shareholder value. It demonstrates the HR practices that produce value for money in terms, for example, of return on investment. According to Dae-bong (2009), Human capital theorists believe that education and earning power are correlated, which means, theoretically, that the more education one has, the more one can earn, and that the skills, knowledge and abilities that education provides can be transferred into the work in terms of productivity. Human capital refers to the knowledge, expertise, and skill one accumulates through education and training (Severine and Lila, 2009);

Marimuthu *et al.*,(2009),;Dae-bong (2009); Malose and Boris (2012; Armstrong (2014), Odhong *et al.*, 2014)

Human capital theorists have typically argued that organizations can increase their human capital by internally developing the knowledge and skills of their current employees, and by attracting individuals with high knowledge and skill levels from the external labour market. That is, organizations can try to make and buy human capital. Human capital grows in two ways; when the organization uses more of what people know and when more people know more of what is useful to the organization (Choudhury and Mishra, 2010). Human capital theory as the main underpinning theory in studies related to human capital, in this study the theory supports variables such as knowledge management, education, training, and skills development as well. The implication: HCI adds short-and long-term value from investments in the development of knowledge and expertise in individuals and groups of individuals.

Skill Acquisition Theory

As defined by Vanpatten & Benati (2010) Skill refers to ability to do rather than underlying competence or mental representation". According to Trofimovich& McDonough (2013), skill theory "refers to a cognitive repetition phenomenon in which prior exposure to specific language forms or meaning facilitates speaker's subsequent language processing". The scientific roots of Skill Acquisition Theory can be found in different branches of psychology, which ranges from behaviorism to cognitivism and connectionism (Dekeyser and Criado, 2013). This theory draws on Anderson's Adaptive Control of Thought (ACT) model which itself is a kind of cognitive stimulus-response theory (Ellis and Shintani, 2013). According to Chapelle (2009), this theory falls under the category of general human learning. The theory assigns roles for both explicit and implicit learning and, as a general theory of learning, it claims that adults commence learning something through largely explicit processes, and with subsequent sufficient practice and exposure, move into implicit processes. Development, within this theory, entails the utilization of declarative knowledge followed by procedural knowledge, with the latter's automatization (Vanpatten & Benati, 2010).

As elaborated by Vanpatten and Benati (2010), using declarative knowledge involves explicit learning or processes; learners obtain rules explicitly and have some type of conscious awareness of those rules. The automatization of procedural knowledge entails implicit learning or processes; learners begin to proceduralize the explicit knowledge they own, and through situational suitable practice and use, the behavior becomes second nature. This theory supports the skills development as an independent variable in the study. It assisted in answering the research question on how skills developments influence performance.

Sustainable Resource Theory

Sustainable Resource Theory is much like scarce resource theory except for one major point: the concern for the long-term versus short-term agenda. Thurow (1993) informs us that "in the future, sustainable advantage will depend on new process technologies and less on new product technology. New industries of the future depend on brain power. A man-made competitive advantage replaces the comparative advantage of Mother Nature (natural-resources endowment) or history (capital endowments). The implication of this theory to this paper being that HCI must

add value to creating sustainable long-term economic performance (Swanson and Holton III, 2001).

CONCEPTUAL FRAMEWORK

According to Young (2009), conceptual framework is a diagrammatical representation that shows the relationship between dependent variable and independent variables. In the study the conceptual framework shows the relationship between human capital investment and organizational performance in Kenya. The study sought to establish the effect of Human Capital Investment on organizational performance of Pharmaceutical Companies in Kenya.

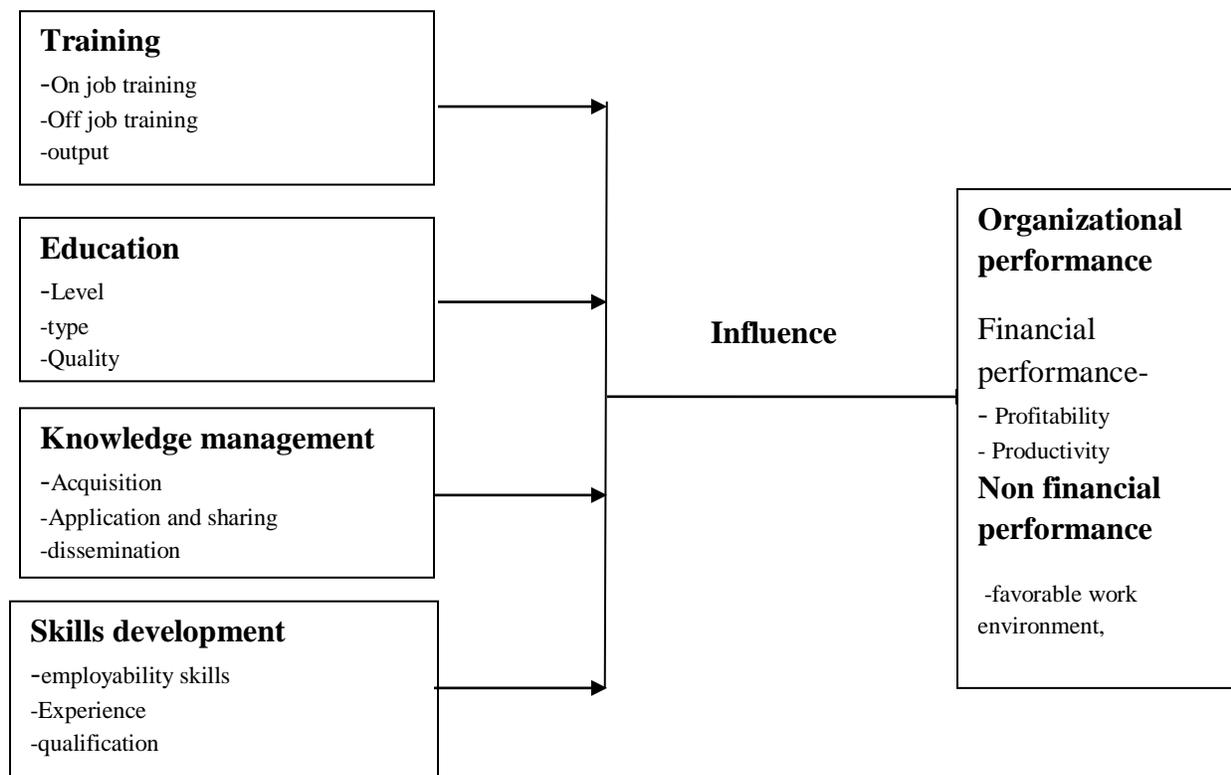


Figure 2.1: Conceptual framework

EMPIRICAL REVIEW

Shaheen *et al.*,(2013) conducted an empirical study on employees training and organizational performance: mediation by employees performance. The intention of this specific study was to determine the impact of training on employee performance as well as on organizational performance and employee performance mediating role between employee training and organization performance. The research proposed the way the teachers’ effectiveness could be

improved simply by suitable education and training. Both quantitative and qualitative methods were used; questionnaire used for data collection involving 220 questionnaires that were dispersed amongst schools teachers, out of those 197 received with 90 percent turnover. SPSS was used for data analysis and policy based on results presented for ensuring training effectiveness and enhancing employee's performance. With support of SPSS, correlation and regression ended up being conducted to generate results. Overall results revealed significant and positive association between training and organization performance. The mediating role of employee performance also gave positive result. Generally, the model supported well both theoretically and statistically.

Ravi *et al.*, (2013) did a Study on Human Capital Investments and Employee Performance: An Analysis of IT Services Industry. The study examined whether Human Capital Investment is directed toward employee training is effective in improving employee performance. The panel data set was used to link formal training with performance at the individual employee level. Using a dynamic panel model, the study identified a significant positive impact of training on employee performance. A unit increase in training is linked to a 2.14 per cent increase in an employee performance. The study also found that general training that an employee can utilize outside the focal firms improves employee performance.

Seleim *et al* (2007) cited in Maran and Maimunah (2009) in their study analyzed the relationship between human capital and organizational performance of software companies. They found that the human capital indicators had a positive association on organizational performance. These indicators such as training attended and team-work practices, tended to result in superstar performers where more productivity were translated to organizational performance. we can conclude that human capital indicators enhances the organizational performance directly or indirectly.

Ariga and Brunello (2009) conducted a study to investigate the relationship between education and employer- provided training, both on-the-job and off-the-job, using a unique dataset drawn from a survey of Thai employees conducted in the summer of 2001. The authors found a negative and statistically significant relationship between educational attainment and on-the-job training (OJT) and a positive and statistically significant relationship between education and off-the-job training.

Thomas *et al.*, (2009) conducted a study to establish how broadly does education contribute to job performance? It provides a meta-analysis on the relationships between education level and 9 dimensions of job behaviors representing task, citizenship, and counterproductive performance. Results here show that, in addition to positively influencing core task performance, education level is also positively related to creativity and citizenship behaviors and negatively related to on-the-job substance use and absenteeism.

Barro and Lee (2010) estimated that increasing average years of schooling by one year increases per capita GDP by 1.7% to 12.1% depending on specification. Overall studies found that education significantly and positively correlated with economic growth and argue that causation runs from education and growth in line with human capital growth models. In addition, existing employees will be motivated to attain additional education for an increase in compensation. The

organization saves money by retaining existing employees in addition to developing stronger skill sets that will increase productivity.

According to Hecht *et al.*, (2011) the process of successful implementation of knowledge management has three stages: adoption, acceptance, and assimilation. According to Barrick (2011), knowledge is a body of information, usually of a factual or procedural nature, about a particular domain that makes for successful performance of a task. A distinction was made by Ryle (1949) cited in Armstrong (2009), between 'knowing how' and 'knowing that'. Knowing how is the ability of a person to perform tasks, and knowing that is holding pieces of knowledge in one's mind. Knowledge management is a process that transforms individual knowledge into organisational knowledge

Jelena, *et al.*, (2012) conducted a study on the impact of knowledge management on organizational performance. The aim of this paper is to show that through creating, accumulating, organising and utilising knowledge, organisations can enhance organizational performance. The impact of knowledge management practices on performance was empirically tested through structural equation modelling. The sample included 329 companies both in Slovenia and Croatia with more than 50 employees. The results show that knowledge management practices measured through information technology, organizations and knowledge positively affect organizational performance.

Vision 2030 recognizes that Kenya's pool of talent is small and inadequately trained for integration into the job market. Measures are therefore taken to improve the national pool of skills and talent through training that is relevant to the needs of the economy. The current transition rate from secondary level education to university will be increased and post graduate training strengthened, particularly in science and technology (Republic of Kenya, 2007). A study by World Bank (2010) showed that information on learning outcomes indicates that schools in many developing countries are failing to teach Foundational Cognitive skills, much less the expert thinking and complex communication and occupational skills needed to function effectively in the modern labor market.

Skills and skills development are essential component of all efforts in this challenging era. Too many workers are simply unprepared to meet the needs of firms, particularly in more competitive economic environments. Skills are at the core of improving individuals 'employment outcomes and increasing countries 'productivity and growth. This is particularly relevant as today's developing and emerging countries seek higher sustained growth rates (World Bank, 2014). Skills development programmes enable employees gain employability. Employability includes skills, knowledge and competencies that enhances a worker's ability to secure and retain a job, progress at work and cope with change, secure another job if he or she so wishes or has been laid off, and enter more easily into the labour market at different periods of his or her lifecycle (Omolo, 2013; Franz and Omolo, 2014).

Josan (2013) has conducted research through content analysis to analyze the relationship between Human Capital & Organizational effectiveness. Organizational effectiveness is characterized by competitiveness, Innovation and excellence. Competitiveness depends on skills & human capital investment. Human capital investment is characterized by investing in

education, health & training. She narrates that globalization has resulted in new economy named as knowledge economy, in which human capital variables education & training- plays a significant role. Based on the existing literature it was analyzed that investment in human capital is directly proportional not only with the productivity of the organizations- trainings increase productivity by 16%; but also with profitability. An increase of over twice the size of the wages increased because of trainings was witnessed in materials. It was also concluded that in strategic triad- Business strategy, Human capital strategy and Human Resource Strategy – human capital strategy is a critical component.

Sutia *et al.*,(2013) conducted a study on the Influence of Human Capital Investment, Leadership and Strategic Orientation on Airport Performance using primary and secondary data, the samples of the study were 25 Airports. The sampling technique employed was census. The results of the study show that human capital investment and strategic orientation will increase company performance.

METHODOLOGY

The study adopted Descriptive Research Design. According to Serekan (2010), a good research design has a clearly defined purpose and has consistency between the research questions and the proposed research methods. While according to Cooper and Schindler, (2014), if the research is concerned with finding out who, what, where, when or how much, then the study is descriptive. According to Walliman (2011) descriptive research attempts to examine situations in order to establish what is the norm, that is, what can be predicted to happen again under the same circumstances.

The study targeted registered pharmacists in the pharmaceutical industry, who are employees of the retail companies. There are about 42 companies listed as Local Pharmaceutical Companies in Kenya. Out of 2,775 pharmacists who are in the country, 2,063 had been registered to practice by April, 2009, Kenya had about 8 pharmacists for every 100,000 people (Thoithi and Okalebo, 2009). Kenya's population is estimated to be 43 million (provisional) in 2014, the number of registered pharmacist in 2013 was 2,202 and rose to 2,355 with a ratio of 5 pharmacists per 100,000 people (Republic of Kenya, 2015). Therefore, the study considered 2,355 as the target population.

Williman (2011) argued that no sample will be exactly representative of a population. According to Kothari and Garg (2014) the following is the procedure of determination of Sample size when estimating a percentage or proportion. For example, in this study what should be the size of the sample if a simple random sample from a population of 2355 items is to be drawn to estimate the per cent defective within 2 per cent of the true value with 95.5 per cent probability? First of all, I shall have to specify the precision and the confidence level and then I worked out the sample size as under: e (error margin) in this case is 0.02; level of significance is 95.5%; z tabulated value is 2.005.

where p = sample proportion,

$$q = 1 - p;$$

z = the value of the standard variant at a given confidence level and to be worked out from table showing area under Normal Curve;

n = size of sample.

In case of finite population as in this study the below stated formula will be applicable:

$$n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2 (N - 1) + z^2 \cdot p \cdot q}$$

From the equation

$$N = 2355;$$

$e = .02$ (since the estimate should be within 2% of true value);

$z = 2.005$ (as per table of area under normal curve for the given confidence level of 95.5%).

Let me assume p to be $p = .02$

$$\frac{(2.005)^2 (0.02)(1 - 0.02)(2355)}{(0.02)^2 (2355 - 1) + (2.005)^2 (0.02)(1 - 0.2)}$$

$$\frac{184.632}{1.02} = 182. \text{ From the computation, the sample size was 182}$$

The study adopted purposive and simple random sampling technique. In simple random sampling the researchers or fieldworkers have the freedom to choose whomever they find: since most companies headquarters are within Nairobi, hence the data was collected within Nairobi. Purposive sampling is a non-probability sampling technique that conforms to certain criteria (Cooper and Schindler, 2014). Purposive or judgmental sampling enables a researcher to use his or her own judgment to select case that will be best enable him or her to answer the research questions and to meet the research objectives (Saunders *et al.*, 2009).

Pilot Testing

A pre-test of a questionnaire or other type of survey on a small number of cases in order to test the procedures and quality of response (Williman, 2011). According to (Cooper and Schindler, 2014; Mugenda and Mugenda, 2010) pilot test is conducted to detect weaknesses in design and instrumentation to provide proxy data for selection of probability sample. It should, therefore, draw subjects from the target population and simulate the procedures and protocols that have been designated for data collection. For example, if the study is a survey to be executed by mail, the pilot should be mailed. According to Saunders *et al.*, (2009), the purpose of pilot test is to refine the questionnaire so that respondents will have no problems in answering the questions and there will be no problems in recording the data. In addition, it will enable the researcher to

obtain some assessment of the questions validity and reliability of the data that was collected. For most students questionnaires, the minimum number for a pilot is 10, although for large surveys between 100 and 200 responses is usual. From the computation, 10 per cent of 182 is 18. For this study 18 questionnaires were used for pilot testing that forms 10 per cent of the total sample size.

Reliability

Reliability refers to the extent to which your data collection techniques or analysis procedures will yield consistent findings (Saunders *et al.*, 2009). Reliable instruments can be used with confidence that transient and situational factors are not interfering. Reliable instruments are robust; they work well at different times under different conditions. This distinction of time and condition is the basis for frequently used perspectives on reliability - stability, equivalence, and internal consistency (Cooper and Schindler, 2014). According to (Mugenda and Mugenda, 2010), reliability is using the internal consistency technique where data is determined from scores obtained from a single test administered. The score obtained in one item correlate among themselves. Cronbach's Coefficient Alpha was computed to determine how items correlate among themselves. Cronbach's Alpha is a general form of the Kuder-Richardson (K-R) 20

$$\text{formula } KR_{20} = \frac{(K)(S^2 - \sum s^2)}{(S^2)(K - 1)}$$

Where KR_{20} = Reliability coefficient of internal consistency;

K = Number of items used to measure the concept

S^2 = Variance of all scores

s^2 = Variance of individual items

Interpretation: A high coefficient will imply that items correlate highly among themselves. According to Sekaran, (2010) a value of at least 0.7 is recommended.

Correlation coefficient

An important aspect is the different measurement of these relationships, such as assessing the direction and degree of association, statistically termed correlation coefficients. The commonly used coefficients assume that there is a linear relationship between the two variables, either positive or negative. In reality, this is seldom achieved, but degrees of correlation can be computed, how near to a straight line the relationship is. A positive relationship is one where more of one variable is related to more of another, or less of one is related to less of another. For example, more income relates to more political power, or less income relates to less political power. A negative relationship is one where more of one variable is related to less of another or the other way round (Williman, 2011). The correlation coefficient between variables in this study was determined by:

$$r = \frac{Cov(X, Y)}{\sigma_x \sigma_{y_1}}$$

Multiple Regression Analysis

According to Kothari and Garg (2014) Regression is the determination of a statistical relationship between two or more variables. In simple regression, we have only two variables, one variable (defined as independent) is the cause of the behaviour of another one (defined as dependent variable). Regression can only interpret what exists physically, there must be a physical way in which independent variable X can affect dependent variable Y . According to Kothari and Garg (2014) when there are two or more than two independent variables, the analysis concerning relationship is known as multiple correlation and the equation describing such relationship as the multiple regression equation. Multiple regression equation assumes the form: $\hat{Y} = a + b_1x_1 + b_2x_2$ Where X_1 and X_2 are two independent variables and Y being the dependent variable, and the constants a , b_1 and b_2 . This is a technique used to measure the effects of two or more independent variables on a single dependent variable measured on interval or ratio scales, e.g. the effect on income due to age, education, ethnicity, area of living, and gender (Williman, 2011). Performance has to be regressed against four variables; education, training, knowledge management, and skills development. The equation of firm performance was expressed in the following multiple regression model.

$$Y_s = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$$

Where Y_s = firm performance

β_0 = Constant

X_1 = Training

X_2 = Education

X_3 = Knowledge management

X_4 = Skills development

ε = error term

β_1X_1 β_5X_5 Regression coefficient or coefficient of determination, (R^2) of five variables.

Regression equation was preferred because it helps avoid overestimating the impact of adding an independent variable on the amount of inconsistency explained by the estimated regression equation (Kothari and Garg, 2014). In this study 200 observations were analysed. This included 182 sample size and the 18 questionnaires for the pilot test. Both added up to 200.

RESULTS AND DISCUSSION

Reliability Analysis

Reliability of the measurement instruments was analysed using Cronbach's Alpha Coefficient. This helped to determine the consistency and stable measurement. According to Mugenda and Mugenda (2010), Cronbach's Alpha is a coefficient of reliability that gives an estimation of data generalization without any bias. Table 4.1 indicates that the data was reliable since a coefficient value of between 0.820 and 0.903 was obtained on all the research variables. Muna (2012) conducted a reliability analysis that produced value of 0.8248 which is in line with the Cronbach's Alpha value in this study.

Reliability Analysis

Independent variables	Cronbach's Results	Alpha	Comments
Training	0.903		accepted
Education	0.902		accepted
Knowledge Management	0.897		accepted
Skills Development	0.868		accepted
Organizational Performance	0.820		accepted
Total	200		

DESCRIPTIVE STATISTICS

Bassi's Human Capital Measurement score was used (Bassi *et al.*, 2007). The Human Capital Measurement system of scores was used indicated as 0-1 score was rated good; 2-3 score rated adequate and 4 and above rated as poor. Table 4.5 indicates training has a mean score of 1.82, standard deviation of 1.04 and variance of 1.08. Education has a mean score of 1.95, standard deviation of 1.13 and variance of 1.28. Knowledge management has a mean score of 2.26, standard deviation of 1.15 and variance of 1.32. Skills Development has a mean score of 2.31, standard deviation of 1.15 and variance of 0.71. The cumulative mean of human capital investment is 2.09 rated adequate. This implies that human capital investment influence organizational performance as it is rated good in the human capital management measurement score. The results of the study are consistent of (Wang *et al.*, 2008) whose results showed significant positive relationship between human capital investment and organizational performance.

Table 4.5 Effect of human capital investment on organizational performance

Human capital investment	N	Mean	Standard Deviation	Variance
Training	200	1.82	1.04	1.08
Education	200	1.95	1.13	1.28
Knowledge Management	200	2.26	1.15	1.32
Skills Development	200	2.31	1.85	1.72
Total	200	100	1.3	1.4

The respondents were asked to give their views by agreeing or not agreeing that inadequate training affect individual performance. 85.5 per cent agreed and 10 per cent disagreed. 50.5 per cent indicated that they do get relevant training in school but much more is needed to train them in the industry. 60.8 per cent indicated that their organizations do not conduct training need analysis to support them on job training. 55.5 per cent indicated that they get support or opportunity for career development. 87.8 per cent of the respondent indicated that their level education matter and has major influence on the performance. They indicated that pharmaceutical industry is knowledge intensive and very dynamic with new development of technology and complication in health sectors. 60.8 per cent of the study respondents indicated that the quality of education matters a lot in the pharmaceutical industry. 80.8 per cent indicated that organizations need to encourage both formal and informal education to enhance their individual performance and that of the organizations.

The study respondents were asked if they are provided with the necessary manuals and procedures they need to help the do their job. 50 per cent indicated that they are given but 45 per cent indicated they get through their own effort, while 55 per cent indicated not given. 45 per cent indicated that their organizations promote team work to improve knowledge sharing at their work place, through autonomous work group and team building activities occasionally. 45.9 per cent indicated that their organizations has knowledge management systems that facilitate knowledge transfer and dissemination. In promoting Skills Development, only 45.8 per cent of the employees agreed that their organizations conduct orientation or on boarding for new employees to enable them get introduced to the organizations systems and work processes. 50.2 per cent indicated that they are provided with necessary tools for work. 60 per cent of the respondents indicated they have never had skills audit conducted in their organizations to establish skills lacking or required in order to deliver effectively.

INFERENCE STATISTICS

Table 4.6 Result of Correlation analysis for Human Capital Investments and Organizational Performance of Pharmaceutical Companies in Kenya

Table 4.5 gives a summary of the results of correlation analysis. The variables considered were: training, education, knowledge management, skills development and organizational performance.

Variable	Training	Education	Knowledge Management	Skills Development	Organizational Performance
Training	1.0000				
Education	0.5969	1.0000			
Knowledge Management	0.6622	0.6173	1.0000		
Skills Development	0.6301	0.5703	0.6306	1.0000	
Organizational Performance	-0.0530	0.2564	-0.0292	-0.1276	1.0000

The results of the analysis show that there is a positive correlation between training and education. The correlation coefficient between the two variables is 0.60 implying a strong positive correlation between the two variables. Positive attributes of elements of education promotes effective training and vis versa. The study results are in tandem with results of (Ariga and Brunello, 2009) who found a negative and statistically significant relationship between educational attainment and on-the-job training (OJT) and a positive and statistically significant relationship between education and off-the-job training.

The results presented in table 4.5 also indicate that there is a strong positive correlation between training and knowledge management. The correlation coefficient is 0.66. This finding is consistent with the results of interviews conducted which indicated that most of the pharmacists would prefer training, to enhance their performance. Pharmacists interviewed indicated that knowledge management is weak in their respective organizations thereby undermining, knowledge creation, sharing, dissemination and feedback. Overall knowledge management systems that are useful in collecting information and making it available to employees were not in place in most organizations.

The study results are consistent with that of Nasiripour (2012) who found the correlation coefficient of training systems for knowledge management and productivity was 0.191 and p-value was 0.007, that proved to be meaningful and so a good correlation between training and knowledge management. A positive correlation between training and knowledge management is also reflected in the positive correlation between education and knowledge management. The correlation coefficient between the two variables is 0.62, implying a strong positive relationship.

The study results show that there is a strong positive correlation between training and skills development. The correlation coefficient is 0.63. The study results also show strong positive correlation between skills development and education. The correlation coefficient is 0.57. This implies that the training, education and skills development are very key for organizational performance within the pharmaceutical industry, since the correlation coefficients were found to be positive and strong. This implies that the pharmacy industry puts more emphasis on education, training and skills development. The study results are in tandem with results of (Wang *et al.*, 2008) who found that staff training and development at (-0.134, -0.233 and -0.138; p-value 0.000 of human capital investment show significant correlation with the three dimensions of organizational performance.

The study results show that there is a weak negative correlation between training and organizational performance that implies that the pharmacist complained of inadequate training. On job training, off-job training, on boarding not conducted well. Implication is that there are no clear lines or policies for staff development within the sector. The study results also show that there is a weak positive correlation between educations with a correlation coefficient of 0.26. This study results is in tandem with the results of (Ariga and Brunello, 2009) who found a negative and statistically significant relationship between educational attainment and on-the-job training (OJT) and a positive and statistically significant relationship between education and off-the-job training.

The study results show that there is a weak negative correlation between knowledge management and organizational performance within the pharmaceutical industry. This implies that most organizations do not promote knowledge management and may not have knowledge management systems that can promote creation, sharing and dissemination. The study results are consistent with results of Nasiripour (2012) who found correlation coefficient between knowledge acquisition and knowledge management and productivity was 0.124 and p-value was 0.082.

According to the results, there is a weak negative correlation between Skills Development and organizational performance. This implies that the organizations does not promote employability skills, no challenging job to enhance experience of pharmacists. Skills Development realizes workforce competency. Bonin and Holzl (2010) found that skills upgrading has direct positive growth effects associated with the stronger labour force attachment and the better employability of more-qualified workers.

Generally, training, education, knowledge management, and skills development has a statistically significant relationship with organizational performance. This is manifested in the estimated correlation coefficient of the respective variables, which are all less than 0.5. The findings of this study reveals that the human capital investment has a significant positive relationship with the organizational performance, with knowledge management and skills development taking the lead as the most important indicator and element of human capital investment that promote organizational performance. Correlation coefficients obtained results ($r=0.489$; $p\text{-value} = 0.000$), indicating statistically significant correlation between human capital investment and organizational performance. The study results are in consistent with result found by (Tadic *et al.*, 2015), who in order to test set hypothesis about relations between human capital investment and business excellence of Croatian Companies, correlation coefficients obtained results ($r=0.262$; $p\text{-value} =0.003$) indicating statistically significant correlations between the level of human capital investments and its overall business excellence.

Table 4.6 shows a summary of the regression results on effect of human capital investment on Organizational Performance of pharmaceutical companies in Kenya. The results presented in table 4.6 shows that training, education; knowledge management and skills development collectively determine the performance.

Table 4.7: Regression result of Effect of Human Capital Investment on Organizational Performance of Pharmaceutical Companies in Kenya

Variable	Coefficient	Standard Error	t-statistic	P-Value
Training	0.3353	0.0728	4.60	0.000
Education	-2.0098	1.0227	-1.97	0.051
Knowledge Management	0.389	0.074	5.25	0.000
Skills Development	0.0497	0.0622	0.80	0.042
Constant	12.325	3.1936	3.86	0.000
Number of Observations	200			
F-Statistic	46.7			
Prob > F	0.000			
R-Squared	0.489			
Adjusted R-Squared	0.479			

Results presented in table 4.6 shows that training, education; knowledge management and skills development jointly determine organizational performance in the pharmaceutical industry. The F-statistic, which is a measure of joint determination has an estimated value of 46.7 and a probability statistic of 0.000 (Prob > F=0.000). This means that the four independent variables are jointly important in explaining the changes in organizational performance in the pharmaceutical companies. The Adjusted R-squared is 0.49 which means that the model explains 48 per cent changes in the organizational performance attributed to the independent variables collectively. We can also deduce that 51 per cent of once soft skills influence individual performance. The study results concur with (Barnard, 2008) cited in (Aworanti, 2012) who asserted that in addition to academic, qualification, graduates need to possess team work skills, good communication skills and the ability to appreciate others' perspective to be more proficient. He further states that when it comes to intellectual capability, recruiters rated transferable skills such as grasping complex information (68 per cent) and seeing problems from different angles (50 per cent above) academic ability.

The regression results presented in table 4.6 shows that training has a positive relationship with organizational performance. The coefficient of this variable is 0.34 with a t-value of 4.60. According to the results, the coefficient of this variable is statistically significant at 1 per cent level of significance. This results is in tandem results of (Sheehan, 2014) whose results found that for Poland, the coefficients are positive and there are significant associations with changes in training and development ($p > .10$ for overall and firm-specific and $p < 0.001$ for general. The strongly significant association between the coefficient for Poland and changes in general training and development investment is likely to be a sign of its relatively stable external environment.

The regression results show that education and organizational performance not moving in the same direction in the pharmaceutical industry. According to the estimation, the coefficient for education is -2.01. The parameter estimate has a t-value of -1.97 and a p-value 0.051. This

implies that the coefficient of the variable is statistically significant at 1 per cent level of significance thereby confirming that education is an important determinant of organizational performance. This is in tandem (Thomas *et al.*, 2009) who found that educational level was related to objective measures of task performance at 0.24, peer rated task performance at 0.18, supervisor-rated task performance at 0.09 and self-rated task performance at 0.06. However, found that educational level was weakly related to performance in training programs at -0.03.

The estimation results show that there is a positive relationship between knowledge management and organizational performance. According to the estimation results, the coefficient of this variable is 0.389. The parameter has a t-statistic of 5.25 and a corresponding p-value of 0.000. This implies that the coefficient of the variable is positive and statically significant at 1 per cent level of significance. This is in tandem (Rasula *et al.*, 2012) who found significant relationship between knowledge management and organizational performance with the parameter t-statistic of 11.67; coefficient 0.94; R-Squared indicating 89 per cent variance of knowledge management on organizational performance.

According to the estimation result, skills development is an important determinant of organizational performance. The result shows the coefficient of the variable at 0.05 and that it is positive. The t-statistic is 0.80 while the p-value is 0.042. The estimates confirm that the coefficient of skills development variable is statistically significant at 5 level of significant. The study results can be linked to the findings of Global Human Capital Trend (2015) that indicated that companies that transform their learning and development organizations are not only able to accelerate skills development, but also can dramatically improve employee engagement and retention that impacts positively on organizational performance.

The study results represented in Table 4.6 indicates that the coefficient of the constant is statistically insignificant. This confirms that there is no other important variable that determines the changes in organizational performance that was left out in the regression model. It, therefore, shows that the elements of human capital investment, namely: training, education, knowledge management and skills development adequately explain the changes in organizational performance. This is consistent with the coefficient of joint determination which was estimated at 0.49 with a probability of 0.0000. The results also imply that 51 per cent of individual performance could be attributed to once Soft Skills. According to (Aworanti, 2012) Soft skills are all the skills other than technical skills that are required for successful career. Aworanti (2012) study results revealed that soft skills have strong effect on the performance of graduates in their work despite the fact that they were not directly taught in schools. The study result also concurs with Bosley (2007) study results which showed that 50 per cent of the responding companies reported that they take writing into consideration when hiring and promoting professional employees. The study results also concurs with (Ahmed *et al.*, 2013) whose study results showed that high demand soft skills include communication skills (87 per cent), analytical and problem solving skills (70 per cent) and team player 67 per cent. The study results are also in tandem with results by Marimuthu *et al.*, (2009) who found that human capital investment variables – training, education, knowledge and skills are closely linked to fundamentals of economics and firm performance.

IMPLICATION TO RESEARCH AND PRACTICE

The findings of the study will help the Management of Pharmaceutical Companies in Kenya in formulating policies that promote human capital investment; develop strategies of human capital investments that align to the organizations goals and objectives and invest in human capital investment practices that promote productivity and enhance organizational performance. The study also contributes to the body of knowledge for utilization by other scholars and researchers who will find the study relevant. From the avenues created by this study on possible areas for future studies, researchers can identify a research problem, replication can be done to develop a theory, solutions to existing phenomena can be provided through supporting data and information. Research in human capital investment areas provides opportunities and information for economic, organizational and personal development. This study also provides advice to government policy makers while addressing issues of human capital investment to help develop a solid human capital base in Kenya in line with the requirement of Kenya Vision 2030. The study also identifies a call for action to strengthen the linkages between the education and training institutions with the industry so as to provide skills, knowledge and capacities that conform to the industry requirement to avoid skills mismatch and improve productivity.

CONCLUSIONS

The study results give empirical evidence that the relationship between human capital investment and organizational performance is statistically significant. The study variables, education, training, knowledge management and skills developments both has significant relationship with the organizational performance. Human capital investment is a tool for value creation and a form human capital risk management strategy for sustainable organizational performance.

Inadequate training affects individual performance and that of the organization as well. It is important for employees to get relevant training in school and on job training should be relevant and specific to organizations objectives. Employers should develop their employees by equipping them and giving them opportunity to gain employability skills within or outside the organization. Most organizations do not conduct effective training need analysis to support them on job training. Results showed the need to support and provide opportunity for career development. Hence, relevant training has a direct positive effect on performance of employees and their organizations.

The employees level of education is important and has major influence on the performance. Education influence employee earnings, performance and the ability to acquire skills. They indicated that pharmaceutical industry is knowledge intensive and very dynamic with new development of technology. The quality of education matters a lot in the pharmaceutical industry and other industries as well. It is important for organizations to encourage both formal and informal education to enhance their employee performance and that of the organizations. Hence, education level and quality influence individual performance.

It is important to provide employees with the necessary manuals and procedures they need to help the do their job. Organizations should promote team work to improve knowledge sharing at

their work place, through autonomous work group and team building activities occasionally. Organizations need knowledge management systems that facilitate knowledge transfer and dissemination. Knowledge management enhance organizational performance. In promoting Skills Development, organizations should conduct orientation or on boarding for new employees to enable them get introduced to the organizations systems, culture and work processes. Provide necessary tools for work. Conduct skills audit in the organizations to establish skills lacking or required in order to deliver effectively. Skills Development has influence on organizational performance.

Employees need job relevant skills that go beyond simple book learning and the ability to execute a specific task. Individual's soft skills are major contributing factors towards performance and personal development. The findings not only show human capital investment as a tool for value creation but also as a form of human capital risk management in organizations. The economic literature has overwhelming evidence that stresses the importance of education in increasing productivity. Education can affect productivity both directly, by improving basic skills, and indirectly, by influencing training. The traditional apprenticeship not the future for Skills Development, and is evident that quality education, relevant training, Skills Development and knowledge management promote intrapreneurial spirits that improves organization performance and competitiveness.

RECOMMENDATIONS

The findings of this study have various important policy implications. The organizations human capital provides the only enduring source of wealth creation in this global knowledge and technological era, in order to achieve sustainable profitability both in the developing and developed countries. Identification of talent in the education sector should be encouraged. This requires a strategy that is put in place to identify talent within the education sector in order to fast-track it for key career specializations in short supply such as the pharmacists. Resources needed for learning, such as curriculum materials, science laboratories, ICT and libraries should be made available to every student. It is important to promote knowledge management through team work and provision of Knowledge Management Systems.

More emphasis should be put to link the industry, technical training institutions, education and research institutions. The study suggests adoption of the German Dual System that provides training in partnership with the industry. In this system, students spend, for example, 3-4 days per week on the basis of regulations, within the framework of training contract and mainly at the workplace. This will promote training that is demand-driven, and to ensure that the technical and research institutions are responsive to the requirement of industry, particularly in the priority sectors. The study also suggests introduction of Skill Development Funds that is governed by rules and regulation in Labour Code, as practiced in the US, the Skill Development provide grants to community and technical colleges to provide customized job training programs for businesses who want to train workers or upgrade the skills of their workforce. The fund made available to employers and job seekers.

By strengthening the industry linkages, a clear industrial attachment framework should be imposed. Organizations to develop industrial attachment policies while the institutions to ensure their industrial attachment logbook shows what the students on attachment are to deliver. Serious follow up of student while at the stations should be done. The industry should be involved in curriculum development for the pharmacist so that they offer relevant training that is up to date. Pharmacists need specialized training that is expected to specifically provide special skills demanded by *Vision 2030* that will enable them become effective in their jobs.

Regarding skills development much more need to be done to enhance employability skills of students (pharmacists). Schools are supposed to teach basic competencies that enable students to acquire the skills that would help them make informed life choices and that would later be valued by the prospective employers and useful for self-employment. These competencies include: problem-solving skills, learning skills, communication skills, personal skills and social skills. In addition to these, more important are skills which are directly required for work can be developed through schooling. The skills such as: 1. Cognitive skills – that is demonstrated by an intellectual grasp of the subject matter of various academic subjects such as languages, mathematics, pure and applied sciences and social sciences. 2. Psychomotor skills – for the tasks to be performed in an occupation, job or business and ability to apply the skills in practice and 3. Affective skills - skills relating to a person's attitude towards timelines, accuracy and general commitment to quality and performance, and value of work, concept of self and others. Life skills and Soft Skills Assessment should be integrated into curricula of institutions at all levels. Finally, Technological change is a key driver for HR transformation. The smart thing to do would be to invest in upskilling line managers with the ability to use the new HR technologies to take on their strategic HR roles, and to outsource non value-adding HR Administration. This is attainable through e-HRM Strategies such as e-learning/virtual and e-recruitment.

Areas for Future Research

Since Human Capital Investment covers other elements such as health, other studies can be done comprehensively to include health variable, in the same industry or other industries in the country. It is also important to note that, at the time of this study other factors were held constant and that the study variable is subject to change in any way, further studies are highly recommended to establish the role of human capital investments on sustainable organizational performance and development in the organizations and the country as well.

REFERENCES

- Adams, A. V., Silva, J. S. & Razmara, S. (2013). *Improving Skills Development in the Informal Sector, Strategies for Sub-Saharan Africa*, International Bank for Reconstruction and Development/The World Bank, Washington DC.
- Afiouni, F. (2013). *Human Capital Management: A new name for HRM?* Int. J. Learning and Intellectual Capital, Vol. 10, No. 1 pp 18 – 34.
- Ariga & Brunello(2009). *Are Education And Training Always Complements; Evidence From Thailand*, Thailand Journal Of Law And Policy Spring Issue 1, Vol.12.

- Armstrong, M. (2009). *Armstrong's Handbook of Management and Leadership: A guide to managing for results*, (2nd edition), London and Philadelphia, Kogan Page Publishers.
- Armstrong, M. (2009). *Armstrong's Handbook of Performance Management*. An evidence-based guide to delivering high performance, (4th edition), London and Philadelphia, Kogan Page Publishers.
- Armstrong, M. (2012). *A Handbook of Human Resource Management Practice*, (12th edn.), London, Kogan Page Publishers.
- Armstrong, M. (2014). *A Handbook of Human Resource Management Practice*, (13th edn.), London, Kogan Page Publishers.
- Aworanti, A. O (2012). *Integration of Soft Skills Assessment into Public Examining in Technical and Vocational Education*, Paper Presented During the 31st Annual Conference of Association of Educational Assessment in Africa Held at Botswana, National Business and Technical Examinations Board, Nigeria.
- Barrick, M. et al., (2011). *Selection in Human Resource Management*, (7th edn) South-Western, Cengage Learning, Canada.
- Barro R, & Lee, J. W. (2010). *A new data set of educational attainment in the World, 1950-2010*. National Bureau of Economic Research Working Paper No. 15902, Massachusetts.
- Bassi, L. and McMurrer, D. (2007). *Human Capital and Organizational Performance: Next Generation Metrics as a Catalyst for Change*, USA, Whitepaper, McBassi & Company.Inc.
- Boni, H. & Holzl, W. (2010). *The Link Between Job Creation, Innovation, Education and Training: An Assessment of Policies Pursued at EU Level*, Directorate-General For International Policies, Policy Department, Brussels, Economic And Scientific Policy.
- Bontis, N., (2009). *Managing Organizational Knowledge by Diagnosing Intellectual Capital: Framing and Advancing The Sate of the Field* International Journal of Technological Management, 18, 5-8, 433-462.
- Bosley, D. S. 92007). *The Impact of "Soft Skills" in the Information – Knowledge Management Economy and the UNC System*, Major Trends Facing North Carolina: Implications For Our State and for The University of North Carolina. The University of North Carolina Tomorrow Commission.
- Chapelle, C. A. (2009). *The Relationship between Second Language Acquisition Theory and Computer-Assisted Language Learning*. The Modern Language Journal, 93, 741-753.
- Choudhury, J. and Mishra, B. B, (2010). *Theoretical and Empirical Investigation of Impact of Developmental HR Configuration on Human Capital Management*, *International Business Research*, Vol. 3, No. 4. pp.181–186.
- Chung, M., L. (2011). *Team and Organizational Research Strategic Orientations and Firm Performance in Transitional Economy*, *Journal of Business Research*, Volume 64, pg 1344-1351.
- Cooper, D. R. & Schindler, P. S. (2014). *Business Research Methods*, (12th edn.), Boston, Mc Graw-Hill Irwin.
- Dae-bong, K. (2009). *Human Capital and its Measurement*, the 3rd OECD World Forum on "Statistics, Knowledge and Policy", Charting progress, Building Visions, Improving life, Busan Korea 27 – 30 October. Viewed on <http://www.oecd.worldforum.org>.
- Dekeyser, R. M., & Criado, R. (2013). *Automatization, skill acquisition, and practice in second language acquisition*. In C. A. Chapelle (Ed.), *The encyclopedia of applied linguistics*. London: Blackwell.

- Ellis, R., & Shintani, N. (2013). *Exploring language pedagogy through second language acquisition research*. New York: Routledge.
- Euler, D. (undated). *Germany's Dual Vocational Training System: as a Model for Other Countries?* A study commissioned by the Bertelsmann Stiftung.
- Franz, J. and Omolo, J. (2014). *Youth Employment Initiatives in Kenya, A Report of Review Commissioned by the World Bank and Kenya Vision 2030*, Nairobi: World Bank and Vision 2030 Delivery Secretariat.
- Global Human Capital Trend (2014). *Engaging the 21st – Century Workforce*, report by Deloitte Consulting LLP and Bersin by Deloitte University Press, dupress.com/wp-content/uploads/.../GlobalHumanCapitalTrends_2014.pdf viewed on 19/6/2014.
- Global Human Capital Trend (2015). *Leading in the New world of work*, report by Deloitte Consulting LLP and Bersin by Deloitte University Press dupress.com/wp-content/uploads/.../GlobalHumanCapitalTrends_2015.pdf viewed on 8/6/2015.
- Hassali, M. A. (2011). *Challenges and Future Directions for Public Health Pharmacy Education in Developing Countries*, *America Journal Pharmaceutical Education* Vol. 75 (10) Article 195.
- Hecht, M., Maier, R., Seeber, I., and Waldhart, G. (2011). *Fostering Adoption, Acceptance, And Assimilation In Knowledge Management System Design*, in: Lindstaedt, S., Granitzer, M.: i-KNOW '11 - Proceedings of the 11th International Conference on Knowledge Management and Knowledge Technologies. Graz, Austria - September 07-09, New York: ACM Digital Library, ISBN 978-1-4503-0732-1, pp.1-8.
- Jelena, R., Vesna, B. and Mojca, I. S. (2012). *The Impact Of Knowledge Management On Organizational Performance*, *Economic and Business Review* Vol. 14, No. 2, 147 – 168.
- Josan, I. J. (2013). *Human Capital & Organizational Effectiveness. Change & Leadership*, Vol.17, 39-45.
- Joshi; Arun R. [editor]; Gaddis, Isis [editor]. (2015). *Preparing the next generation in Tanzania: challenges and opportunities in education*. Directions in development; human development. Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/2015/06/24619100/preparing-next-generation-tanzania-challenges-opportunities-education> viewed on 30/7/2015.
- Kothari C.R. and Garg G.(2014). *Research Methodology, Methods and Techniques*, (3rd edn), New Age International Publishers.
- Law of Kenya (2010). *Constitution of Kenya*, Nairobi, Government Printer.
- Maran.M, Arokiasamy.L & Maimunah.I (2009). *Human Capital Development and its Impact on Firms Performance: Evidence from Development Economics*; *The Journal of International Social Research* Volume 2 (8).
- Marimuthu, M., Arokiasamy, L., & Ismail, M. (2009). *Human Capital Development and Its Impact on Firm Performance: Evidence from Developmental Economics. The Journal of International Social Research*, 2(8), 265-272.
- Mhamba, R. M. & Mbirigenda, S. (2010). *The Pharmaceutical Industry and Access to Essential Medicine in Tanzania*, University of Dar es Salaam, Tanzania.
- Ministry of Health and Social Welfare (2010). *Assessment of the Pharmaceutical Human Resources in Tanzania and the Strategic Framework*, Dar es Salaam, Tanzania.
- Mugenda., O. M. & Mugenda, A. G. (2010). *Research Methods*. Nairobi, Kenya, Acts Press.

- Muna, Al-Ghazawi (2012) *The Impact of Investments In Human Resources Activities on Effectiveness of Investment In Human Capital: The Case of Commercial Banks of Jordan*, International Journal Of Business and Social Science Vol. 3 No. 18, Special Issue.
- Nasiripour, A. A. (2012). *The Relationship between Knowledge Management and Productivity in Teaching Hospitals of Hamedan Iran*, International Journal of Academic Research in Economics and Management Sciences, Vol.1 No. 1.
- Odhong, A. E., Were, S. & Omolo, J. (2014). *Effect of Human Capital Management Drivers on Organizational Performance in Kenya. A Case of Investment and Mortgages Bank Ltd.* European Journal of Business Management, 2(1), 341-356.
- Odhong, E. A. and Were S. (2013). *Human Capital Management as a tool for Value Creation*, in proceedings of First SHRD Annual Research Conference, 12th and 13th September, Nairobi, Jomo Kenyatta University of Agriculture and Technology main campus.
- OECD (2010) *Vocational Education and Training in Germany Strength, Challenges and Recommendations*, Directorate for Education, Education and Training Policy Division, Germany.
- Ogunade, A. O. (2011). *Human Capital Investment in the Developing World: Analysis of Praxis*, University of Rhode, Island.
- Omolo, J. (2013). *Employment Challenges in Kenya*, African Journal of Economic Review, Vol. 1 No. 1, pp.18-32.
- Pharmaceutical Society of Kenya (2010). Kenya Pharmaceutical Industry, Nairobi, Kenya.
- Pharmaceutical Society of Kenya (2012). Kenya Pharmaceutical Industry, Nairobi, Kenya.
- Pharmacy and Poisons Board (2010). Local Pharmaceutical Manufacturers, Nairobi, Kenya.
- Rasula, J. Vuksic, B. V. & Stemberger, I. M. (2012). *The Impact of Knowledge Management on Organizational Performance*, Economic and Business Review, Vol. 14, No. 2, 147 – 168.
- Ravi, B., Nishtha, Amit, M., Ram, G. and Alok, G.(2013). *Human Capital Investments and Employee Performance: An Analysis of IT Services Industry*, Journal Of Management Science, Vol. 59, No. 3 pp641-658.
- Republic of Kenya (2007). *Kenya Vision 2030: A Globally Competitive and Prosperous Kenya*. Nairobi: Ministry of Planning and National Development and National Economic and Social Council.
- Republic of Kenya (2015). *Economic Survey*, Nairobi: Kenya National Bureau of Statistics.
- Saunders, M., Lewis, R. and Thornhill, A. (2009). *Research Methods for Business Students*, (5th edn.), England, Pearson Education.
- Sebahattin, Y., Faruk, B. and Ilknur, T. B. (2014). *The Effect of Leadership and Innovativeness on Business Performance*, Procedia- Social and Behavioral Science, (150), 785-793.
- Serekan, U. (2010). *Research Methods for Business: A skill Building Approach*, (5th edn), USA, John Wiley & Sons Publisher.
- Severine, D. and Lila, S. (2009). *An Introduction to the Human Development and Capability Approach, Freedom and Agency*, London, EarthScan.
- Sheehan, M. (2014). *Investment in Training and Development in Times of Uncertainty Advances in Developing Human Resources*, Vol. 16(1), 13 – 33, Sage Publication.
- Sutia, S., Sudarma, M., Djumahir and Rofiaty (2013). *Influence Of Human Capital Investment, Leadership and Strategic Orientation On Airport Performance*, International Journal Of Business and Management Invention, Volume 2 Issue 6, pp 26-32.

- Swanson, R. A and Holton III (2001). *Foundations of Human Resource Development*, Carlifornia, Beret – Koehler Publishers, Inc.
- Tadic, I., Barac, A. Z. & Plazonic, N. (2015). *Relations between Human Capital Investments and Business Excellence in Croatian Companies*, International Journal of Social Education, Economics and Management Engenering, Vol. 9; No. 3.
- Texas Workforce Commission (2015) available at www.twc.state.tx.us viewed on 18/9/2015.
- Thoithi, G., T. and Okalebo, F., A. (2009). *Country Case Study: Kenya*, GPWR Part 5.4 Kenya pdf as retrieved from www.fip.org.
- Thomas, W. H. N. & Feldman, D. C. (2009). *How Broadly Does Education Contribute to Job Performance?* Personnel Psychology, 62: 89- 134.
- Thomas, W. N. and Daniel, C. F. (2009). *How Broadly Does Education Contribute To Job Performance?* Journal of Personnel Psychology.
- Tibaijuki, A. (2007). *Chapter 5: Nairobi and its Environment*, UNON and UN-HABITAT.
- Trofimovich, P., & McDonough, K. (2013). *Priming in P. Robinson (Ed.)*, The Routledge Encyclopedia of Second Language Acquisition (pp.505-508). New York: Routledge.
- United Nations (2015). Draft Outcome Document of the United Nations Summit for the Adoption of the post-2015 development agenda, Sixty-Ninth Session, General Assembly. Source: www.un.org viewed on 5/10/2015.
- United Nations (2015). *Transforming Our World: the 2030 agenda for Sustainable Development*. Source: <https://sustainabledevelopment.un.org> viewed on 5/10/2015.
- United Nations Development Programme(2010). *The Human Development Report 2010*, the United Nations Development Programme, New York, USA.
- United Nations Industrial Development Organization (2010). *Pharmaceutical Sector Profile Report*, USA.
- Walliman, N. (2011). *Research Methods the Basics*, London, Routledge Taylor & Francis Group
- Wang, I. Shieh, C. & Wang, F. (2008). *Effect of Human Capital Investments on Organizational Performance*, Society for Personality Research (Inc), 36 (8), 1011-1022.
- World Bank (2010). *Stepping Up Skills for More Jobs and Higher Productivity*, USA, International Bank for Reconstruction and Development/The World Bank.
- World Bank (2010). *Stepping Up Skills: For More Jobs and Higher Productivity*, USA.
- World Bank (2014). *Sri Lanka: Investment in Human Capital* as retrieved from <http://openknowledge.worldbank.org/handle/10986/20057>
- World Economic Forum (2013). *Human Capital Report*, prepared in collaboration with Mercer, Switzerland.
- Young, N. (2009). *Understanding the Research Process and Methods. An Introduction to Research Methods*. Las Vegas: Act Press.